An investigation into the political psychology of attitudes towards immigration in the UK: What drives these attitudes, can they be predicted, and can they be changed?

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Preface

Declaration: This thesis is the result of my own work and includes nothing which is the outcome of work done in collaboration except as declared in the preface and specified in the text. It is not substantially the same as any work that has already been submitted before for any degree or other qualification except as declared in the preface and specified in the text. It does not exceed the prescribed word limit for the Psychology Degree Committee.

Tessa Buchanan

Word count: 59,868.

The thesis includes a letter published on 7 February 2022 in *Climatic Change*, volume 170, Article number: 24 (2022), entitled: "Clear consensus among international public for government action at COP26: patriotic and public health frames produce marginal gains in support." The authors were: Tessa Buchanan, James Ackland, Sam Lloyd, Sander van der Linden & Lee de-Wit. Members of the Political Psychology and Social Decision-Making labs took part in a joint hackathon over several hours in 2019 researching the literature and checking opinion polling. They are acknowledged in the accompanying material.

The data analysed in Chapter 6 was gathered as part of the Polarisation Tracker project led by the manager of Cambridge University's Political Psychology lab, David Young. David led on the data gathering via Prolific Academic and created a clean set of data and a code book. Dr Jon Roozenbeek, from the Social Decision-Making lab, kindly offered advice on the Structural Equation Modelling in Chapter 6.

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Summary

This thesis investigates British attitudes towards immigration, a key issue in the 2016 EU referendum. As its primary contribution to the literature, it demonstrates that British people can become more positive about immigration after exposure to a short text. The thesis draws on literature relating to political psychology, notably as regards authoritarianism and the Dual Process Model. It touches on behavioural science, the study of individual differences (including Moral Foundations Theory, Social Dominance Theory and personality traits) and the literature on framing. In the initial pre-registered survey experiment, over 11,000 British people were exposed to short pro-immigration texts reflecting different theoretical approaches in an "intervention tournament." The experiment showed that attitudes towards EU immigration could become more positive but failed to identify the most effective approach. A study was then carried out (total N>30,000) to investigate the underlying drivers of immigration attitudes, establishing that authoritarianism is one of the best predictors of anti-immigration attitudes in the UK. An additional literature review then considers the literature on authoritarianism, including research by Adorno et al. (1950), Allport (1954), Altemeyer (1981), and Feldman & Stenner (1997). It also discusses Social Dominance Theory (Pratto et al., 1994) in the context of the Dual Process Model (Duckitt, Sibley, 2009). The next pre-registered experiment tests how these characteristics fit together. It establishes that a sub-dimension identified as Authoritarian Aggression is of particular interest. In the final pre-registered experiment (N>9,000), texts framed to reflect authoritarian values are tested. Those exposed to an authoritarianism compatible text were significantly more positive about immigration than those exposed to a control. The thesis includes a published paper which shows how this research and its associated methodologies can be relevant in other fields and outside of the UK. A framing experiment about attitudes towards climate change was carried out in seven countries (N>14,000) in collaboration with the Foreign, Commonwealth and Development Office and the Economic and Social Research Council (ESRC).

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This thesis is dedicated to all the people in my life who have come to Britain from overseas, with heartful thanks for the contribution they have made to this country.

This doctorate was made possible by an extraordinary leap of faith on the part of my supervisor Dr Lee de-Wit, who took on a highly non-typical candidate as his first UK PhD student. Politics had underpinned my civil service career, while he had spent his academic career studying psychology. Nonetheless, we rapidly established that we shared many common research interests, and it seemed to him that I might be capable of completing a doctorate. Buoyed by his confidence, mentorship and encouragement, my studies duly began. Lee is committed to the highest standards of scholarship, and I have benefited greatly from his rigour, wisdom, kindness and curiosity. I am enormously privileged to be among the first cohort of scholars in the flourishing Political Psychology lab that he set up. I am not aware of any other supervisor who has been as supportive of a PhD candidate, and the sense of excitement from our first experiments is something I will never forget.

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Among the academic giants I have come to admire are Else Frenkel-Brunswik, the second and often overlooked author of *The Authoritarian Personality* (1950), and Gordon Allport, who was behind so many important discoveries. Others whose research set me on this path were Amos Tversky, Daniel Kahneman, David Halpern, Cass Sunstein, Richard Thaler and Betsy Levy Paluck.

My late mother, who was barely educated but fiercely driven, blazed a trail for me and many others by studying for a social work doctorate in her 40s. I miss her enormously, as I do my late father, an unlikely feminist who would admit no obstacle to his three daughters. They would be thrilled that their legacies have supported this research. My beloved husband Peter is not only a wise head on strong shoulders but has taken on so much to give me time to study and supported the family while I have been without a wage. My daughter Laura has led me onwards with her double mantra of “You’ve got this” and “Get on it”. Tom’s music has been the soundtrack to my doctorate, with his piano playing drifting up the stairs. Meanwhile, Emily, who barely remembers life before this thesis, has developed a knack for asking all the most pertinent questions. I am grateful to family and friends in Croatia, and I remember with great fondness colleagues at the BBC, AFP, the Foreign Office and UK Trade & Investment.

It is customary in academia – or at least in our lab – to end with a cute animal. My recommendation for any scholar of authoritarianism and social dominance is to get a dog. Indy has helped me to understand how even the gentlest and best-mannered of creatures will respond fiercely to threat or the unfamiliar to protect those she loves and will fight ruthlessly for top dog status. She is a reminder, lest we forget, that man is a political *animal,* as Aristotle (BCE350) said.

Chapter 1: Introduction

This doctoral study investigates British attitudes towards immigration and whether it is possible to make them more positive.

Its roots lie in the period around the 2016 EU referendum, when the desire to restrict immigration was a key issue for Leave voters (BES, 2016). Looking back in his memoirs, former Prime Minister David Cameron said he felt paralysed by this question. It was a subject on which he "had no clear answer" (Cameron 2019, pp. 670-672).

As a former government speechwriter, I was curious as to whether this view was correct. Civil servants are often asked to draft arguments for politicians and are required to base these arguments on the evidence. Hypothetically, if the political will had been there to commission arguments that would make British opinion on immigration more positive, could they be expected work? What might they look like? And were some arguments better than others?

There appeared to be a gap in the literature. The lack of evidence in government decision-making had been a *casus belli* for Halpern (2015) who set up the Behavioural Insights Team in 2010. The work of his team inspired me to study for a Master's degree in Behavioural Science at the London School of Economics from 2016-18.

For my dissertation, I explored some of the behavioural factors behind the Brexit vote (Buchanan, 2019). The research was based on the MINDSPACE framework (Dolan et al., 2012) that had been developed as a tool to explain behavioural science to civil servants. The

mnemonic lists "nine of the most robust (non-coercive) influences on our behaviour." [1] The concluding experiment tested whether a short narrative reflecting various behavioural insights would be more effective than a fact at persuading Leave voters to donate to a pro-migrant charity. Those exposed to the narrative donated at almost double the rate of those exposed to the fact (28% v. 50%, N=459).

Further impetus came from Halpern's 2015 book *Inside the Nudge Unit*. He urged behavioural scientists to move beyond getting people to pay their taxes and go to the gym. Instead, he said they should focus on the "biggest and seemingly intractable challenges" (p.346) of our time: tackling entrenched disadvantage, getting governments to use evidence and resolving conflict.

Having spent over a decade living in the former Yugoslavia and 14 years working for the UK's Foreign & Commonwealth Office, I was intrigued by the idea that academia might hold the keys to some of the issues I had faced in my working life. In my professional experience, conflict resolution and government communications were usually treated as art rather than science. Yet my experiment had shown that behavioural and psychological insights might be relevant, and that it was possible to test propositions using scientific methodology. In the wake of the EU referendum, I had on my very doorstep a nation not in conflict but certainly polarised between those who had wanted to remain in the EU and those who had voted to leave it. A key point of difference between the two groups was their attitude towards immigration. Keen to build on the work I had completed for my Master's degree and to develop evidence-based techniques that could be used to address this issue, I decided to embark on a doctorate.

At this point, I was fortunate to attend a lecture given by Dr Lee de-Wit about his 2017 book *What's Your Bias* in which he discussed a wide range of psychological characteristics that affect political decision-making. We met and he kindly agreed to take me on as his supervisee, introducing me to Professor Alan Renwick, Deputy Director of UCL's Constitution Unit and Professor of Democratic Politics, who became my second supervisor.

As this thesis developed, the focus turned increasingly towards political psychology, but at the outset, the approach was based on behavioural science. At that time, the guiding ethos

[1] The nine elements are: Messenger, Incentives, Norms, Defaults, Salience, Priming, Affect, Commitments, Ego.

in behavioural science was largely atheoretical. Policy practitioners were encouraged to compare different approaches with randomised controlled trials, using large samples with high ecological validity, ideally with a behavioural outcome (Haynes et al., 2012; Halpern, 2015). Interest lay not only in “what works” but also in “what doesn’t work”, gathering evidence that might help to avoid expensive policy missteps. The replication crisis in psychology was much discussed, and the pre-registration of experiments was encouraged as a potential remedy.

The results of my Master’s experiment had been encouraging but the methodology had clear limitations. The narrative deployed numerous techniques from the behavioural science literature (e.g. commitment, social norms, authoritative messengers and an affecting story about missing refugee children), but once combined, it was unclear which techniques had been most effective and whether any had been redundant. The first challenge for this doctorate was to develop a form of neutral, scientific methodology that separated out the various strands of theory so that they could compared individually while holding all else equal.

A starting point was the literature on framing. Kahneman and Tversky (1979) had demonstrated that risk assessments change when logically identical information is presented in a negative or positive way (the “framing effect”). Lakoff and Ferguson (2006) had researched how language and metaphor had been used in the USA to frame the debate on immigration. And a third major influence was a study by Feinberg and Willer entitled “From Gulf to Bridge: When Do Moral Arguments Facilitate Political Influence?” (2015). In this, they used Moral Foundations Theory (Graham, Haidt, Nosek, 2009) to frame texts that successfully changed political attitudes.

In the search for an appropriate methodology, Feinberg and Willer's approach of comparing framed textual narratives was promising. The choice of text, as opposed to visual or auditory stimuli, allowed for easy inter-comparison; and it was a scalable and relatively inexpensive option (a small grant had been made available from UCL’s Grand Challenges Fund).

Feinberg and Willer had used Moral Foundations Theory for their study, and social norms had been used in my Master’s experiment, but it was assumed that these were not the only theories and techniques that were relevant. The initial literature review (Ch. 2) was thus a search for theories and techniques that were known to affect political attitudes, particularly

as regards immigration, which could be represented in a persuasive text. Each text would represent a single theory or technique and they would be tested against others in what would now be called an "intervention tournament" (Hameiri, Moore-Berg, 2022). The intention was to cast the net widely in the first instance and to narrow down the focus in subsequent enquiries. The psychology, behavioural science and political science literatures were all regarded as being in scope. As the thesis progressed, literature from the 1940s and 1950s became increasingly relevant, but this initial review focused on the most recent research. It was influenced by Cottam et al.'s (2015) *Introduction to Political Psychology* (3rd edition, p.10). They maintain that there are numerous psychological characteristics that affect political attitudes and behaviour. The long list of theories generated by this review included Rational Choice Theory, cognitive processes, emotions, Moral Foundations, the Big Five personality traits, and thinking styles.

Chapter 3 describes the first pre-registered experiment in which texts representing the various theories and techniques were tested against each other in an "intervention tournament." The main experiment was preceded by two pilots (N=840, N=5,880) conducted via Prolific Academic – the first being a test of concept and the second intended to whittle down the long list of theories and techniques to a short list. For the actual experiment, a large (N=11,357) nationally-representative sample of participants was sourced from the polling agency YouGov. Nine treatment texts were tested. Judged against the "*No text*" control, the results showed that when participants were exposed to a treatment text, attitudes towards EU immigration became more positive on average by over seven percentage points. There were also shifts in policy preferences and (for one text) on a donation, but not on immigration from outside the EU. The experiment showed that it was possible to make a persuasive argument on immigration, but what wasn't clear was which technique had worked best. Since all of the texts had changed opinion significantly, there was no obvious direction for the research to follow.

Chapter 4 describes the response to this finding. Setting out on a different tack, correlational and regression analysis were used to investigate what underlies British attitudes towards immigration. There were two datasets to explore. The first had been gathered during the pilot studies (n=5,880), and the second was a large, publicly available dataset (n>30,000) gathered by the British Election Study (Fieldhouse et al., 2019). In British

politics, campaigns are often analysed in terms of demographic indicators such as gender or socio-economic status (e.g. *Scottish Independence Referendum*, Electoral Commission, 2014). The results of Ch.4 suggested that, with the exception of age and education, demographic indicators had little influence on immigration attitudes. Other researchers had found that personality traits such as Openness and Conscientiousness (Gerber et al., 2010) are related to political attitudes. Indeed, Cambridge Analytica maintained that they targeted US voters in 2016 with messages framed in terms of the Big Five personality traits (Nix, 2016). However, these too had only low correlations with immigration attitudes. Higher scores were recorded between immigration attitudes and items taken from the Moral Foundations Questionnaire (Graham, Haidt, Nosek, 2008). However, some of the strongest correlates with immigration attitudes were items testing for authoritarianism (Adorno, Frenkel-Brunswik, Levinson, Sanford, 1950; Allport, 1954; Altemeyer, 1981), followed by items testing for Social Dominance Orientation (Pratto et al., 1994).

The finding that authoritarianism was a leading predictor of immigration attitudes led to the additional literature review that has been included as Chapter 5. It describes how, after the Second World War, there was a flurry of interest in the concept of authoritarianism as academics sought to explain the psychological impulses behind the rise of Nazism. Classic works in this field include *Escape from Freedom* by Fromm (1941), an essay on 'The Authoritarian Character Structure' by Maslow (1943), *The Authoritarian Personality* by Adorno, Frenkel-Brunswik, Levinson and Sanford (1950), and Allport's *The Nature of Prejudice* (1954). They found that those high in authoritarianism were prone to be prejudiced against multiple targets, including immigrants. This chapter outlines how the concept of authoritarianism developed over the intervening years with the help of researchers such as Altemeyer (1981, 1996, 1998), and Feldman and Stenner (1997). Social Dominance Theory, which was developed by Pratto, Sidanius, Stallworth and Malle (1994) and which introduced the construct of Social Dominance Orientation (SDO), is briefly summarised. The chapter then discusses the Dual Process Model developed by Duckitt & Sibley (2009), which posits that a unidimensional left-right scale is not as good at predicting political attitudes as a dual-axis model, with authoritarianism as one axis and SDO as the other.

The literature review cast the results of the first experiment in a new light. There were two main points of interest. First, researchers into authoritarianism have established that this construct is linked to a range of psychological characteristics, including some of the personality traits, socio-political views, emotions, Moral Foundations and categorical thinking styles that were tested in the first experiment.

The second point of interest is that Feldman and Stenner (1997) found that people with an authoritarian predisposition were sensitive to "normative threat". When their group's social norms or way of life were under attack, they tended to seek out a strong leader ready to enforce the rules and punish norm-transgressors. Sibley, Wilson and Duckitt (2007) found that those high in Social Dominance Orientation also reacted to threat, but of a different kind, namely competitive threat either over resources or over their position in the hierarchy. This created an interesting theoretical question. If it were possible to rile people up by making them feel threatened, then would it be possible to reverse these mechanisms and move attitudes the other way?

Chapter 6 begins with a pre-registered study investigating how these theories fit together. Structural Equation Modelling was used to test two models which failed to meet pre-registered fit criteria. However, the experiment bolstered the impression that authoritarianism was a leading characteristic predicting immigration attitudes, and that these attitudes were indeed linked to the experience of normative or cultural threat. The study also produced an insight into the scales used to measure authoritarianism. The Right-Wing Authoritarianism (RWA) scale developed by Altemeyer (1981, 1996, 1998) is regarded as the measure of choice by academics (Bizumic, Duckitt, 2018). Using factor analysis, the scale was broken down into three sub-dimensions, one of which strongly predicted immigration attitudes. Using a proxy for the Very Short Authoritarianism scale (Bizumic, Duckitt 2018), this was identified as Authoritarian Aggression.

The third part of Chapter 6 follows up on earlier findings about the close relationship between Moral Foundations, Authoritarianism and Social Dominance Orientation. There is a question in the literature as to whether the Moral Foundations are distinct constructs or whether it is the case, as Claessens et al. (2022, p.26) suggest, that Moral Foundations Theory has "independently converged upon the same two dimensions of ideology that have been repeatedly identified in political psychology." Using a fresh sample, and two scales that

test for the three sub-dimensions of authoritarianism, it establishes close relationships between the Authority foundation and authoritarianism overall and with the Aggression sub-dimension, and a close relationship between the Purity foundation and Conventionalism. The results are presented without any judgement as to whether these represent the same or different constructs. Authoritarianism appears to be slightly better at predicting attitudes towards immigration than the Moral Foundations. If Aggression is driving this, then it may be that the authoritarianism scales are capturing a broader range of human behaviour, and not just behaviour regarded as moral. However, the extent of the overlap is such that researchers into authoritarianism may wish to look across to the work being carried out by Moral Foundations researchers, not least when it comes to framing.

Chapter 7 describes the final pre-registered experiment of this thesis on immigration attitudes. This consisted of two pilots carried out with Prolific Academic and an experiment with a nationally representative sample on YouGov. In the first pilot (N=5,000), six texts were tested reflecting different levels of authoritarianism. Participants who were high in authoritarianism were much more likely to say that their values overlapped with a fictional immigrant when exposed to a high authoritarianism text than when exposed to a low authoritarianism text. The converse was true of those low in authoritarianism. The hypothesis was thus accepted that targeting people with texts framed to reflect their levels of authoritarianism can be effective. Nonetheless, these texts did not change immigration attitudes, suggesting that it is not enough to emphasise common values alone.

A second pilot (N=1,957) was then carried out in which a longer authoritarian compatible text was tested, drawing on elements from the texts used in Chapter 3. This not only led to participants feeling closer to the fictional immigrant, it also led to a change in attitudes towards EU immigration, and towards immigration as a whole. On this basis, this longer text was taken through to a final experiment in which three texts were tested on a nationally and politically representative sample sourced from YouGov (N=3,067). The results showed that those exposed to an authoritarian compatible text not only felt that their values overlapped more with those of a fictitious migrant, but they were also significantly more positive about EU immigration, the number of immigrants already in the country and the number they felt should be allowed in. For example, respondents exposed to the 400-word text were 20 percentage points more likely to say that immigration from the European

Union was “slightly”, “moderately” or “very good” as compared to those exposed to a control.

Chapter 8 considers whether the methodology developed for this thesis is relevant for other topics and for wider audiences. It includes a study completed in 2021 ahead of the UN Climate Change Conference (COP26) in Glasgow. Former colleagues at the Foreign, Commonwealth & Development Office (FCDO) asked if I would run an experiment with YouGov testing climate change messaging in seven countries[2] (N=14,627). With funding from the ESRC Impact Acceleration Account and supported by my co-authors, as listed on the subsequent article, I proposed and then led on the experiment[3] which tested five framed texts. One was a control text, one was based on current United Nations messaging and the others were based on social norms, public health and patriotism. The study found that views did change, albeit by only a small amount, but this was partly because of a ceiling effect. Support for climate action in the baseline condition was already over 90% in six of the seven countries (Buchanan et al., 2022).

In the Conclusion (Chapter 9), I discuss the implications of this research for my own work and the contribution made by this doctorate to the political psychology literature.

I began this doctorate as a speechwriter seeking to establish if there were arguments that could make British attitudes towards immigration more positive, and looking for a rigorous, scientific, evidence-based methodology to test which arguments worked best. I have established that immigration attitudes can indeed change if a positive argument is made; that more than one type of argument is effective; and that targeting people based on their levels of authoritarianism is an effective communication strategy. I have also developed a methodology that can be applied to this and other fields. As the literature predicts and as my results show, authoritarianism is connected to a range of other characteristics.

An additional contribution to the literature is to show that in large UK samples, there is a strong relationship between the individual Moral Foundations and the sub-dimensions of authoritarianism and SDO.

[2] Brazil, China, India, Indonesia, UK, USA and Poland.

[3] I initiated the experiment, proposed the methodology, wrote the treatment texts, liaised with the Foreign Office and YouGov and co-wrote the published article.

I conclude with a personal reflection. My undergraduate degree was in Philosophy, Politics and Economics, where the underlying assumption is that people are motivated by reason and logic. My Master's degree in Behavioural Science suggested that people were boundedly rational with limited bandwidth for political issues and a tendency towards bias. However, both disciplines assume that their assumptions hold true across the general population. This thesis adds to the literature by showing that people are not only individually different but predictably so, and there are patterns of preferences that tend to go together which can be measured. A deeper understanding of how these preferences interrelate is likely to result in better predictions of how people will behave and react in certain contexts that are more accurate than those based on their demographic profiles alone. These patterns can help to explain which issues are likely to matter to people and what messages they are likely to respond to. Further research might test whether it is possible to predict which messengers will appeal to which groups, which medium is most effective for them, and at what level of complexity a message should be pitched.

This research highlights that people can be expected to have different strengths and weaknesses. It is not helpful when pejorative undertones are attached to psychological constructs like authoritarianism which describe individual differences along a continuous spectrum. There is no obvious cut-off point between authoritarian and non-authoritarian, nor is there a monopoly of virtue. Behaviours that may be seen as negative in one context may be positive in another. As Maslow (1943, p.402) said, if you accept the view that the world is a dangerous place then such values make sense. For these people, their actions are "not only understandable, but from their own point of view, quite justifiable and correct." My hope is that by understanding and accepting these differences, we may be able to deepen mutual understanding and bring people closer together. Political rhetoric can play on people's fears and rile them up, and some people will be more responsive to this than others, but this research has shown that rhetoric can also be used to reassure and make people feel more comfortable with difference.

Chapter 2: Literature Review

This initial literature review was carried out at the start of this doctoral thesis and is supplemented by an additional review in Chapter 5 that considers in greater detail the extensive literature on authoritarianism and Social Dominance Orientation which were shown to be correlated with immigration attitudes in Chapter 4.

The review begins by describing the wider political context in which this PhD began. It then gives a timeline for some of the key strands of theory mentioned in this thesis. It quotes commentators on the current state of political psychology who suggest that the field has become fractured in recent years, with different theories competing for attention and a paucity of high quality, empirical, comparative research. A particular gap in the literature is for empirical studies that demonstrate how prejudice can be reduced.

Drawing on work by Cottam et al. (2015), the review describes some of the theories that have been used to change political attitudes, representing them in a table before discussing them individually in greater detail. To avoid duplication with Chapter 3, these theories are discussed here in general terms. In the following chapter, greater reference is made to their relevance as regards immigration.

2.1 The wider political context

The background to this PhD was the UK's referendum on EU membership on 23 June 2016. In the academic year 2018-9, when this initial literature review took place, dust had yet to settle after the surprising and close-fought victory for Vote Leave.

Journalists who followed the campaign had rushed out a slew of first-hand accounts (Shipman, 2016; Bennett, 2016; Farrell, Goldsmith, 2017; Gibbon, 2017), which were supplemented by books from those who were variously delighted (Banks, Oakeshott, 2016) or despairing over the result (Clegg, 2017; Cameron, 2019; Oliver, 2016). Academic research was beginning to emerge explaining what had happened in the vote (Clarke, Goodwin, Whiteley, 2017; Fisher, Renwick, 2018; Curtice, 2017). However, all accounts agreed that the ability of the Leave campaign to mobilise anti-immigration sentiment had been critical to the outcome. According to Evans and Menon (2017, p.19), it was arguably "*the* key issue" [their italics] in the campaign.

In June 2016, 56% of respondents to a YouGov survey said that immigration was the most important issue facing the country (YouGov, 2016). Over half of the population thought that immigration numbers would fall in the event of Brexit, and 70% of the people who held this view voted for Leave (Curtice, 2017).

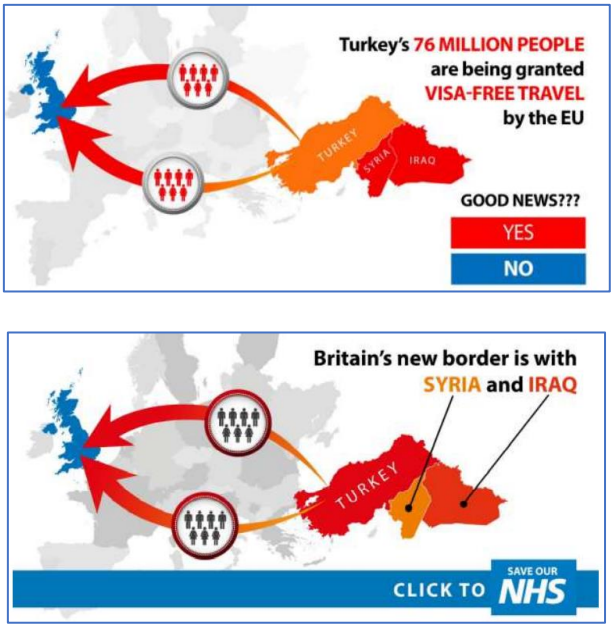
The two Leave campaigns (Vote Leave and the unofficial Leave.EU) were supported by much of the tabloid press as they made immigration their key theme in the immediate run-up to the vote. Moore and Ramsay (2017) analysed 14,779 articles published in the course of the campaign and found that immigration was the most prominent referendum issue, with the coverage being overwhelmingly negative, and migrants blamed for many social and economic ills, notably pressure on social services. In the last seven days, the *Daily Express*, *The Daily Mail* and *The Sun* had negative stories about immigration on one third of their front-pages (Simpson, Startin, 2023). On 16 June, UK Independence Party (UKIP) leader Nigel Farage unveiled a poster suggesting the UK was at "Breaking Point" with a snaking queue of young, male immigrants knocking at its doors (Faulkner, Guy, Vis, 2021).[4]

[4] The posters unveiled on 16 June 2016 actually showed refugees walking through Slovenia towards Germany.

Meanwhile, the official Vote Leave campaign was pushing out a campaign on Facebook, targeting voters with so-called "dark ads."[5] These were brought to light when Facebook handed them over to the UK's parliament's Digital, Culture, Media and Sport Committee for publication in their 2019 report on *Disinformation and 'Fake News'*.

In these ads, Vote Leave suggested that 76 million Turkish citizens – the entire population of that country – might come *en masse* to the UK if it voted to remain in the European Union (Fig.2.1). Successfully conflating the issue of EU immigration with the Syrian refugee crisis (O'Rourke, 2019, p.186), the campaign further claimed that because of its EU membership, the UK now shared a border with Iraq and Syria, a potentially frightening prospect given the ongoing conflict in these counties at that time.

Fig. 2.1: Vote Leave "dark ads" – supplied by Facebook to a UK parliamentary committee



Source: DCMS committee report, 2019[6]

[5] The term "dark ads" refers to Facebook ads that only the targeted individual can see. With reference to the Canadian advertising firm Aggregate IQ, which worked for Vote Leave, the final report of the UK parliament's Digital, Culture, Media and Sport Committee inquiry into Disinformation and Fake News reported on 18 February 2019 (para.150) that "According to Facebook, 'AIQ ran 1,390 ads on behalf of the pages linked to the referendum campaign between February 2016 and 23 June 2016 inclusive.' "

[6] Ads supplied by Facebook to the DCMS Committee for inclusion in the report.

Nonetheless, on the subject of immigration, the Remain campaign floundered. Curtice (2017) described this as their Achilles heel, while Menon and Salter (2016) said Remain had no credible retort. Oliver, who was communications director at Number 10 at the time, said that the Remain campaign not only lacked strong arguments, they also struggled to find spokespeople who were willing to raise the subject at all (Oliver, 2016, pp. 324-386). The Conservatives were hamstrung by their 2015 manifesto promise to reduce immigration to the tens of thousands (Behr, 2016), while Labour politicians feared emulating former Prime Minister Gordon Brown, who had been castigated for calling a voter a “bigoted woman" when she expressed concern about immigration (BBC, 2010). The Remain campaign’s preferred tactic when immigration was raised was to pivot back to the economy (Oliver, 2016) – changing the subject rather than changing people’s minds.

The outcome of the referendum, in which 52% voted to Leave and 48% to Remain, was decided by a small margin, but the vote did not split along traditional party lines. Substantial proportions of both Conservative and Labour supporters had voted in favour of Leave (Ashcroft, 2016; Hanretty, 2017), so the results could not be understood in terms of the traditional left-right axis (Swales, 2016).

An alternative view was provided by political psychology. Questions were raised about whether a company called Cambridge Analytica had used the Big Five personality traits to target voters in the Brexit campaign (McCrae, Costa, 1996; Glendinning, 2018). In the 2016 US presidential primaries, the firm claimed to have used data scraped from tens of millions of Facebook profiles to target Neurotic voters with fear-inducing advertisements. They were subsequently hired by Republican candidate Donald Trump for his successful presidential campaign (de-Wit, 2017; Nix, 2016).

Some commentators wondered if voters had been swayed by emotion. The Remain campaign had been dubbed ‘Project Fear’ for its warnings on the potential economic impact of leaving, which they put at £4,300 per household per year as against the £350m a week that Leave said was being sent to the EU instead of spent on the National Health Service (Buchanan, 2019). Journalists also speculated that angry Leave voters may have sought to punish a government they saw as distant and unfeeling (Behr, 2016).

Others questioned whether behavioural science had played a role in the vote. The chief architect of the Vote Leave campaign, Cummings, referenced status quo bias in a 2017 blog

(Cummings, 2017; Samuelson, Zeckhauser, 1988; LeDuc, 2003), noting that "it is much simpler to argue for the status quo than for a very complex change – that is exactly why most 'change' referendums lose." He appeared to have taken loss aversion (Kahneman, Tversky, 1979) into account while drafting the slogan "Take Back Control" noting that " 'back' plays into a strong evolved instinct – we hate losing things, especially control". Then, he referenced availability bias (Kahneman, Tversky, 1979) when he discussed why Vote Leave sent out nearly one billion ads in the last three days of the campaign ("adverts are more effective the closer to the decision moment they hit the brain").

Other behavioural techniques such as commitment and social norms (Dolan et al., 2012; Gerber, Rogers, 2009) were used in Vote Leave's Facebook advertisements aimed at raising turnout (Fig. 2.2), and Cummings chose the Nudgestock 2017 behavioural science conference as a platform to discuss Vote Leave's strategy (Ogilvy, Nudgestock, 2017).

Fig. 2.2: Vote Leave used behavioural techniques in ads aimed at raising turnout

Source: DCMS Committee Report 2019.

The result of the vote has been hugely consequential both for the UK and the wider world. The UK has regained some measure of sovereignty but, politically, Brexit ushered in a period of unprecedented political instability. Rishi Sunak is currently the UK's fifth prime minister in seven years. While free to make its own trade deals, to date, Brexit has contributed to a reduction in UK economic growth and reduced exports (Office for Budget Responsibility, 2023). Internationally, the results dismayed pro-EU allies and emboldened parties of the far right (BBC, 2016). US presidential candidate Donald Trump welcomed the vote (Trump,

2016), while Russia's President Vladimir Putin later called on Theresa May, then British Prime Minister, to fulfil the will of the British people (Roth, 2018).

A central research aim for political psychology is investigating what causes political attitudes and behaviour. This was a landmark event, and immigration attitudes were at the heart of it. The research question for this thesis is hence: what drives British attitudes towards immigration, can they be predicted, and can they be changed?

2.2 A timeline of the political psychology literature relevant to this thesis

The following section defines political psychology and gives a timeline for how key theories relevant to this thesis have developed.

According to Huddy, O'Sears and Levy (2013, p.1), political psychology is the "application of what is known about human psychology to the study of politics."

Scholars may argue over when it originated, but they agree that it is by nature inter-disciplinary and can draw on rich and varied sources of literature.

Political psychology became formalised as a distinct discipline in the 1970s (Huddy et al., 2013), but according to Osborne and Sibley (2022), the original term "political psychology" was coined by German polymath Adolf Bastian (1860) as early as the 19th century. If the definition can be said to include political persuasion, then it might be said to date back to antiquity. In the words of Portolano and Evans (2005, p.123), social psychology has a "vast and ancient family tree" from which it can draw.

It was Aristotle (350 BCE) and Cicero (55 BCE; Cicero, May, 2017) who set down the rules of rhetoric, or the art of political persuasion, based on their experience and observations of human behaviour. Aristotle maintained, for example, that persuasive speeches should contain *ethos*, *logos* and *pathos* – appeals to character, reason and emotion – and that the mood of the audience will affect the impact of the speech. Rhetorical textbooks were popular in the 16th century, with advice that is still relevant today. Peacham's *Garden of*

Eloquence (1593) has a definition of the rhetorical device of *procatalepsis* that arguably describes the modern practice of "pre-bunking" or inoculating people against disinformation[7] (van der Linden, 2017). Meanwhile *anaphora* is the rhetorical device used powerfully by Reverend Martin Luther King Jr. when he repeated the phase "I have a dream" in his speech on the steps of Washington's Lincoln Memorial in 1963 (Sundquist, Miller, 2009, pp. 229-234). Rhetoric was seen as a core part of an elite education, essential for public speaking, political leadership and the law, until it fell out of fashion in the early 20th century (Andrews, 2019).

Where the art of rhetoric differs from political psychology is in the application of the scientific method, in which empirical data is used to test and refine hypotheses.

Some of the earliest scientific research relevant for this thesis dates back to the 1930s when Allport and Odbert (1936) trawled through *Webster's New International Dictionary* attempting to identify words that describe personality – work that presaged the discovery of the Big Five traits (McCrae, Costa, 1996) recognised today. The Lexical Hypothesis with which they are associated was that the most important concepts in personality are encoded into language, and thus language can be used as a resource to assemble a taxonomy of personality traits. Interestingly, this hypothesis assumes that if a psychological phenomenon is real, it will have been noticed by earlier generations. Where older, non-scientific works are referenced in this thesis – as with the example of rhetoric – it is with this idea in mind.

The next burst of literature is linked inextricably to the rise of fascism and anti-Semitism in Nazi Germany. Fromm in his book *Escape from Freedom* (1941) describes how some individuals find unbearable and frightening the freedom that comes when stable but secure social confines break down. He says such people will seek to escape from freedom by submitting to a dominant leader. In 1943, Maslow drew on this research in his essay on 'The Authoritarian Character Structure,' which argued that others should seek to understand the mindset of such people. In 1950, Adorno, Frenkel-Brunswik, Levinson and Sanford published

[7] Peacham's *Garden of Eloquence* (1593) described the rhetorical device of Procatalepsis "a forme of speech by which the Orator perceiving aforehand what might be objected against him, and hurt him, doth confute it before it be spoken, or thus: when the Orator putteth forth the same objection against himselfe, which he doth thinke his adversarie would, and then refelleth it by a reason, whereby he doth providently prevent him…"

their classic book *The Authoritarian Personality* which established that those who were most prejudiced were much more alike than those who were not and that if someone was prejudiced against one target, they were more likely to be prejudiced against others. Their (flawed) F scale was an attempt to measure the extent to which ordinary people might have such tendencies. Allport made another important contribution with *The Nature of Prejudice* (1954), in which he described the range of psychological characteristics that are shared by prejudiced people. He developed Contact Theory as a way of reducing this prejudice (see Chapter 5).

In the 1950s, the study of social psychology, or the behaviour of groups, developed with Asch's (1955) research into the power of social norms. The same decade saw Simon's (1957) work proposing that humans had "bounded rationality," and were limited by constraints on their ability to process information or to cope with complex tasks.

The 1960s saw Milgram's experiments on people's willingness to submit to authority figures, even when the authority figures were asking them to do something harmful (1975). Allport published his book *Pattern and Growth in Personality* (1961) setting out his theory on values.

The 1970s were marked by the beginning of the partnership between the late Tversky and Kahneman, documented by Lewis in his 2016 book *The Undoing Project*. They developed the foundational research for the modern discipline of behavioural science (1974, 1979) starting with papers on heuristics and loss aversion. In the same decade, Tajfel and Turner published on Social Identity Theory (1979), looking at how individuals define themselves as group members, which can lead to intergroup conflict and discrimination.

The 1980s saw a renewed interest in authoritarianism when Altemeyer published his book on *Right-Wing Authoritarianism* (1981) in which he produced a psychometrically reliable scale and defined three sub-dimensions of authoritarianism: Aggression, Submission and Conventionalism.

In the 1990s, Schwartz published his seminal paper on the theory of human values (1992), which drew on Allport's earlier research. The same decade saw the introduction of Social Dominance Theory by Pratto, Sidanius, Stallworth and Malle (1994), describing a group-

based theory for intergroup inequality and oppression, while McCrae and Costa developed the Big Five personality model (1996).

The first decade of the 21st century saw Stephan and Stephan (2000) publish on Inter-Group Threat Theory, and Putnam (2000) on Social Capital Theory. In 2008, Thaler and Sunstein produced their classic book *Nudge: Improving Decisions About Health, Wealth, and Happiness* and the UK's Behavioural Insights Team was set up by Halpern in 2010 (Halpern, 2015). Graham, Haidt and Nosek published their original paper on Moral Foundation Theory in 2009, the same year Sibley and Duckitt (2009) published their research on the Dual Process Model.

A final key element of research relevant to this thesis is Rational Choice Theory (Chong, 2013), which crystallises the pervasive assumption that humans act as rational agents who behave with consistency and are aware of their own self-interest.

Over the course of the last four years, each of these theories has been relevant for this thesis. However, seen from the outset of this doctorate in 2018, the initial challenge was to identify theories that would help to explain the formation of political attitudes, particularly in reference to immigration, with empirical evidence or insights supporting the idea that attitudes could be changed.

2.3 A fractured field

An immediate observation was that there was no pre-eminent theory in political psychology. The field appeared to be fractured and silo-ed. Sibley and Duckitt (2008) said that researchers were studying a wide and bewildering array of personality constructs and measures; Funke (2005) said that the field was riven with disagreement; and Zmigrod et al. (2021) commented that researchers seemed to develop their own hypotheses in isolation and then look for confirmatory evidence without considering the broader implications.

Writing in *Political Psychology*, Funk et al. (2013, p. 807) commented:

> Readers can be excused if they look upon these expansive and varied literatures and see only chaos. Core political values, personality traits, psychological needs, and

> moral foundations all jockey for influence, and within each category are several conceptualizations empirically represented by varied measurement strategies.

Looking at attitudes (defined as the favour or disfavour that an individual attaches to an object, person or idea), Albarracin and Shavitt (2018) carried out a meta-analysis of studies published between 2010 and 2017. They suggest that attitudes are neither crystallised in memory nor determined solely by passing moods, but partly memory-based and partly constructed on the fly. As such, while generally stable, they can be changed. In their study, they found that attitude change interventions based on delivering a message at a certain time had a small average effect size of d=.22, with studies in the laboratory typically more effective than studies in the field.

Immigration attitudes may be rooted in beliefs or in prejudice. According to Allport (1954), a belief is factual, whereas prejudice requires an attitude of favour or disfavour that can be based on stereotypes, rumours or unfounded generalisations. Allport said that beliefs can be updated by new evidence. Reducing prejudice is also possible but it is made harder by the tendency of humans to arrange their slippery beliefs in such a way as to reinforce the prejudices they already hold.

Paluck and Green examined 985 prejudice-reduction studies in a 2009 meta review. They found a diverse array of theoretical approaches but only a small number that convincingly answered the questions of whether, why, and under what conditions a given type of intervention would be effective. They concluded that:

> "a much more rigorous and broad-ranging empirical assessment of prejudice-reduction strategies is needed to determine what works." (p.339)

As of 2018, there appeared to be a particular gap in the literature for studies which make attitudes towards immigration more positive. In one of the few empirical studies testing this, Kaufmann (2019) reflected that he could find no studies showing a liberalising effect on conservative white immigration policy preferences.

Summarising the above, no political psychology theory was pre-eminent, there was a lack of rigorous, empirical studies that showed how attitudes could change outside of the lab, notably where the aim was to reduce prejudice, but it appeared that attitude change in general was an achievable objective.

2.4 The methodological challenge

In this literature review, no study was found in which the various theories and techniques were comprehensively compared against each other in the same experiment. An initial challenge was to create a methodology that would allow this to happen, with the intention of establishing the most promising theory on which to base the rest of the thesis. The methodology developed by the UK's Behavioural Insights Team (BIT) appeared to offer a rigorous, empirical way forward. The BIT was set up in 2010 with a "Test, Learn, Adapt" (Haynes et al., 2012) philosophy and a mandate to establish "what works" (Halpern, 2015). The team proposed that potential treatments be compared in the same experimental paradigm to see which were most effective when all else was held equal. The process was neutral between theories and, where possible, the experiments were carried out in an ecologically valid environment with pre-registered studies and large sample sizes. Behavioural measures, such as donations, were preferred over self-reported attitude change.

A similar approach has more recently been recommended by Hameiri and Moore-Berg (2022), who suggested that "intervention tournaments" could address the problem of researchers testing their ideas and intuitions in isolation. The requirements they suggested for a successful tournament were that it should compare interventions against a single control, using the same standardised dependent variables and participants drawn from the same population.

Jost, in his book *Left and Right* (2021, p.7) says that politically, people differ meaningfully "in terms of personality, cognitive style, motivational interests, moral values and physiological characteristics." Table 2.1 is an attempt to organise theories about influences on political attitudes drawn from a wide range of literatures. The order in which these theories are presented is worthy of debate, but this initial framework draws on Cottam et al.'s (2015) 'Introduction to Political Psychology' (3rd edition, p.10). In common with Jost et al. (2003), Cottam et al. discuss theories in terms of cognitive accessibility. Here, the more cognitively accessible are listed at the top of the table while those that are less accessible are towards the bottom. Another lens through which to see the table might be Kahneman's (2011)

System 1 and System 2. Theories at the top of the table might be more relevant for the rational System 2-type thinking, while those at the bottom might reflect the more automatic System 1. A Haidt-ian (2013) type distinction might be between what could be classified as influences on the rational "rider" (towards the top of the table) versus the more emotional "elephant." Meanwhile, students of authoritarianism theory (Adorno et al., 1950; Allport, 1954) might reasonably point to evidence that some of these characteristics are interlinked (see Ch. 5).

Table 2.1: Influences on political decision-making

Theory	**Characteristics**	**Authors**
Rational Choice Theory	Benefits/costs	Chong (2013)
Cognitive processes	Salience Availability bias Loss aversion	Kahneman (2011)
Emotions	Fear & Anger Disgust Perspective-taking	Brader, Marcus (2013) Brader et al. (2008) Aaroe et al. (2017) Broockman & Kalla (2016)
Social cognitive processes	Social norms Social Identity Theory Inter-group threat theory	Allport (1954) Tajfel, Turner (1979) Stephan, Stephan (2000)
Socio-political predispositions	Right Wing Authoritarianism Social Dominance Theory	Adorno et al. (1950), Altemeyer (1981) Pratto et al. (1994)
Worldview	Dangerous World Competitive jungle	Sibley, Duckitt (2009)
Values	Universalism, Benevolence, Hedonism, Stimulation, Self-direction, Tradition, Conformity, Power, Achievement, Security	Schwartz (2012)

Moral Foundations	Individualising foundations: Care, Fairness Binding foundations: Loyalty, Authority, Sanctity	Graham, Haidt, Nosek (2009)
Big Five personality traits	Openness, Conscientiousness, Agreeableness, Neuroticism, Extraversion	McCrae, Costa (1996) Gerber et al. (2010) Mondak (2010)
Thinking styles	Essentialism Cognitive inflexibility	Bastian, Haslam (2008) Zmigrod et al. (2018)
Threat sensitivity	Threat sensitivity	Allport (1954)

2.5 Theories

2.5.1 Rational Choice Theory

Starting with Rational Choice Theory, this falls at the intersection of politics and psychology, and highlights their different conceptions of human nature. As Cottam et al. (2015) note, political science has often tended in recent decades to assume that human behaviour is based on the rational pursuit of self-interest, while psychology acknowledges that people have an impaired understanding of the wider world and may not be aware of their underlying motivations.

The idea that rational individuals make decisions based on the best evidence and in their own self-interest is at the core of classic liberalism (in the British rather than the US sense of

the word), and the foundation of modern-day economics and politics (Fukujama, 2022, p.vii). Rational Choice Theory (Chong, 2013) takes its origin from the so-called 'Age of Reason', or 'Enlightenment', which began in the 18th century. Smith (1759, 1776, in Heilbroner, 1987) described how the exercise of rational self-interest can serendipitously lead to socially desirable ends. He was followed by the utilitarian Bentham (1789) who believed in the rational calculation of the greatest happiness for the greatest number. In turn, their work fed into the thinking of the highly influential 19th century polymath, J.S. Mill (1844), who said that political economy presupposed that men sought to obtain the most for themselves with the smallest amount of labour or physical self-denial. It was Mill who wrote in *On Liberty* (1859) that, provided a person is well-informed and rational, no-one is better placed than that individual to make decisions on his or her behalf.

Modern-day Rational Choice Theory is based on work by researchers such as George Homans (1961), who sought to apply the concepts of microeconomics to social science more broadly. It makes the assumptions that all actions are rational and are made after a consideration of the costs and benefits. Benefits must outweigh costs if an action is to proceed. If this ceases to be the case, then the person will cease their activity. Furthermore, individuals can be assumed to be seeking to optimise their rewards.

2.5.2 Cognitive processes

Lodge and Taber (2013) are among those who express scepticism that the conscious construction of arguments and reasoning are guideposts to rational political behaviour. Lakoff (2004) decried what he called Enlightenment myths, such as the belief that 'the truth will set us free' and that if people know the facts, since they are basically rational, they will reach the right conclusions.

One issue is that humans have predictable biases when it comes to processing information given known flaws in their cognitive processes. As Simon (1957) notes, humans are boundedly rational. They may have at their disposal an abundance of information, but they have only limited attention.

In his 2011 book *Thinking, Fast and Slow*, Daniel Kahneman acknowledges that people are capable of making rational decisions when they use the slow and effortful "System 2" type of thinking, but more commonly, they tend to rely on their fast, automatic, intuitive "System 1" style of thinking. In so doing, he argues, they become more likely to make predictable mistakes, since "System 1" is more prone to bias.

Loss aversion was one of the biases discovered by Kahneman and his late collaborator Amos Tversky (1979). They established that people care more about an amount of money when the sum is framed as a loss rather than a gain. Examples of loss aversion's use in the political context might be the political slogans 'Make America Great Again' or 'Take Back Control.'

Another flaw in people's reasoning is availability bias (Tversky, Kahneman, 1974), whereby whatever is salient, or at the forefront of a person's mind, is judged to be more important than it actually is. They note that this bias can be activated by media coverage. Thaler and Sunstein (2008, Part 1, Ch1. Biases and blunders) say that an issue can be made more salient if it can be described in vivid and easily imaginable terms.

Another cognitive bias is related to the way in which large numbers are processed. Slovic (2007, 2016) found that when presented with a major tragedy, a form of "psychic numbing" sets in. As the number of victims rises, so empathy falls. Slovic said that appeals to others are more effective when there is a smaller number of victims – ideally just one.

2.5.3 Emotions

A further blow to the assumption of rationality is the role played by the emotions. Affect, or the experience of emotion, is known to cloud or heighten the senses. Cottam et al. (2015) say that it is a highly accessible psychological characteristic influencing political beliefs and pervading every level of personality.

Writing over two millennia ago, Aristotle notes in *The Art of Rhetoric* (BCE350) that people make different judgements "when we are sad or hostile from when we are happy or friendly." One of the three types of rhetorical proof, alongside *ethos* (a persuasive appeal

based on the moral standing or credibility of the speaker),[8] and *logos* (setting out the logical arguments), is *pathos* – the appeal to the emotions that stirs the audience into action. Aristotle maintained that when a speaker has mastered the three elements of rhetoric and understands how and when they should be deployed, he or she will have "the power of observing the means of persuasion on almost any subject presented to us" (p.12).

For political scientists, emotion can be a point of information. J.S. Mill (1861) said that the passion with which an individual pleads for an argument indicates the strength of feeling. There is also an emotional charge to being able to air an opinion which the government is forced to consider and respond to, even if they don't eventually act on it. This, he said, was one of the foremost benefits of free government.

Emotion can be seen as a barrier to reasonable debate. Supporters of deliberative democracy (John, Smith, Stoker, 2009) seek to create environments where emotion is kept in check to allow for discussion of complex issues. In the 2017 Citizens' Assembly on Brexit (Renwick et al., 2017), immigration was raised, but it wasn't until some people had got strong views off their chest that they became ready to hold a well-informed and rational debate.

The psychology literature suggests that it is wrong to assume that emotion and logic are separate; it is rather the case that emotion informs decision-making. The example given is that of the 19th century railway worker Phineas Gage, who suffered a brain injury that affected his ability to experience emotions and lived the rest of his life making risky and irrational decisions (Damasio et al., 1994). According to Baddeley (2018), reason is not irrelevant when we are in danger, and emotion is not irrelevant when people think deeply. Both operate at the same time in the foreground or the background of people's thinking.

Paul Ekman (1992) describes six emotions: Anger, Fear, Enjoyment, Sadness, Surprise and Disgust (with Contempt as a potential seventh). He says that the primary function of emotion is to prompt rapid action in important interpersonal encounters. What action is taken depends on the types of activity that have been adaptive in the past, either personally or as a society.

[8] There are echoes of this point in MINDSPACE, where M is for messenger, reminding civil servants that the credibility of the messenger is critical to the success of a piece of communication. Steve Marks and Joe Martin's 2019 book "Messengers" explores this concept in more detail.

Lodge and Taber (2013) say that affect is automatic and uncontrolled, and it operates much faster than conscious decision-making. A committed Republican, in their example, would take about 700 milliseconds to evaluate former Democratic presidential candidate Hillary Clinton using a like/dislike button, but would take far longer to justify their decision. This suggests that voters rationalise rather than using reason to begin with (as Jonathan Haidt, 2014, suggests with his rider and elephant metaphor[9]). When an individual is experiencing an emotional state of arousal – a hot state – this reduces their capacity to think in rational terms (Dolan, 2014).

In research conducted by Ted Brader and George Marcus (2013, 2008), they describe how fear promotes risk-averse behaviour and can affect memory and thinking. Anger, meanwhile, encourages people to cling to previous convictions and makes them impervious to new information. It motivates people to take risky, confrontational and punitive actions. Brader and Marcus say that anger is triggered by threat, when people find obstacles on their path to reward, and by the perception that a situation is unfair.

Maitner, Smith and Mackie (2017) say that another emotion that is relevant to outgroup attitudes is disgust. Disgust is linked to a very old neural and physiological mechanism to avoid and expel contamination, and it is regarded as one of the easiest emotions to elicit. It is known that disgust is associated with conservatism (Inbar, Pizarro, Iyer & Haidt, 2013).

2.5.4 Social cognitive processes

Some social cognitive processes provide an alternative angle from which to study political attitudes.

Allport (1954) says that people tend to form groups with those who share similar characteristics. These group memberships (e.g. family, ethnicity, religion) then form part of the individual's identity. People are prone to conclude that their group is superior to others, and to stereotype out-groups, being ultra-sensitive to differences which they then over-weight for significance. They may be less able to distinguish individuals (for whom they

[9] Haidt maintains that reason (the "rider") is used to rationalise decisions already made by the "elephant", or subconscious processes.

might feel attachment or sympathy) from the more threatening mass. The tendency of groups to favour their in-group members can lead to ethnic nationalism.

According to Social Identity Theory, developed by Tajfel and Turner (1979, p.281), it is easy to spark such a reaction. In their words: “the mere awareness of the presence of an out-group is sufficient to provoke inter-group competitive or discriminatory responses on the part of the ingroup.”

Inter-Group Threat Theory (Stephan, Stephan, 2000) suggests that the threat posed by an out-group does not have to be genuine, the mere perception of threat can be sufficient to make attitudes hostile. They suggest that there is a split between perceived realistic threats (e.g. to jobs, health, crime) and perceived symbolic threats (e.g. to culture). Esses et al. (2017) say that this sense of threat is exacerbated when out-groups are perceived to be competing for scarce resources which can spark antagonism and the desire to reduce or eliminate the competition. The effect is more pronounced when groups are large, perceived as growing in size, or highly distinct from the in-group. They also note that attitudes can be influenced by language, and that people are prone to dehumanise out-groups, who can be described as vermin or insects.

Allport (1954) says that hostility between groups can be reduced by contact under certain conditions. Contact Theory sets out that these are equal status between the groups; common goals; intergroup cooperation; and the support of the authorities, the law, or custom. A meta-analysis of 515 studies published in 2006 by Tropp and Pettigrew found strong effects in rigorous studies when all four conditions were met, and people became part of the same team. However, mere contact alone does not generate this result. Enos (2018) describes how being exposed to two people speaking Spanish on a commuter train led white, upper-class liberals to become sharply exclusionary. Not only is there an issue with ensuring the conditions are met, but Contact Theory faces the issue of scalability – replicating the effect of face-to-face contact and people working together as a team can be hard to do at a large scale.

Social norms (aka social proof) are a group-based phenomenon that has been researched by Robert Cialdini (1984), who identified “Six Principles of Persuasion” – Reciprocity, Consistency, Social Proof, Liking, Authority and Scarcity. In his later book, *Pre-Suasion* (2016), he added a seventh principle, Unity. David Nickerson and Todd Rogers (2013) used

two of his principles in a campaign for Barack Obama, who was elected US president in 2008 and again in 2012. While the precise details of their work were kept under wraps, it is known that to boost turnout they used social norms and consistency ("making a plan", an idea that draws on Implementation Intentions; Gollwitzer 1999).

Rhodes et al. (2020) demonstrated in a meta-analysis of 110 papers that messages using social norms were effective at influencing attitudes, perceived norms, intentions and behaviour. When it comes to same sex marriage, Thaler and Sunstein (2021) said that a 2015 US Supreme Court ruling in favour boosted an emerging supportive social norm. Tankard & Paluck (2017) studied reactions to that ruling. In a controlled experimental setting, they found that a favourable ruling, when presented as likely, shifted perceived norms and personal attitudes toward increased support for gay marriage and gay people. According to Paluck et al. (2021), between 1984 to 2016 in the US, average feeling thermometer responses in relation to gay people went from 30.9 (cold) to 60.7 (warm), an effect size of d=1.09 – a clear demonstration that political attitudes can change.

2.5.5 Authoritarianism and Social Dominance Theory

Authoritarianism (Adorno, Frenkel-Brunswik, Levinson, Sanford, 1950; Allport, 1954; Altemeyer, 1981; Stenner, 2012) and Social Dominance Theory (Pratto et al., 1994) relate to social identity. Later in this thesis, they emerge as key predictors of immigration attitudes, and in Chapter 5 they are discussed in greater detail. However, as a brief summary, authoritarianism is regarded as an intra-group phenomenon. It is a measure of individual difference that assesses a person's preference for a closed, ordered and similar society, versus an open and diverse one. Social Dominance Theory relates to relationships between groups. Social Dominance Orientation is a measure of individual difference which judges the extent to which an individual is content with a hierarchy and believes that one group should be above another.

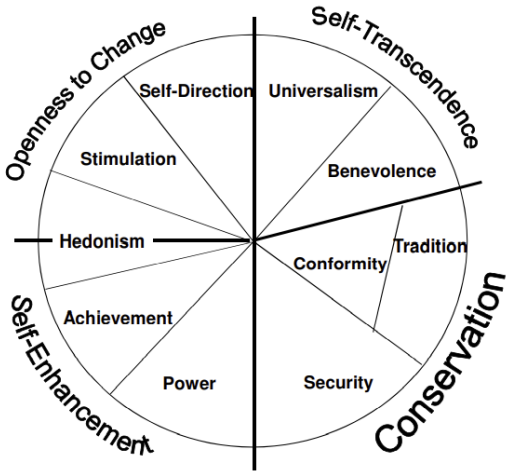
Those who score highly in authoritarianism believe that the world is a dangerous place (Perry, Sibley, Duckitt, 2019) and that people should conform and respect legitimate authority. Under certain conditions, they will seek to punish norm-transgressors. SDO is

associated with a competitive worldview (Perry, Sibley, Duckitt, 2019), and an assumption of a zero-sum game whereby one person's gain is another's loss.

2.5.6 Schwartz values

The values identified by Schwartz (Schwartz, 2012) set out the motivations for attitudes and behaviours. Drawing on work carried out by Allport that began in the 1930s (Allport, Vernon, 1931), Schwartz's theory described ten values, which can be grouped into four quadrants (Fig. 2.3). He described values as beliefs linked to affect. They motivate action, they can be ranked and they are independent of individual situations. They can also be traded off against each other. Schwartz (2012) said that the values of conservation and self-enhancement are related to self-preservation against threat, whereas the self-transcendence and openness to change values are related to self-expansion and growth.

Fig. 2.3: Model of Schwartz values



Source: Schwartz (2012)

2.5.7 Moral Foundations Theory

Moral Foundations Theory (MFT) has become highly influential in social psychology since Graham, Haidt and Nosek published their original paper (2009).

Graham et al. found that conservatives and liberals respond to different moral values that are founded on moral intuitions. Making a link between moral and evolutionary psychology, Haidt (2013, p. 314) describes moral foundations as "interlocking sets of values, virtues, norms, practices, identities, institutions, technologies and evolved psychological mechanisms that work together to suppress or regulate self-interest and make cooperative societies possible." According to MFT, both conservatives and liberals (in the US sense) respond to arguments framed in terms of the moral foundations of Care and Fairness*;* but conservatives additionally respond to those of Authority, Loyalty and Sanctity (pp. 150-179). Liberty was later added as a potential sixth foundation (Iyer et al., 2012). Haidt argues that for conservatives, this is about liberty from government interference, while for liberals, it is about freeing underdogs from tyranny and oppression (pp. 197-205).

2.5.8 Big Five personality traits

The acronym OCEAN stands for Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (McCrae, Costa, 1996; Mondak, Halperin, 2008). The traits, known as the Big Five, develop very early in life and are partly influenced by genetics.

Gerber et al. (2010) showed that some traits have as large an impact on political attitudes as income or education. They found that Openness and Neuroticism were associated with liberal (i.e. left-wing) attitudes, while Conscientiousness was associated with conservative attitudes, and Agreeableness with liberal economic policies and conservative social policies (i.e. pulling in different ideological directions). Extraversion was modestly related to conservative social and economic policy. According to Gallego and Pardos-Prado (2013), personality shapes the likelihood of response to a situation and the intensity of the response.

A recent study by Bakker et al. (2021) questions the assumption that the relationship between politics and personality is one-way, with stable underlying personality traits affecting more fluid political attitudes. It may be the case that people adapt their personality over time to fit in with politically similar others, particularly when politics is salient. If so, then this is further testimony to the power of social norms.

2.5.9 Thinking styles

Allport (1954) says that those whom he describes as “prejudiced” have different thinking styles from other people. They tend to dislike uncertainty and ambiguity and prefer to see things in black and white. There are parallels with the modern-day concept of essentialism, as discussed by Bastian and Haslam (2008), who found a relationship between prejudice and people who believe that people cannot change. Those who hold essentialist beliefs believe that group membership is immutable and that group members share an underlying and unchangeable essence.

2.5.10 Threat sensitivity

The final measure of individual difference highlighted in this review is threat sensitivity. In 2003, Jost et al. published an article entitled ‘Political Conservatism as Motivated Social Cognition’. They described a wide range of theories - epistemic, existential or ideological - that have been associated with what they describe as conservative beliefs. Among the numerous theories considered are Terror Management Theory (Greenberg, Pyszczynski, Solomon, 1986), Regulatory Focus Theory (Higgins, 1997, 1998), dogmatism (Rokeach, 1960), intolerance of ambiguity (Frenkel-Brunswik, 1948), authoritarianism (Adorno et al., 1950; Altemeyer, 1981) and Social Dominance Theory (Pratto et al., 1994). They suggest that these theories offer differing motivations for adopting politically conservative beliefs, and, in their view, “virtually all of the above motivations originate in psychological attempts to manage fear and uncertainty” (p. 351). They argue that these relate to two core aspects of conservative thought, namely resistance to change and endorsement of inequality, and they link these various theories in an integrative model of political conservatism.

There is a question as to whether combining all these theories into a single left-right axis is an over-simplification, and whether the left-right dimension captures the nuance provided by Duckitt & Sibley’s (2009) Dual Process Model (DPM), or even Stenner’s (2009) understanding of conservatism as comprising three elements: status quo conservatism (a

dislike of change); what she describes as authoritarianism (a dislike of difference); and laissez-faire conservatism (a dislike of government intervention).

However, what the three approaches have in common is their assumption that threat underlies political attitudes. In the DPM, it is the Dangerous World View and the Competitive World View (Perry, Sibley, Duckitt, 2019), whereas for Stenner (Feldman, Stenner, 1997), this is normative threat.

Threat sensitivity can be seen as a type of individual difference. Nichola Raihani and Vaugh Bell (2019), investigating the evolutionary aspects, found that individuals facing the same threatening stimulus or context will feel markedly different levels of fear, even within a species.

2.6 Discussion

The overview of political theories outlined in this literature review sets the scene for the following chapters. In a field that is as broad as it is fractured, many theories and techniques are shown to influence political attitudes but none stand out as being the obvious choice for this thesis to focus on. The extent to which they are important in the immigration context is further explored in Chapter 3, but it appears there would be merit in developing a robust, empirical methodology that can help to compare theories and techniques to see which are most effective in particular contexts.

Chapter 3 begins with a literature review that considers which theories and techniques have been linked to immigration attitudes or used in framing exercises. It then considers which of these are appropriate for inclusion in a series of experiments. These will test framed texts representing individual theories or techniques against each other in an intervention tournament. The first pilot is a test of concept, the second tests a long list of theories and the third tests a shortlist of nine texts on a large nationally-representative sample sourced from the opinion survey company YouGov.

The aim is to determine whether attitudes to immigration can be changed at all, and then to identify the most promising direction for the future focus of the thesis.

2.7 A note on ethics

The first experiment in this thesis was approved by UCL's Ethics Committee and the later experiments by the Ethics Committee of the Cambridge University's Psychology Department. Respecting the principles of open science, this thesis uses pre-registration and has made data and materials available via the Open Science Framework.

Ethics informed the choice of subject for this thesis and the methodology. David Halpern set the challenge of resolving conflict in his 2015 book *Inside the Nudge Unit*. However, rather

than seeking out people directly experiencing conflict, who might be traumatised and suffering, this thesis addresses inter-group conflict at one remove in a safe setting. Immigration may have polarised people in the UK, but it is a country where the rule of law is respected and free speech is not considered dangerous. The use of online surveys is considered non-controversial in the UK, and, since the data is anonymised, none of the participants would be at risk of having their individual responses made public.

While political persuasion is a fact of life in a democracy, and rhetoric is a recognised tool of politics, there can be nervousness about the use of political psychology because of fears that it may operate at the subconscious level.

The British Psychological Society states in its *Code of Human Research Ethics* (p. 11) that:

> "The aim of generating psychological knowledge should be to support beneficial outcomes. Such outcomes can be broadly defined as those that not only support and reflect respect for the dignity and integrity of persons (both individually and collectively) but also contribute to the 'common good'."

A key decision was whether this research should focus on moving immigration attitudes in a positive direction or whether it should focus on making them more negative too.

Establishing how the mechanism worked both ways would promote better scientific understanding, but it was considered that making attitudes towards immigration more negative would not reflect respect for the dignity and integrity of persons.

Did this choice support beneficial outcomes and contribute the common good?

While the aims of this research were well-intentioned, consideration was taken of the possibility that the results might be used by those seeking to make inter-group relations worse. Here, the argument was that there is already a substantial body of research (see Ch 3.) on how psychological characteristics are associated with anti-immigration attitudes. This

thesis aimed to show that the underlying mechanisms that are known to make attitudes towards immigration more negative can be used to move the dial the other way.

In the first experiment, funds were raised for a charity that raised money for EU migrants. The charity, 'Here for Good', is a UK-registered charity that has worked with the European Commission, the Home Office and the Greater London Authority. They were described accurately as a charity that had been set up to provide free legal advice to EU immigrants about their status, and they were selected because their name 'Here for Good' was self-evidently about helping EU migrants to stay in the UK. They were asked in advance for permission, and after the experiments in Chapter 3 were completed, a donation was made to the charity.

The final experiment in this thesis is a message-framing experiment on climate change carried out in seven countries: the UK, USA, Poland, Brazil, India, Indonesia and China. Of these, the concern was that people in China might be put in a dangerous position if they were seen to be criticising their government, even if their answers were given anonymously in an online survey, particularly if there were surveillance of Internet use. For this reason, YouGov, which gathered the data and which has extensive experience of operating in China, was carefully consulted about what would be safe to ask. The question on climate change was modified so that people in each country were not being asked to comment on their own government but instead asked: "Do you agree or disagree that all national governments should do more to protect the environment."

Chapter 3: Can British immigration attitudes be made more positive? An intervention tournament

This study, involving over 18,000 people in total, considers whether there are arguments that can make British attitudes towards immigration more positive. In a pre-registered experiment with nationally representative samples sourced from YouGov, it tests nine texts framed to reflect different psychological characteristics. Attitudes towards EU immigration among those exposed to these texts are over seven percentage points higher on average than the attitudes of those exposed to no argument at all. More than one approach was effective, which suggests the need for further exploration of the underlying factors that drive attitudes towards immigration in the UK context.

3.1 Introduction

Ch. 2 provided an overview of the rich and varied literature that links political attitudes with psychological constructs and theories. It introduced a range of influences on political attitudes. In this chapter, their particular relevance to immigration attitudes is discussed. The intention is to generate a long list of theories that might be suitable for inclusion in an intervention tournament using the technique of framing, with the intention of improving attitudes towards immigration in the UK.

A pilot study (N=840) is used to test whether the experimental method is likely to work, after which a second pilot (N=5,880) is carried out testing 20 treatment texts. In the final experiment, nine treatment texts are tested on a nationally representative sample sourced from YouGov (N=11,357).

The research questions addressed in this chapter are whether there are any arguments that can make British attitudes towards immigration more positive. If so, the aim is to establish which are the most effective.

3.2 Literature review

Immigration was the most salient topic for British voters ahead of the June 2016 referendum that decided whether the UK should leave the European Union or remain within it (YouGov, 2016). The majority of the UK public felt that immigration was too high and wanted the numbers to fall (Blinder, Richards, 2020).

Mutz, Sniderman and Brody (1996, p.2) describe the public opinion survey as a tool of exceptional value but one that leads people to focus on the statics not the dynamics of political preferences. If, as they maintain, politics is about persuasion, then it should be possible to change attitudes.

One way of doing this is with framing. In a 2022 meta-analysis, Amsalem and Zoizner analysed 138 experiments (total N= 64,083) and found that framing can result in medium-

sized effects on political attitudes (d=.41). This technique was used by Feinberg and Willer in their 2015 “From Gulf to Bridge” study when they changed attitudes with texts based on the Moral Foundations, and by Kaufmann in a 2019 study when he changed attitudes with texts framed to discuss how immigrants integrate.

Lakoff and Ferguson (2006) comment that in the USA, immigration is often framed as a problem, with reference to illegal immigration and border security. However, they questioned whether attitudes might change if different frames were used, such as a humanitarian frame, or arguments based on immigrants working hard and deserving fair treatment (i.e. reflecting proportionality).

Another example of framing comes from a non-political context. Matz et al. (2017) demonstrated that advertisements framed in terms of the Big Five traits of Extraversion and Openness led to a 50% in make-up sales when these advertisements matched the traits of those they are directed towards.

Table 2.1 in Ch. 2, suggested a range of theories that could be used to frame a persuasive text.

As to how these texts should be structured, there is guidance from classical rhetoric. Aristotle (250BC) said that persuasive arguments should contain appeals to *ethos* (a values appeal), *logos* (a logical appeal) and *pathos* (an emotional appeal).

3.2.1 Rational Choice Theory

As described by Chong (2013, pp.96-97), Rational Choice Theory assumes that individuals are perfectly rational, with a complete and coherent set of preferences. They will gather the appropriate amount of information to make a choice, form beliefs about the alternatives and then choose the best course of action related to these beliefs.

If humans do indeed weigh costs and benefits in assessing their self-interest, how might well-informed utility maximisers have viewed the arguments for and against EU immigration in the UK in 2016? Was the predominantly anti-immigration sentiment (Migration

Observatory, 2020) based on fact or were opinions being shaped by the faulty and inflexible generalizations (Allport, 1954) that characterise prejudice?

As Dempster and Hargrave (2017) point out, individuals might have legitimate concerns over the economic, cultural and security implications of immigration, either in terms of their impact on themselves and their families, or for the UK as a whole.

Logically, at issue in the referendum was immigration from the European Union, and there is published data available from the UK government on its associated costs and benefits. According to the government's Migration Advisory Committee (MAC, 2018), the average immigrant from the EU contributed more to public finances (£2,300 per person) than people born in the UK, without causing detriment to public welfare.

If it is assumed that this figure was not widely known, the question might arise of the extent to which beliefs about EU immigration were based on scant or faulty information. In a statement on 26 May 2016 (accessed November 2016), the leader of the official Vote Leave campaign Boris Johnson said that the UK's immigration system had spun out of control. He said the UK had no say in the numbers or terms under which people came to the UK nor could it remove those who abused the UK's hospitality. Such views were widely held. According to polling data published by the Policy Institute of King's College London in 2018, many people incorrectly assumed that EU migrants were a fiscal drain on the UK, that they decreased the quality of healthcare, raised crime levels and depressed wages for the low-skilled (Duffy, 2018). The government data suggested that these were myths that could be debunked.

The literature provided an example of the successful use of "myth-busting", with a study by Grigorieff et al. (2020) who provided bundles of information to survey participants to correct common misperceptions about the characteristics of immigrants to the USA (e.g. on their likelihood to commit crime, the time taken to learn English and their employment levels). Against this, Helen Dempster and Karen Hargrave questioned whether the technique works for all audiences. They found in a 2017 meta-analysis that, while myth-busting is one of the traditional approaches to public engagement on immigration, there were associated risks: it might exacerbate negativity; fail to resonate beyond those who were already supportive; and have limitations as a persuasive tool.

There was then the question of whether people were merely uninformed. Allport (1954, p.9) suggests that, in the absence of prejudice, people can be expected to update their beliefs in the face of new evidence. Giovanni Facchini et al. (2016) demonstrated that the provision of new information can be effective in a study which found that attitudes towards immigrants in Japan durably improved when Japanese citizens were asked to read texts giving them information about the care needs of the country's ageing population or labour shortages in certain sectors.

In the context of this experiment, there was potentially relevant information that was not widely known in the UK about immigration controls that were permitted under EU law. In a nationally representative survey, only 20% of Britons said they were aware of the EU's three-month rule (Buchanan, Renwick, Ackland, de-Wit, 2019). This allows for conditions to be imposed on workers who want to stay on in another EU member state for more than three months. They are allowed to stay if they have a job, if they are students or if they can support themselves and their families and have their own health insurance. Those who can prove they are actively seeking employment and have a genuine chance of finding it can stay for another three months but, after that, they must provide compelling evidence that this is the case. EU migrants can also be required to register with the authorities, while those who threaten public security can be refused entry. Johnson had claimed that the UK "cannot control the terms on which people come." In fact, there were potential curbs available on freedom of movement from the EU, but as the Buchanan et al. survey showed, the vast majority of people in the UK were not aware of them.

3.2.2 Cognitive processes

Building on the assumption that humans have bounded rationality (Simon, 1957), Kahneman and Tversky (1979) demonstrated that people are prone to predictable biases, a foundational insight for the discipline of behavioural science.

If such biases affect how people process information, the question arose as to which biases might be relevant when drafting texts for a framing exercise relevant to immigration.

Kahneman and Tversky (1979) found that people are loss averse – they care more when logically identical information is framed as a loss rather than a gain. They also discovered the 'availability bias', whereby information that is salient and easily accessible will be overweighted for importance (Kahneman, Tversky, 1973). The Migration Advisory Committee's report had details about the contribution made by EU immigrants to the National Health Service and to social care. The possibility that people might lose access to these medical staff and carers could be made salient. The effect was likely to be increased if it were described in dramatic terms.

Another bias relates to the processing of large numbers. Slovic (2007) found that people find it easier to empathise with stories about individuals or smaller groups. This is relevant for immigration figures. Shortly ahead of the EU referendum, on 26 May 2016, the Office of National Statistics announced that 333,000 immigrants had come to the UK in 2015, the second highest figure on record (ONS, 2016). As described in the previous chapter, Vote Leave's campaign communications presented immigrants as a faceless mass coming to overwhelm the UK. The question arises as to whether describing individual case studies would be more effective at changing immigration attitudes.

3.2.3 Emotions

Cottam et al. (2015) described emotions as highly accessible characteristics that affect political beliefs and pervade every level of personality. Brader and Marcus (2013, 2008), found that the emotions of fear and anger were related to attitudes towards immigration. In the EU referendum campaign, both were said to be present.

On fear, the Migration Observatory (2016) noted the alarmist headlines on immigration that the national print media ran in the immediate run-up to the Brexit vote. Fears were raised about crime and terrorism, and immigrants were portrayed as being in competition with UK citizens for benefits, jobs, hospitals and school places.

As to anger, journalist Rafael Behr (2016) said there had been an emotional groundswell of contempt for the establishment. Opinion surveys showed that voters who agreed that

‘politicians don’t care what people like me think’ were over twice as likely to support Leave as people who disagreed with this statement (70% versus 30%, Curtice, 2017).

Disgust is relevant in the immigration context. Aaroe, Petersen and Arceneaux (2017) found that people high in disgust sensitivity tend to be more opposed to immigration. They argue that disgust motivates people to retreat and adopt protective behaviours in the face of pathogen threats. They suggested that a hyper-vigilant behavioural immune system operates outside of conscious awareness, which is partly why peaceful integration and interaction between ethnic majorities and minorities is hard to achieve. Hodson and Costello (2007) found that those who were sensitive to inter-personal disgust (e.g. who opposed wearing used but clean clothing or sitting on bus seats warmed by strangers) were more opposed to immigrants, foreigners, deviants and low status groups.

In the UK, the narrative around immigration supports the hypothesis that disgust plays a role. In a column for The Sun newspaper in 2015, Katie Hopkins compared migrants to the norovirus, cockroaches and a plague of feral humans. Even David Cameron, while still Prime Minister in 2015, described migrants as a swarm (BBC, 2015).

Looking at positive emotions, empathy allows people to feel the emotions of others. Perspective-taking is a technique that proved to be effective in a study carried out by Broockman and Kalla (2016). They found that a 10-minute conversation asking people to take the perspective of trans people durably reduced transphobia. The conversation began by asking the participants to think of a situation in which they themselves had experienced discrimination.

3.2.4 Social cognitive processes

Experimental evidence suggests that informing people about social norms has changed attitudes in numerous contexts, including conflict prevention, generating social change and climate communications (Paluck, 2009; Sunstein, 2019; van der Linden, 2015).

‘Social proof’ (aka ‘social norms’) is one of Cialdini’s principles of persuasion (Cialdini, 1984). According to Gerber et al. (2010), sensitivity to social norms is particularly associated with conservatism.

However, one question is which social norms are relevant. Social Identity Theory (Tajfel, Turner, 1979; Turner, Hogg, Oates, Reicher & Wetherell, 1987; Stets, Burke, 2000) suggests that individuals are prone to join groups from which they gain a sense of social or personal worth, and they are motivated to maintain positive social relationships. However, they can be members of more than one group at a time and their cognition, emotions and behaviour can be affected by the situational salience of any given identity. Identity salience can also be relevant at the individual level. Using messages on climate change, Diamond (2020) found that Republican parents exposed to a message about climate change became more supportive of climate change action and pro-climate behaviours after receiving a prime which made their individual identity as a parent salient, but this effect disappeared they received first a partisan prime, which made their group identity salient.

Another of Cialdini’s principles of persuasion is ‘Liking’, which can be sparked by information that someone is like you or shares a common interest. The search for common ground is thus another technique that might help to bridge the gap between immigrants and British people. Jonathan Haidt (2013) suggested that this is one way to broaden the social circle and make people feel more like family. In a 2017 experiment, the Behavioural Insights Team showed that teenagers who discussed common ground in an ice-breaking activity were more likely to keep up links when they finished a volunteering programme (Sanders et al., 2017).

A further finding is the ‘messenger effect’. The likelihood that a person will accept information is affected by the messenger who delivers it (Dolan et al., 2012). Rolfe (2018), when discussing immigration with British focus groups, found that people had a “hierarchy of evidence,” with personal experiences and anecdotes at the top, followed by the experience of friends and family, while media stories and statistical information were least trusted.

3.2.5 Authoritarianism and Social Dominance Orientation (SDO)

Authoritarianism (Adorno et al., 1950; Allport, 1954; Altemeyer, 1981) and Social Dominance Orientation (SDO, Sidanius, Pratto, 1994) are two known predictors of prejudice that produce different reactions towards immigration.

RWA is a measure of individual difference that reflects a person's intra-group preferences. Those high in this trait tend to prefer societies where people are the same, where there is order and control, and may hold the view that norm violators should be punished (Altemeyer, 1981). They tend to oppose immigrants who pose a cultural threat (Duckitt, Sibley, 2017) and to prefer immigrants who integrate into society (Green, Staerkle, 2013).

Social Dominance Orientation reflects the extent to which an individual is comfortable with inequality and believes that their group should be dominant over another. Unlike those high in authoritarianism, Green and Staerkle (2013) found that those high in SDO want to persecute immigrants who make efforts to assimilate and adapt to the host society's values. Duckitt and Sibley (2017) said that they also oppose immigrants who appear to be socially disadvantaged.

3.2.6 Schwartz values

As defined by Schwartz, values (defined as beliefs linked to affect) set out the motivations for attitudes and behaviours (Schwartz, 2012). Schwartz's theory described ten values (universalism, benevolence, conformity, tradition, security, power, achievement, hedonism, stimulation and self-direction) which motivate action. Of these, Dennison (2020) found that those who are opposed to immigration favour the conservation values of conformity, security, tradition and power, while those who are pro-immigration favour universalism and undervalue security and conformity.

3.2.7 Moral Foundations Theory

One of the foundational papers for this thesis was the 2015 article 'From Gulf to Bridge,' in which Feinberg and Willer demonstrated that framing arguments in terms of Moral Foundations can change attitudes on issues such as same sex marriage and universal healthcare. They said the effectiveness of their framing depended on fitting the values underlying a message to those held by the targeted audience.

The binding foundations of Authority, Loyalty and Purity are known to be associated with conservative views, while the individualising foundations of Care/Harm and Fairness are associated with liberal views. Looking specifically at immigration attitudes, Koleva et al. (2012) found that immigration attitudes were linked to the Authority and Sanctity foundations, but also the foundation of Care.

3.2.8 The 'Big Five'

In a paper published in 2008, Mondak and Halperin found that virtually all aspects of political behaviour were affected by personality. McCrae and Costa (1996) list the Big Five personality traits as: Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (hence the acronyms OCEAN or CANOE).

Evidence suggests that the Big Five traits do have an influence on attitudes toward immigration but the findings are slightly nuanced.

Gallego and Pardos-Prado (2013) found that Agreeableness and Openness were both positively correlated with pro-immigration attitudes, with Agreeableness being more positively correlated (r=.16) than Openness (r=.05). Conscientiousness (r=-.08) and Extraversion (r= -.03) were both negatively correlated, but they also found a moderate negative correlation for Neuroticism (r= -.09).

Dinesen at al. (2016) found that higher levels of Openness led to greater willingness to admit immigrants, and high levels of Conscientiousness and low levels of Agreeableness led

to greater sensitivity around skill levels, notably for low-skilled workers. They suggested further study was needed on this topic.

3.2.9 Thinking styles

Two studies in the literature are relevant as regards thinking styles. The first was a finding by Bastian and Haslam (2008) that people who endorse more essentialist statements about human nature are more likely to oppose immigration. They comment that where people believe that another group's attributes are deeply rooted, unchangeable, biologically-based and distinct from their own, they tend to oppose the integration of that group, especially when they frame their own national identity in an exclusive way.

The other study highlights the difficulty of sorting these studies into separate categories. Kaufmann's 2019 study finds that a short message about "assimilation" or integration works better than a message on diversity at encouraging white British Leave voters to feel more positive about immigration. Whether this reflects the breakdown of an essentialist category that an immigrant is always an immigrant, or whether this is tied to the authoritarian preference for immigrants to integrate is a moot point.

3.3 Methodology

3.3.1 The approach

Each of the theories described above can be said to have an influence on political attitudes, and most have been shown to influence attitudes towards immigration. Given that no studies were found that tested these theories against each other in the same experiment, setting up what is now known as an "intervention tournament" (Hamieri, Moore-Berg, 2022) seemed an appropriate way to identify theories that were either not effective at changing immigration attitudes or less effective than others in the UK context.

In this experiment, the aim was to use textual vignettes that were framed to reflect individual theories or techniques.

The pilots were to be carried out on Prolific Academic with samples that included both Leave and Remain voters. However, there were fewer than 5,000 Leave voters available via the site at the time (defined as those who had taken surveys in the last three months). Estimating an effect size based on results given by Kaufmann in his 2019 study, a power calculation was carried out for an effect size of d=.4, an alpha of .5, power of .8 and a two tailed t-test. This suggested that a minimum of 100 per sample would be adequate. Erring on the conservative side, it was decided to aim for a sample size of 120 per condition for the first pilot, which was a test of concept involving six samples of Leave voters (i.e. 720 people) and 120 Remain voters (see 3.3). Once this experiment was completed, there were approximately 4,000 Leave voters who had not been exposed to a survey. For the second pilot (3.4), the decision was taken to aim for a larger sample size to make the experiment more sensitive, while still testing a wide range of treatments. A target of 165 per condition was set. The decision was taken to test three controls - the *'No Text'* control, the *'Common text'* control, and a variation of the *'Common text'* which did not mention the National Health Service[10]. This left enough Leave participants to cover 20 treatment conditions.

[10] The intention had been to test the extent to which the NHS was a significant argument in its own right, but there was no significant difference between the *'Common text'* and this variant so for reasons of clarity it is not included in the results shown here.

Appreciating that these sample sizes would require the participation of about 90% of the available Leave voters in this research[11], the pre-registration allowed for a sample size of 120 per condition if this level of participation could not be achieved.

The initial task was to select 20 theories or techniques to be tested in the second pilot. Five principles guided the selection.

The first was a preference to test commonly-used techniques, such as perspective-taking and myth-busting, to establish how persuasive they were in comparison to others.

The second was a desire to test a wide variety of alternatives.

The third was to test complete sets of characteristics where possible (e.g. all six Moral Foundations, and all of the Big Five). This meant that the Schwartz values could not be included as there were ten of them, and that would reduce the range of alternatives that could be tested.

The fourth principle was that the texts had to be arguments which a British politician might make. Considering Social Dominance Theory (SDO), those high in Social Dominance Orientation (SDO) might approve a scenario where immigrants were kept separate from the rest of the population and restricted to the most demeaning jobs. This might be politically palatable in some countries, but, at the time, it was not considered an argument that a UK politician might make.

The final principle was that the texts had to be recognisably distinct, which meant that where there were thematic overlaps (e.g. between Right-Wing Authoritarianism and the Moral Foundation of Authority; the emotion of Disgust and the Moral Foundation of Purity; or the emotion of Fear and Loss Aversion), a trade-off had to be made. In this case, it was decided to test each of the Moral Foundations since they represented a full set of characteristics, and also because they had proved to be effective in the Feinberg and Willer experiment on which this study was based. Meanwhile, Fear and Loss Aversion were combined into a text that described the fear of losing EU immigrants working in areas such as the National Health Service.

[11] 720 Leave voters took part in the first pilot and 2,760 Leave voters took part in the second pilot i.e. about 70% of the total Leave voters available at the time on Prolific Academic.

Fig. 3.1: Twenty texts to test

Theory	Text	This text could…
Rational Choice Theory	New Information	…provide information on the EU's three-month rule.
	Myth-busting	…undermine myths around EU immigration.
Cognitive processes	Salience	…discuss in vivid terms the likely impact on the individual and their close family of EU immigrants leaving the UK.
Emotions	Fear	… discuss the fear of losing EU migrants such as those working in the National Health Service.
	Anger	…discuss the anger immigrants might feel at having their lives affected by a decision they have no control over.
	Perspective-taking	…invite participants to consider how EU immigrants must feel.
Social cognitive processes	Social norms	…use opinion survey data to reflect social norms in areas where British people approve of EU immigration.
	Common ground	…discuss common areas of interest between British people and EU immigrants.
Moral Foundations	Authority	…discuss how immigrants respect authority and pay taxes.
	Loyalty	Either… discuss how immigrants can be team members. Or… discuss how immigration makes the UK stronger (patriotism).
	Purity	… discuss how immigrants contribute to a clean, healthier society.
	Care	…discuss how immigrants should be treated with kindness.
	Fairness	… discuss how immigrants deserve to be treated fairly.
	Liberty	…discuss how immigrants should be free to make their own choices.
Big Five	Openness	…discuss how immigrants make Britain more diverse.

	Conscientiousness	…discuss how immigrants are hard-working.
	Extraversion	…discuss how immigrants are friendly and gregarious.
	Agreeableness	…discuss how immigrants are agreeable and want to get along with people.
	Neuroticism	…discuss how immigrants will feel anxious about their situation.
Thinking styles	Integration	…discuss how immigrants integrate into society by getting the respondent to think about people in their own families who have done the same, thereby undermining the essentialist view that people cannot change.

3.3.2 The "Common text"

To ensure maximum comparability, the texts were constructed using a common framework, the *'Common text'*. This technique was not used by Feinberg and Willer (2015) but it was introduced to provide an additional element of experimental rigour.

The *'Common text'* was collection of paragraphs to which text could be added to reflect the individual treatment conditions. In later experiments in this thesis, a neutral text is used, but in this first study, it was a persuasive argument in its own right, of a kind that might be crafted by a skilled government communicator. The structure draws on classic rhetoric (Aristotle 350 BC), including elements of *ethos* (a character appeal), *logos* (a logical appeal) and *pathos* (an emotional appeal). *Ethos* is an appeal to people's values. Rolfe (2018) said that people trust their own experience first and foremost, so the text begins by asking people to think of their own values. They were then encouraged to think about people who had come to the UK from elsewhere in Europe; and presented with the *logos* element of the text, logical and fact-based arguments about the National Health Service (NHS), social care and the contribution made by EU migrants to the UK economy, using data sourced from the government's Migration Advisory Committee (2018). Finally, they were asked to consider three case studies (Giorgia, Sonia and Ina), who personified the arguments (Slovic, 2007), and as an emotional, or *pathos,* appeal, they were asked to empathise with them.

The argument for mentioning the NHS in this text was twofold. It was regarded as an important issue by voters (Cameron, 2019, p. 668), and by including a mention in all the texts, this allowed for it to have a consistent impact as opposed to skewing the results, which was the potential outcome if it were mentioned in just one text.

In the experiments, the texts were tested against a control whereby respondents were exposed to no text at all (the *'No text'* control). However, the *'Common text'* was also tested as a control condition. An analogy might be drawn with medical science where the effectiveness of a new medicine is tested against an active control – an existing treatment – rather than no medicine at all to see if it performs better than what is already available.

Fig. 3.2: The *'Common text'*

We would like to ask some questions about your views. Please read the text below and answer the questions at the end to let us know what you think.

When you think about what matters most to you, what is most important?

Do you have any views about people who have come to the UK from elsewhere in Europe?

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, they have been doing jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK.

What do you think?

Figs. 3.3 and 3.4 illustrate how the treatment conditions were created from the framework provided by the *'Common text'*. For ease of reading, the *'Common text'* is shown here in grey. In the survey, the text was one colour.

Fig.3.3: The Moral Foundation of *'Fairness'* text

We would like to ask some questions about your views. Please read the text below and answer the questions at the end to let us know what you think.

When you think about what matters most to you, how important do you think it is to have a level playing field? Do you think it's appropriate that those who make a positive contribution should be treated fairly and get the thanks and recognition they deserve?

Think then about people who have come to the UK from elsewhere in Europe. They have come here knowing that their qualifications and expertise will be recognised, and they will have the same opportunities as anyone else.

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. They are treated just like local staffers and they share the burden equally. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, the government's Migration Advisory Committee says that it is hard to recruit in this area. These people deserve our thanks for taking on jobs that few others will do.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. When it comes to making a contribution to society, we all have to play our part, and these people are paying their dues.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She is working with a well-known company that produces books for schools and hopes to share her success by employing others as the business grows.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. It's always full-on, but having an extra pair of hands around lightens the load for everyone.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They feel that anyone has the chance to do well in this country and how successful they are will depend on the amount of effort they put in.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK, despite what they have done for people here and through no fault of their own.

What do you think?

Fig.3.4: The *'Social norms'* text

We would like to ask some questions about your views. Please read the text below and answer the questions at the end to let us know what you think.

When you think about what matters most to you, do you think it's important to know what's going on in the heads of those around you? Sometimes it can be helpful to test what you think by finding out where you stand in relation to other people.

Think then about people who have come to the UK from elsewhere in Europe. Did you know that, according to opinion polls, the vast majority of British people (70%) would be happy for those who have a job or a place to study to remain in the UK?

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. Surveys show that over three-quarters of people in this country welcome those who come to work for the NHS. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. Some 60% of people are happy to have such workers here. As Britain rapidly ages, they have been doing jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. Last year, the results of the biggest ever public consultation on this subject were published. It found that the majority wanted a fair system that allowed those who made a contribution to stay.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She advises a company that produces highly-regarded books for schools.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She appreciates the way that people here are more accepting of disabilities.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They like the fact that, working here, he is able to make a small contribution to a sport that is loved by millions.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. This is despite the vast majority of people being happy for them to be here.

What do you think?

Table 3.1 gives examples of the text that was added to the *'Common text'* to create the treatment conditions.

Table 3.1: Adding in the text elements – some examples

Common text	**When you think about what matters most to you…**
Moral Foundation of Care	… how important do you think it is that people treat each other with consideration and decency? Have you ever found yourself in a position where you have had to rely on the kindness of others?...
Openness	… how important do you think it is that we should value diversity? Whether it is trying different types of food, better coffee or a brand-new television series, do you think that it's good to be open to new influences?...
Conscientiousness	… do you feel that it's important to be able to make a plan and stick to it? And do you feel frustrated when events leave you hanging and you can't get anything done?...
Integration	…how important is family? Think of your parents, and your grandparents, then think of their parents. As you go further back up your family tree, it's likely you will come across people who may have moved for work or family reasons, but who eventually decided to settle down and fit in wherever they found themselves…

3.3.3 Disclosures

Each of the following studies was pre-registered on the Open Science Framework. Details can be found on this link. https://osf.io/8xdse/.

3.4 The first pilot

The aim of the first pilot was to test whether the experiment was likely to work. Alongside the two controls, it tested the standard-length text framed to represent the *'Loyalty'* foundation alongside an identical text with a different donation amount (one of the four dependent variables), and a longer version. As a precaution in case this text was ineffective, it included the *'Integration'* text. Since Leave voters were more likely to be opposed to immigration, the texts were tested on five samples of Leave voters. One sample of Remain voters was included for comparison and exposed to the *'Common text'.*

3.4.1 Participants

The study involved 720 Leave voters supplied by Prolific Academic, alongside 120 Remain voters, who were included for the purposes of comparison. They were offered £1.40 for an 11-minute survey. Data was gathered on 5 March 2019.

The samples provided by Prolific Academic in the first and second pilots were non-representative, drawn from England, Scotland and Wales (i.e. not Northern Ireland). They were more left-leaning, female and younger than the national average.

3.4.2 Design and stimuli

The study was a between-subjects survey experiment. After consenting to the survey, participants were asked questions about their demographics (e.g. age, gender, region, socio-economic status), their past voting histories and future voting intentions, their media consumption and who they listened to on EU issues (family, friends or work colleagues). They were then asked to respond to the Moral Foundations Questionnaire (Graham et al.,

2008), the 44-item Big Five Inventory (John, Srivastava, 1999), and a series of items to test their levels of essentialism.

The Leave voters were then split randomly into six groups of 120 people and assigned to one of the following conditions.

'No text' control

'Common text' control

'Loyalty' text (framed to reflect team loyalty, standard length)

Identical *'Loyalty'* text with smaller donation (10p v 30p, standard length)

Longer *'Loyalty'* text

'Integration' text

Those in the *'No text'* control condition proceeded directly to answer the dependent variables after answering the initial questions. Those in the other conditions answered the initial questions and then read either the *'Common text'* or one of the treatment texts before answering the dependent variables (see Appendix for full texts).

The 120 Remain voters were assigned to a *'Common text'* condition for the purposes of comparison.

3.4.3 Dependent variables

The dependent variables included four questions.

The 'policy' question replicated a 2018 YouGov survey question on policy preferences for EU immigration[12]. The next two questions replicated 2016 YouGov questions on attitudes towards immigration from other EU member states (the 'EU attitudes' question[13]) and

[12] YouGov poll from July-August 2018. In this poll, the figures were 16% overall for "complete freedom", 54% for allowing EU migrants to come to work or study, 18% in favour of sharply reducing the numbers, and 12% who didn't know.
[13] YouGov 9 September 2016 via www.whatukthinks.org. In this poll, the figures were: A very good thing (9%), A fairly good thing (27%), Neither good nor bad (24%), A fairly bad thing (18%), A very bad thing (15%), Don't know (7%).

immigration from countries outside the EU (the 'non-EU attitudes' question[14]). The fourth and final question (the 'donation' question) was a behavioural test designed to establish whether participants were prepared to give a donation to 'Here for Good', a UK-registered charity that supported EU migrants who wanted to stay in the UK. The text of the dependent variables is shown in Fig. 4.

Fig. 3.5: The dependent variables

Q1: Which of these policies regarding immigration from the rest of the European Union do you favour most?

- *There should continue to be complete freedom for people from the rest of the EU to live in Britain*;
- *People from the EU should be free to come to Britain as long as they have a job to come to, or have a place at a British university;*
- *We should sharply reduce the number of people coming to Britain from the EU, whatever their reason for coming here;*
- *Don't know*

Q2: Do you think immigration from other EU countries is a good or bad thing for the UK?

("A very bad thing", "A fairly bad thing", "Neither good nor bad", "A fairly good thing", "A very good thing", "Don't know").

Q3: Do you think immigration from countries outside the EU is a good or bad thing for the UK?

("A very bad thing", "A fairly bad thing", "Neither good nor bad", "A fairly good thing", "A very good thing", "Don't know").

Q4: Thanks for your participation and your help so far. You have earned £1.40. There is an extra 30p on offer. Do you want to keep this for yourself or would you like to donate it to a British charity called 'Here for Good' (reg. charity no. 1177260), which has been set up to provide free legal advice to EU immigrants about their status?

(in random order)

- Please donate the money on my behalf
- Please add the money to my fee

[14] YouGov 9 September 2016 via www.whatukthinks.org. In this poll, the figures were: A very good thing (7%), A fairly good thing (24%), Neither good nor bad (24%), A fairly bad thing (19%), A very bad thing (19%), Don't know (7%).

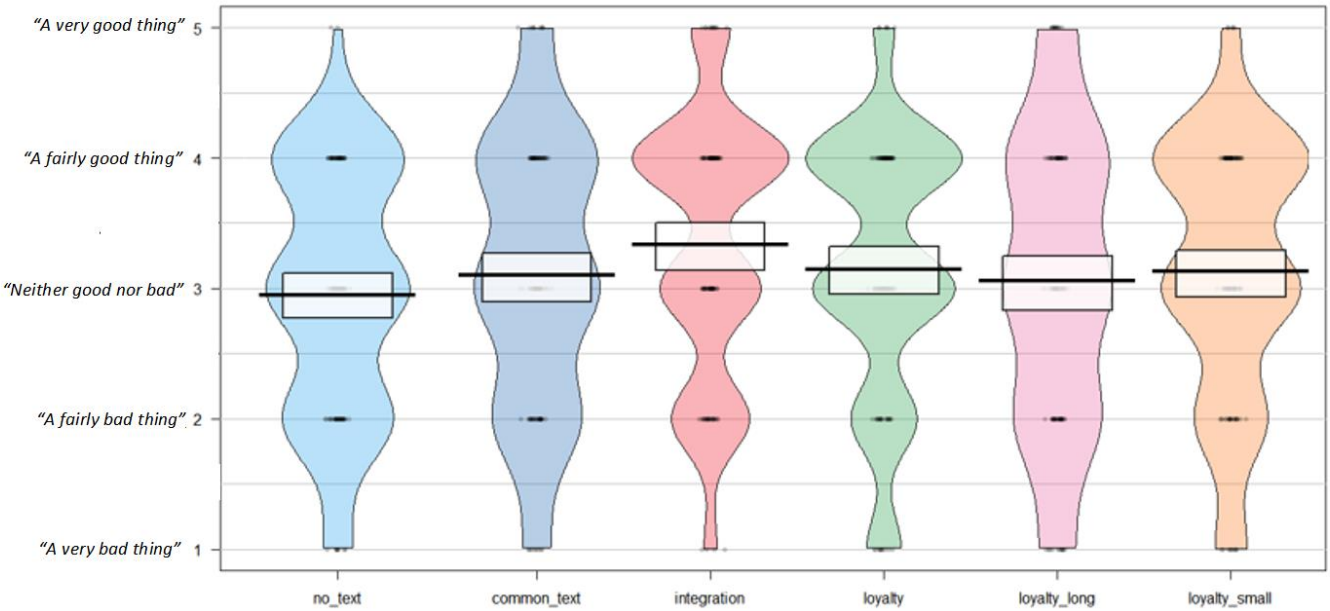
3.4.4 Analysis

The analysis plan was pre-registered. For the policy question, a category ("Allow") was created combining the first two responses (complete freedom + work or study) and compared to a second category combining the other two responses (sharply reduce + don't know). A between-subjects chi-squared test was used to test for significant differences. For the EU attitudes question and the non-EU attitudes question, between-subjects t-tests were used to test for significance. For the donation question, a between-subjects chi-squared test was used. Each text was tested against the controls only. The alpha level was set at .05.

Pre-registered criteria were set such that those who took part in the Leave survey but said they had voted for Remain would be excluded (and vice versa), as would those who clicked randomly on an attention check. Some 37 people were excluded from the first pilot.

3.4.5 Results

Fig. 3.6: Responses of Leave voters to the EU attitudes question



N=720

Table 3.2: Results for the first pilot

	Policy		EU attitudes				Non-EU attitudes		Donation	
Condition	% Allow	p-value	% Fairly + v good	Mean (5=high)	p-value	Cohen's d	Mean (5=high)	p-value	% donate	p-value
Leave voters										
No text	69	NA	31	2.92	NA	NA	2.75	NA	30	NA
Common Text	84	0.015	39	3.09	0.202	0.17	2.77	0.919	23	0.477
Loyalty text	79	0.117	42	3.14	0.100	0.22	2.67	0.513	30	0.840
Loyalty text (smaller donation)	76	0.286	42	3.14	0.098	0.22	2.80	0.717	48	NA
Longer Loyalty text~	67	0.817	38	3.05	0.380	0.12	2.80	0.754	32	0.708
Integration	87	0.003	50	3.31	0.003	0.40	2.93	0.212	29	1.000
Remain voters										
Common text	97	0.002	87	4.30	0.000	NA	3.84	0.000	58	0.000

N=840 The Cohen's d and p values shown are calculated against the *'No text'* control. ~Compared to the *'Common text'*, the result for the Longer Loyalty text was significantly lower (p=.005) on the policy question.

3.4.6 Discussion

The results of the first pilot suggested that the methodology was likely to be effective. There were significant changes in attitudes on the first two dependent variables.

It was striking that baseline support for EU immigration on the policy question was already high among Leave voters. In the *'No text'* condition, a significant majority (69%) said they would be content for EU migrants to come to the UK either to work or study, or with complete freedom. Once they had been exposed to a short text, this percentage rose to 87% in the *'Integration'* condition – a rise of 18% percentage points. Those who said EU immigration was "a fairly good thing" or "a very good thing" for the UK rose from 31% to 50% in the same condition (Cohen's d=.4).

On the non-EU attitudes question, there was no significant increase, suggesting that the participants had picked up on the specific content of the texts, which discussed immigration from the EU only. On the fourth dependent variable, there was no significant increase in responses to the donation question. In this experiment, all participants were paid £1.40 and the amount of the donation was set at either 10p or 30p. The results suggested that the smaller donation size was likely to show up more variability, so it was decided to reduce the donation size in the subsequent experiment.

The *'Loyalty'* text performed less well than the *'Integration'* text. It was therefore reframed for the second pilot to highlight another aspect of this Moral Foundation – patriotism.

As expected, the results for Remain voters were significantly higher than those for Leave voters on all four questions.

3.5 Second pilot

The aim of this pilot was to try out a long list of theories and techniques to establish which should go forward to the next stage.

3.5.1 Participants

5,880 participants were sourced from Prolific Academic, of whom 2,760 were Leave voters and 3,120 Remain voters. They were offered 50p for a 4-minute survey.

3.5.2 Design and stimuli

As with the first pilot, this was a between-subjects survey experiment.

After giving consent, participants were asked for demographic information. They were then exposed to the 10-item Big Five Inventory (BFI-10, Rammstedt, John, 2007); and six questions representing each of the Moral Foundations, including Liberty (Graham et al., 2011; Iyer et al., 2012). They were also asked political questions which the British Election Study (2016) had suggested were relevant for the Brexit vote (e.g. whether they agreed or disagreed that 'Things in Britain were better in the past').

There were limitations on the number of Leave voters available via Prolific Academic.

After answering these questions, the Leave voters were split randomly into 23 groups and exposed to either a short text or a control. The pre-registration had foreseen a maximum sample size of 165 participants per condition but allowed for a minimum sample size of 120. On Prolific Academic, the pool of potential participants who voted Leave was smaller than the pool of Remain voters, nonetheless, the minimum sample size of 120 participants was achieved for the Leave voters in all 23 conditions. For the Remain voters, eight conditions were tested initially, and achieved sample sizes of 165, but the lower take-up by Leave

voters freed up budget that made it feasible to test the other 15 conditions on Remain voters too, and sample sizes of 120 per condition were achieved for these conditions.

Twenty treatment conditions were tested. They can be found in the Appendix.

Rational Choice Theory: *'New information', 'Myth-busting'.*

Cognitive processes: *'Salience'.*

Emotions: *'Anger'*, *'Fear/Loss aversion', 'Perspective-taking'.*

Social Cognitive Processes: *'Social norms', 'Common ground'.*

Moral Foundations: *'Care', 'Fairness', 'Authority', 'Loyalty', 'Sanctity/Disgust', 'Liberty'*.

Big Five: *'Openness', 'Conscientiousness', 'Extraversion', 'Agreeableness'* and *'Neuroticism'.*

Thinking styles: *'Integration'.*

3.5.3 Dependent variables

The dependent variables used in the first pilot were used again in this survey experiment. Given that the smaller donation rate appeared likely to show up more variability, the donation rate for the fourth question was set at 5p (10% of the payment of 50p that was paid to all participants for taking the survey).

3.5.4 Analysis

The analysis plan, which was the same as in the first pilot, was pre-registered with the same exclusion criteria. Some 453 participants were excluded from this pilot.

3.5.5 Results

Table 3.3: Results of the second pilot for Leave voters, as compared to *'No text'*

	Policy question		EU attitudes				Non-EU attitudes		Donation	
Condition	% Allow	p-value	% Fairly + v good	Mean (5 = high)	p-value	Cohen's d	Mean (5=high)	p-value	% donate	p-value
No Text	70	NA	41	3.03	NA	NA	2.89	NA	46	NA
Common Text	76	0.365	41	3.12	0.541	0.09	2.73	0.341	43	0.781
Fairness	83	0.027	53	3.38	0.014	0.34	2.94	0.734	46	1.000
Care	83	0.034	47	3.30	0.062	0.26	2.93	0.780	52	0.413
Loyalty	82	0.046	42	3.25	0.113	0.22	2.97	0.573	47	1.000
Authority	76	0.32	51	3.30	0.073	0.25	2.94	0.710	51	0.540
Sanctity/Disgust	77	0.283	45	3.24	0.150	0.20	2.90	0.951	51	0.542
Liberty	79	0.128	44	3.25	0.133	0.21	2.85	0.781	39	0.398
Openness	85	0.009	43	3.31	0.051	0.27	2.90	0.951	41	0.532
Conscientiousness	83	0.044	43	3.20	0.254	0.16	2.96	0.626	48	0.912
Extraversion	79	0.119	46	3.22	0.167	0.19	2.98	0.524	47	1.000
Agreeableness	81	0.091	41	3.27	0.086	0.24	2.97	0.580	54	0.276
Neuroticism	81	0.063	45	3.29	0.072	0.25	3.05	0.289	59	0.076
Social Norms	83	0.04	44	3.36	0.021	0.32	3.11	0.148	55	0.243
New Information	72	0.798	34	3.03	0.998	0.00	2.73	0.270	48	0.842
Myth-Busting	72	0.916	37	2.99	0.802	0.03	2.81	0.570	41	0.571
Integration	82	0.066	53	3.35	0.037	0.29	2.91	0.880	52	0.455
Anger	80	0.094	51	3.30	0.059	0.26	2.98	0.535	43	0.752
Salience	81	0.066	41	3.21	0.199	0.17	2.97	0.580	55	0.202
Perspective-taking	84	0.025	45	3.37	0.015	0.34	2.99	0.493	55	0.215
Common Ground	77	0.301	46	3.30	0.065	0.25	3.06	0.220	46	1.000
Fear/Loss aversion	77	0.283	42	3.20	0.252	0.16	3.01	0.432	50	0.684

N=2,760.
The p values shown were calculated with regard to the *'No text'* control across all three variables, as was the Cohen's d for the EU attitudes question.
On the non-EU attitudes question, results that were significant against the *"Common text"* control were *"Social norms"* (p=0.027) and *"Common ground"* (p=0.038).
On the Donation question, *"Neuroticism"* was significant against the *'Common text'* control (p=0.032)

Table 3.4: Results of the second pilot for Remain voters, as compared to *'No text'*

	Policy question		EU attitude				Non-EU attitudes		Donation	
Condition	% Allow	p-value	% Fairly + v good	Mean (5=high)	p-value	Cohen's d	Mean (5=high)	p-value	% donate	p-value
No Text	94	NA	81	4.13	NA	NA	3.86	NA	73	NA
Common Text	97	0.302	85	4.24	0.243	0.13	3.92	0.534	77	0.540
Fairness	98	0.269	84	4.33	0.059	0.23	3.98	0.320	75	0.889
Care	98	0.127	91	4.45	0.001	0.40	4.10	0.033	84	0.054
Loyalty	98	0.326	86	4.27	0.188	0.17	3.85	0.927	81	0.171
Authority	96	0.458	86	4.30	0.101	0.20	3.92	0.599	78	0.422
Sanctity/Disgust	98	0.138	85	4.29	0.131	0.19	3.97	0.331	74	1.000
Liberty	97	0.297	93	4.38	0.006	0.33	4.13	0.012	81	0.179
Openness	95	0.637	84	4.25	0.219	0.14	3.91	0.668	74	1.000
Conscientiousness	97	0.449	93	4.42	0.002	0.37	4.04	0.098	75	0.856
Extraversion	94	0.988	83	4.27	0.185	0.16	3.90	0.726	78	0.416
Agreeableness	98	0.146	91	4.29	0.083	0.21	4.00	0.214	79	0.304
Neuroticism	99	0.142	90	4.35	0.024	0.27	4.05	0.099	74	0.957
Social Norms	98	0.098	87	4.34	0.028	0.25	4.06	0.056	79	0.290
New Information	92	0.928	85	4.25	0.210	0.14	3.89	0.784	75	0.880
Myth-Busting	96	0.296	89	4.28	0.121	0.17	3.96	0.357	72	0.819
Integration	96	0.519	88	4.31	0.087	0.21	4.01	0.216	75	0.796
Anger	97	0.304	88	4.26	0.211	0.16	3.94	0.428	81	0.192
Salience	97	0.498	83	4.19	0.580	0.07	3.85	0.913	78	0.495
Perspective-taking	95	0.699	91	4.33	0.033	0.25	3.91	0.666	77	0.553
Common Ground	99	0.058	87	4.39	0.011	0.32	4.00	0.240	75	0.827
Fear/Loss aversion	99	0.046	94	4.44	0.000	0.41	4.07	0.040	77	0.471

N=3,120

The p values shown were calculated with regard to the *'No text'* control across all three variables, as was the Cohen's d for the EU attitudes question.

On the EU attitudes question, results that were significant against the *'Common text'* control in this question were *'Fear/Loss aversion'* (p=0.014), *'Care'* (p=0.020) and *'Conscientiousness'* (p=0.037).

3.5.6 Discussion

Among the Leave voters, on the EU attitudes question, comparing means and excluding "Don't knows", the largest effect sizes were for the *'Fairness'* (d=.34)*, 'Perspective-taking'* (d=.34), *'Social norms'* (d=.32) and *'Integration'* (d=.29) conditions. Each of these results was significant at p<.05, although, as this was a pilot, these results were not corrected for multiple comparisons. Illustrating this, the number of those saying that the EU immigration was 'A fairly good thing' or 'A very good thing' for the UK rose from 41% in the *"No text"* control to 53% in the *'Fairness'* and *'Integration'* conditions.

All four texts were selected to go through to the next experiment.

Among the Remain voters, on the policy question, the *'No text'* baseline was high (94%), which created a ceiling effect. On the EU attitudes question, comparing means and excluding "Don't knows", there were eight statistically significant results. The largest effect sizes were for *'Fear/Loss aversion'* (d=.41), *'Care'* (d=.4) and *'Conscientiousness'* (d=.37). As an illustration, the percentages of those who said that the EU immigration was 'A fairly good thing' or 'A very good thing' for the UK rose from 81% in the *"No text"* control to 94% in the *'Fear/Loss aversion'* condition.

These three texts were also selected to go through to the next experiment.

Two other texts were considered worthy of inclusion in the next experiment on the basis of the first selection criterion because they were commonly used techniques. *'Myth-busting'* was included to see how it compared with other techniques. *'Openness'* was included because it represented a diversity argument which is also often used in support of immigration. The trade-offs were that the *'Liberty'* foundation was not included, but this had only been effective with Remain voters who were already more in favour of immigration. The *'Neuroticism'* text was also considered. While it was framed to be distinct from the *'Fear'* and *'Perspective-taking'* conditions, there was concern that it fell between them thematically and would add little to the overall findings.

The results for the *'Common text'* were interesting. As a standalone argument, it generated no significant results in this experiment. The effect size generated was d=.09 for Leave voters and d=.13 for Remain voters. It would seem that this text was doing some of the work of changing attitudes, but given that the strongest effect sizes in this experiment were d>.30, it was not contributing a large amount. This is consistent with the results of the first pilot when the effect size for this text on the EU attitudes question was d=.17 against an effect size of d=.40 for the Integration text.

No corrections for made for multiple comparisons at this stage since this was a preliminary exercise ahead of the main experiment.

3.6 The main experiment

The aim of the main experiment was to test a number of these texts on large nationally-representative samples to see if British attitudes towards EU immigration could become more positive in a more ecologically valid setting.

3.6.1 Participants

The survey experiment, which took place from 20–30 August 2019, involved 11 nationally representative samples of approximately 1,000 people each, sourced by the polling agency YouGov (N=11,357).

3.6.2 Design and stimuli

This survey experiment was a between-subjects design. There were two sets of hypotheses.

H1 was that at least one text would generate more positive responses towards immigration than the *'No text'* control. There was a separate hypothesis for each dependent variable.

H2 was that at least one text would generate more positive responses towards immigration than the *'Common text.'* Again, there was a separate hypothesis for each dependent variable.

The following texts were included in the main experiment.

Rational Choice Theory: *'Myth-busting'.*
Emotions: *'Fear/Loss aversion', 'Perspective-taking'.*
Social Cognitive Processes: *'Social norms'.*
Moral Foundations: *'Fairness', 'Care'.*
Big Five: *'Openness', 'Conscientiousness'.*
Thinking styles: *'Integration'.*

3.6.3 Dependent variables

Participants were asked to respond to the policy question, the EU attitudes question and the donation question. In this instance, this donation question asked participants to choose whether they wanted to keep 5 YouGov points for themselves or to donate the cash equivalent to the charity 'Here for Good'. Each donation was worth 5p. At the end of this experiment, the donation amounts for all three experiments were added up and a donation was made to the charity.

3.6.4 Analysis

The pre-registered analysis plan stated that multiple comparisons would be controlled for using a Holm-Bonferroni correction (Holm, 1979) on a one-directional test. YouGov only supplied data for respondents who had fully answered the questions, so there were no exclusions.

3.6.5 Results

Fig. 3.7: Results for the nationally-representative samples on the policy question

Participants were asked to respond to the following question.

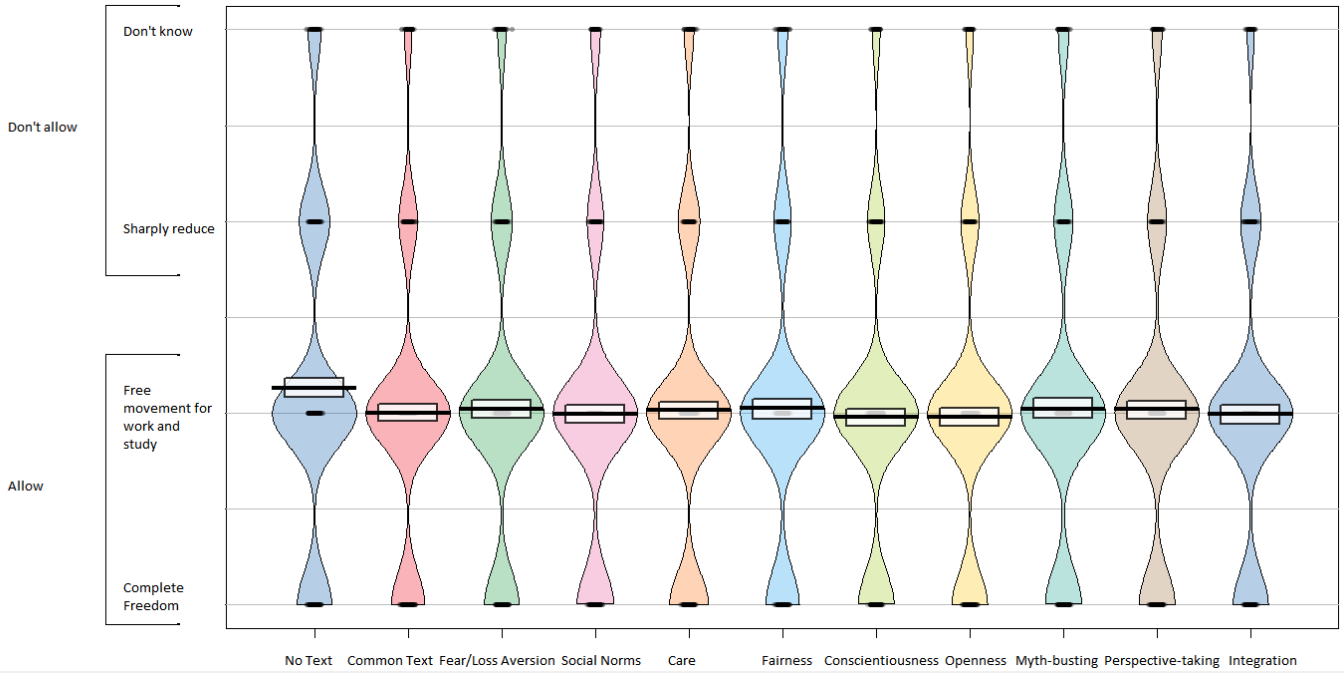
Which of these policies regarding immigration from the rest of the European Union do you favour most?

1 = There should continue to be complete freedom for people from the rest of the EU to live in Britain.

2 = People from the EU should be free to come to Britain as long as they have a job to come to, or have a place at a British university.

3 = We should sharply reduce the number of people coming to Britain from the EU, whatever their reason for coming here.

4 = Don't Know [15]



N=11,357

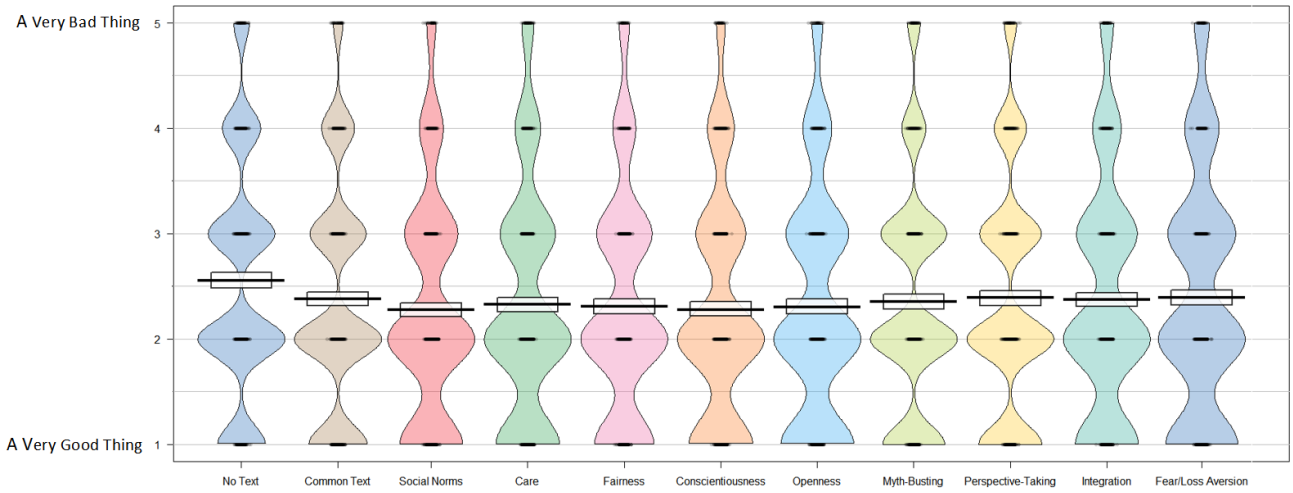
[15] 6% (700 people) out of the total sample of N=11,357 answered "Don't Know".

Fig. 3.8: Results for the nationally-representative samples on the EU attitudes question

Participants were asked to respond to the following question.

Do you think immigration from other EU countries is a good or bad thing for the UK?

(1 = A Very Good Thing, 5 = A Very Bad Thing)



N=11,357.

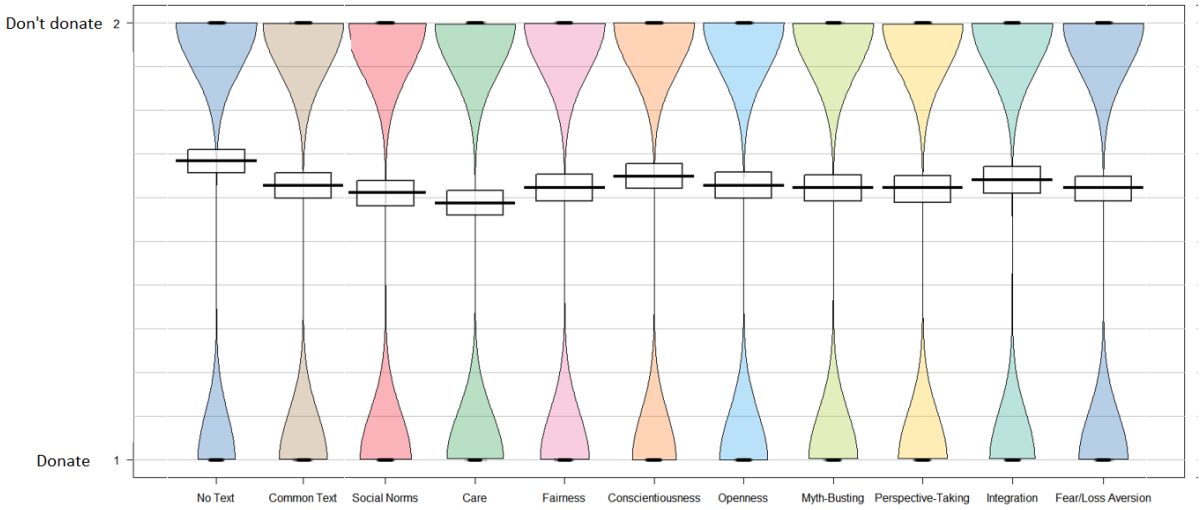
Fig. 3.9: Results for the nationally-representative samples on the donation question

Participants were asked to respond to the following question.

Thanks for your help, which is much appreciated. For this study, there are an extra 5 YouGov points on offer. Do you want to keep these, or would you prefer us to donate the cash equivalent on your behalf to a British charity called 'Here for Good' (reg. charity no. 1177260), which has been set up to provide free legal advice to EU immigrants about their status?

1 = Please donate money on my behalf[16]

2 = Please add YouGov points to my account



N=11,357.

[16] The order of these options was randomised.

Table 3.5: Results for the nationally-representative samples, as compared to *'No text'*

	Policy question		EU attitudes				Donation	
Condition	% Allow	p-value	% Fairly + v. good	Mean (5=high)	p-value	Cohen's d	% donate	p-value
No Text	71	NA	47	3.38	NA	NA	30	NA
Common Text	79	0.000*	53	3.55	0.001*	0.15	35	0.045*
Integration	79	0.000*	54	3.56	0.001*	0.15	33	0.281
Perspective-taking	77	0.001*	52	3.55	0.002*	0.14	34	0.059
Myth-busting	77	0.001*	52	3.59	0.000*	0.19	37	0.003*
Openness	80	0.000*	57	3.64	0.000*	0.23	35	0.021*
Conscientiousness	81	0.000*	57	3.64	0.000*	0.23	33	0.230
Fairness	79	0.000*	56	3.64	0.000*	0.23	36	0.011*
Care~	76	0.014*	56	3.60	0.000*	0.19	40	0.000*
Social norms	80	0.000*	57	3.66	0.000*	0.25	36	0.006*
Fear/Loss aversion	77	0.002*	51	3.50	0.023*	0.10	35	0.028*

N=11,357 p values calculated with regard to the 'No text' control across all three variables, as was the Cohen's d for the EU attitudes question.
Viewed across the three questions, *p<.0167 in the first instance, <.025 in the second instance and <.05 in the third.
~*Care'* (p=.012) was significant against the '*Common text*' on the Donation question.

Table 3.6: Results for Leave voters, as compared to *'No text'*

	Policy question		EU attitudes				Donation	
Condition	% Allow	p-value	% Fairly + v. good	Mean (5=high)	p-value	Cohen's d	% donate	p-value
No Text	62	NA	28	2.83	NA	NA	16	NA
Common Text	70	0.018	32	2.93	0.131	0.11	23	0.021
Integration	73	0.001*	34	3.04	0.004*	0.20	20	0.245
Perspective-taking	70	0.019	31	2.96	0.060	0.14	20	0.142
Myth-busting	69	0.036*	35	3.08	0.001*	0.24	24	0.011*
Openness	70	0.025*	31	3.01	0.012*	0.18	21	0.100
Conscientiousness	71	0.006*	34	3.04	0.004*	0.21	21	0.076
Fairness~	71	0.008*	37	3.14	0.000*	0.31	24	0.011*
Care	67	0.134	36	3.05	0.002*	0.22	20	0.135
Social norms	73	0.001*	33	3.05	0.002*	0.22	22	0.061
Fear/Loss aversion	71	0.005*	31	2.97	0.042	0.14	20	0.154

N=5,121 both weighted and unweighted. p values calculated with regard to the 'No text' control across all three variables, as was the Cohen's d for the EU attitudes question.
Viewed across the three questions, *p<.0167 in the first instance, <.025 in the second instance and <.05 in the third.
~ *'Fairness'* was significant (p=.005) against the *'Common text'* on the EU attitudes question, with an effect size of 0.2.

Table 3.7: Results for Remain voters, as compared to *'No text'*

	Policy question		EU attitudes				Donation	
Condition	% Allow	p-value	% Fairly + v. good	Mean (5=high)	p-value	Cohen's d	% Donate	p-value
No Text	85	NA	70	3.97	NA	NA	47	NA
Common Text	92	0.002*	79	4.21	0.000*	0.28	48	0.861
Integration	91	0.021*	80	4.16	0.002*	0.21	50	0.457
Perspective-taking	94	0.000*	81	4.26	0.000*	0.34	53	0.121
Myth-busting	93	0.002*	78	4.21	0.000*	0.26	51	0.261
Openness	94	0.000*	84	4.28	0.000*	0.36	50	0.456
Conscientiousness	93	0.001*	84	4.27	0.000*	0.34	48	0.837
Fairness	92	0.005*	83	4.26	0.000*	0.32	51	0.336
Care~	89	0.164	78	4.19	0.000*	0.24	59	0.000*
Social norms	91	0.025*	82	4.27	0.000*	0.34	52	0.152
Fear/Loss aversion	90	0.036	78	4.19	0.000*	0.24	53	0.092

N=5,483 (unweighted) or 4,785 (weighted). p values calculated with regard to the 'No text' control across all three variables, as was the Cohen's d for the EU attitudes question.
Viewed across the three questions, * p<.016 in the first instance, <.025 in the second instance and <.05 in the third.
~ *'Care'* was significant (p=0.001) against the '*Common text'* on the Donation question.

Looking at the nationally-representative samples, as compared to the *'No text'* control, all of the results were significant on both the policy and EU attitudes questions, and there were several significant results on the donation question, so H1 could be accepted. On the EU attitudes question, the average effect size was d=.19, and the largest effects were for *'Social norms'* (d=.25), *'Openness'* (d = .23), *'Conscientiousness'* (d=.23) and *'Fairness'* (d=.23). However, when compared to the *'Common text'*, other than the *'Care'* condition on the donation question, none of the results were significant, so H2 could not reliably be accepted.

No hypotheses were pre-registered for the Leave and Remain voters, so these results can be seen as exploratory. For Leave voters, the sample size per condition was N=426 on average, and for Remain voters, the average sample size was N=388.

3.6.6 Discussion

In 2016, David Cameron, then Prime Minister and leader of the Remain campaign, felt that there were no arguments he could make on the subject of immigration. The main experiment in this study, which uses large, representative samples sourced from a national survey agency, demonstrates not only that there are arguments that make British attitudes towards immigration more positive, but that there may be more than one argument that does so. This is an important conclusion in its own right.

On average, and as compared to the *'No text'* control, attitudes towards EU immigration in this experiment became significantly more positive by over seven percentage points. Donation rates were also 5.4 percentage points higher. On the EU attitudes question, the average effect of being exposed to a treatment text was d=.19.

Where this intervention tournament was less successful was in identifying which text performed best and which theory or theories deserved to be taken forward for further study. Based on these results, and after correcting for multiple comparisons, it is not possible to say with certainty that any of the treatment texts reliably did better than any other, or even better than the *'Common text'.*

There are several possible explanations for this. The design of the experiment may have been over-ambitious in trying to compare too many treatment texts simultaneously. Even with samples of about 1,000 per condition, the experiment may not have been sensitive enough. The intention behind the design had been to ensure that external conditions were held equal at a time when the politics around the UK's exit from the EU were in considerable flux. A sporting metaphor might be the London marathon, whereby the maximum number of runners set off simultaneously in the same weather conditions. An alternative design might have been based on the format of the football (soccer) World Cup, whereby treatment texts had to win their groups before proceeding to the final stages. This might have made the experiment more informative by reducing the number of multiple comparisons to correct for, but it would have put the experiment at the mercy of external events (changes in the political weather) that might have changed the wider context.

Another contributing element may have been that the *'Common text'* was an active rather than a neutral control. It was drafted as a persuasive argument of the type a skilled government communicator might make. The test here was whether the psychologically-framed material would make a difference at the margin.

Just how strong an argument the *'Common text'* was is not clear. For the EU attitudes variable, as compared to the *'No text'* control, the effect size of being exposed to the *'Common text'* was d=.15, as compared to d=.25 for exposure to the *'Social norms'* text in the nationally representative sample. This result is consistent with the results in both the first and second pilots, where the effect size generated by the *'Common text'* was less than half of that generated by the most successful texts. Even so, it is not possible to say with certainty that the psychologically-framed material produced an additional effect.

Chapter 4 discusses the response to this result. Taking an alternative approach, it is a study that seeks to understand what underlies British attitudes towards immigration, thereby establishing an alternative route to determining which theories are most relevant in a study of attitudes towards immigration in the UK. Using two datasets, the relationships are explored with a view to gaining a deeper understanding of the relationships that exist.

Ch. 4: Exploring the relationship between psychological constructs and British attitudes towards immigration

Abstract: Using two large datasets (N=5,800, N=30,842), this study investigates the underlying drivers of attitudes towards immigration in the UK. Previous research has established that constructs such as authoritarianism, Social Dominance Orientation, the Big Five personality traits and the Moral Foundations are related to such attitudes. This study compares these to demographic data and political questions. It finds that authoritarianism is one of the key drivers of such attitudes, with correlations of r=.46 on average for items asking about support for the death penalty or the need for young people to respect traditional British values. A hierarchical regression confirms that authoritarianism measures explain more variance than demographic measures. The datasets are further examined to explore the inter-correlations of these constructs.

4.1 Introduction

In Ch.3, the final experiment confirmed with a nationally and politically representative sample that exposure to a nine-paragraph text could change attitudes towards immigration significantly. This was an encouraging outcome, demonstrating that attitudes towards immigration could become more positive. However, the results were not entirely as planned. The intention of that exercise had been to single out a technique or construct on which it would be possible to focus for the remainder of this thesis. While each of the nine texts generated a significant result compared to the 'No text' control, and some of the texts generated larger effect sizes than others, it was not possible to distinguish between them. There was no evidence that would justify a focus on a single variable or construct for the remainder of the doctorate.

The exercise did, however, generate a substantial amount of data from members of the British public. Responses were gathered from 5,880 people in the second pilot, and there was the opportunity to analyse data from wave 15 of the British Election Study (N=30,842). While they did not cover all the influences on political attitudes listed in the previous chapters, the datasets did include responses to survey questions on the Moral Foundations (Graham, Haidt, Nosek, 2009), authoritarianism (Adorno et al., 1950; Altemeyer, 1981; Evans, Heath, Lalljee, 1996), Social Dominance Orientation (SDO, Ho et al., 2015) and the Big Five personality traits (McCrae, Costa, 1996). The datasets also included conventional demographic questions, political questions relating to attitudes that have been associated with Leave voters, and tests for locus of control, political self-efficacy and social capital (BES, 2016: Halpern, 2009).

After a pause for reflection, and with the intention of learning more about the constructs associated with immigration attitudes in the UK and allowing the thesis to be guided by the data, further studies were planned in which these two databases would be examined.

The intention was to corroborate and extend the existing literature. In political campaigns, the focus is often on demographic variables (e.g. "Stevenage Woman", BBC, 2023). These studies would explore whether psychological constructs were more or less highly correlated with immigration attitudes than demographic variables; they would investigate how these

constructs compared against each other in this regard; and they would seek to establish the extent to which these constructs were inter-correlated. Three research questions would be addressed.

RQ1. Which of these constructs, if any, are more highly correlated with immigration attitudes than demographic variables?

RQ2. How do psychological constructs compare against each other as correlates of immigration attitudes?

RQ3. To what extent are these constructs inter-correlated?

These investigations were exploratory, and there was no pre-registration since the data had already been collected. Later chapters (Chs. 6 and 7) have pre-registered hypotheses about the relationships between these constructs that are partly based on these results.

One question was whether it was more appropriate to test for correlations or whether regression would be the more useful tool. Since the research was exploratory and a wide array of variables was being investigated, correlation was chosen as the initial analytical method, after which regressions were carried out for the data in both studies. With the BES data, a hierarchical regression was carried out to compare the variance explained by demographic variables and that explained by authoritarian measures.

4.2 Literature review

4.2.1 Comparing psychological constructs and demographics

While demographic categorisations are often used in political campaigning, 'Stevenage woman' and 'Workington man' being just recent exemplars (BBC, 2023)[17], there are numerous examples in the literature of psychological constructs performing better than demographic variables at predicting political or ideological attitudes.

Zmigrod et al. (2021) found that cognitive and personality assessments consistently outperform demographic variables by 4- to 15-fold when it comes to predicting individual differences in ideological preferences. Gerber et al. (2010) found that the Big Five personality traits can often predict political ideology as well as education or income; and Koleva et al. (2012) found that Moral Foundations Theory is better at predicting political judgments than ideology, age, gender, religious attendance and interest in politics.

Immigration attitudes are usually associated with the demographic variables of age, socio-economic status and education, according to a meta-analysis carried out by Dempster, Leach and Hargrave (2020). In the EU referendum, those who were older, less well-off and less well-educated were more likely to vote to Leave (Curtice, 2017). However, Kaufmann (2016), analysing 2015 British Election Survey data, found that one of the strongest predictors of an intention to vote Leave had been support for the death penalty, which he said was linked to the psychological construct of authoritarianism (Altemeyer, 1981; Stenner, 2005).

The first research question for the current study is whether there are any psychological constructs in these datasets that are more highly correlated with immigration attitudes than the demographic variables.

[17] As described by the Labour think tank Labour Together, "Stevenage Woman" is a mother in her early 40s, in full-time work with two children who voted Conservative in 2019 but has since become inclined towards Labour. "Workington man" was identified by the Conservative think tank Onward as a middle-aged northern man without a university degree who previously supported Labour but also voted for Brexit and who might vote Conservative in 2019. (BBC, 'What is the 'Stevenage Woman' stereotype? The voters who could be key for Labour' 3 April 2023).

4.2.2. How do psychological constructs compare as correlates of immigration attitudes?

The second research question is how different psychological constructs compare against each other as correlates of immigration attitudes, given that they are often studied in isolation. Zmigrod et al. (2021) express concern that researchers studying politics, nationalism and religion generate hypotheses and design studies that will confirm their prior beliefs. Without a comparative overview that could either challenge or validate a researcher's findings, it would be easy to jump to erroneous conclusions.

Summarised below is some of the existing research on the known relationships between immigration attitudes and the constructs for which this study has data.

Beginning with the more overtly political questions, the British Election Study team (2016) found Leave voters were opposed to immigration. They had an external locus of control; they were inclined to agree that things in Britain were better in the past; they had lower levels of social capital as measured by responses to a generalised social trust question; and they trusted the wisdom of ordinary people over the opinions of experts.

Zmigrod, Rentfrow & Robbins (2018) investigated the cognitive underpinnings of nationalistic identities and ideologies in the context of Brexit. While it was not the primary focus of their research, immigration was one of the areas covered. They found a negative correlation between pro-Brexit attitudes and pro-immigration attitudes (r=-.65) underlining the significance of immigration for those who voted to leave the European Union. However, they also found relationships between pro-immigration attitudes and authoritarianism (r= -.49), nationalism (r = -.42), conservatism (r= -.49) and the Wisconsin Card Sorting Test for cognitive flexibility (=.21). Their findings are consistent with Kaufmann's (2019) study and with research carried out by Stenner (2005, 2012), who maintains that it is a predisposition towards authoritarianism that drives the intolerance of difference.

Koleva et al. (2012) looked at correlations for the Moral Foundations and political attitudes in the USA. They found that adherence to the Harm and Care foundations (the individualising foundations) made it significantly less likely that a person would adopt a conservative position on illegal immigration. For the binding foundations, the Loyalty result

was insignificant, but adherence to the Authority and Purity foundations made it more likely that an individual would adopt a conservative position.

Personality traits and immigration were the focus of a 2020 study by Talay and Connick. They tested US attitudes towards Syrian refugees using the HEXACO model (Ashton, Lee, 2001), which is similar but not identical to the Big Five (McCrae, Costa, 1996). They established that Openness to Experience (r=.27) and Agreeableness (r=.27) were most strongly correlated with positive attitudes towards immigration. Conscientiousness and Extraversion were negatively correlated but the results were more mixed. Their findings are consistent with those of Gallego and Pardos-Prado (2013), who found that Agreeableness was positively correlated with attitudes towards immigration (r=.16) as was Openness, albeit to a lesser degree (r=.05), while Conscientiousness (r=-.08) and Extraversion (r= -.03) were both negatively correlated. A separate study by Carlson et al. (2019) found that personality explained about 14% of the variance in prejudicial attitudes toward refugees in the United States.

4.2.3 Which constructs are likely to go together?

The third research question looks at how psychological constructs are inter-related and is sparked by Allport's (1954) insight that there is a set of characteristics that tend to be found among "prejudiced" people. He suggested that, among others, these include a strong sense of morality related to cleanliness, black-and-white thinking, adherence to social norms, intolerance of ambiguity and externalisation of conflict.

More recent research has also established correlations between psychological constructs. Sibley and Duckitt (2009) found that Right-Wing Authoritarianism (RWA) is related to low levels of Openness, while Social Dominance Orientation (SDO) is related to low levels of Agreeableness. Federico et al. (2013) found that RWA is related to the binding Moral foundations and SDO is negatively correlated to the individualising foundations. Meanwhile, Zmigrod et al. (2018) found relationships between authoritarianism and nationalism. The data available in this study may help to generate a deeper understanding as to how these relationships work.

4.2.4 Data sources

This study drew on two data sources. The first data set (described here as Study 4a) was generated by the second pilot study on Prolific Academic that was discussed in the previous chapter, and the second (described here as Study 4b) was a publicly available dataset: wave 15 of the British Election Study with data gathered in 2019 (N=30,842).

The responses of 5,880 people are included in the dataset for Study 4a, where respondents answered a shorter version of the Big Five questionnaire (Rammstedt, John, 2007), six Moral Foundations questions, and other political questions, notably those where the British Election Study team (2016) found marked differences between Leave and Remain voters in the 2016 vote, such as locus of control, self-efficacy and trust (a proxy measure for social capital, Halpern 2015).

However, since the majority of these people in this experiment were exposed to treatment texts, the responses of only 283 voters (120 Leave and 163 Remain) who were exposed to the 'No text' control were considered for RQs 1–2, whereas the full sample was used for RQ3.

Study 4b is based on the data set gathered by the British Election Study, which includes some of the same political questions used in Study 4a. It also includes the BES scale for measuring authoritarianism (Evans, Heath, Lalljee, 1996), and the SDO-7 scale measuring for Social Dominance Orientation (Ho et al., 2015). Each of the research questions was tested on the full sample in this study since participants had not been involved in an experiment beforehand.

4.2.5 Correcting for multiple comparisons

The focus for this study is to compare the relationships between immigration attitudes and different constructs. However, significance is also relevant, and corrections are made for multiple comparisons using the most conservative measure, dividing the alpha level by the number of questions explored in each study.

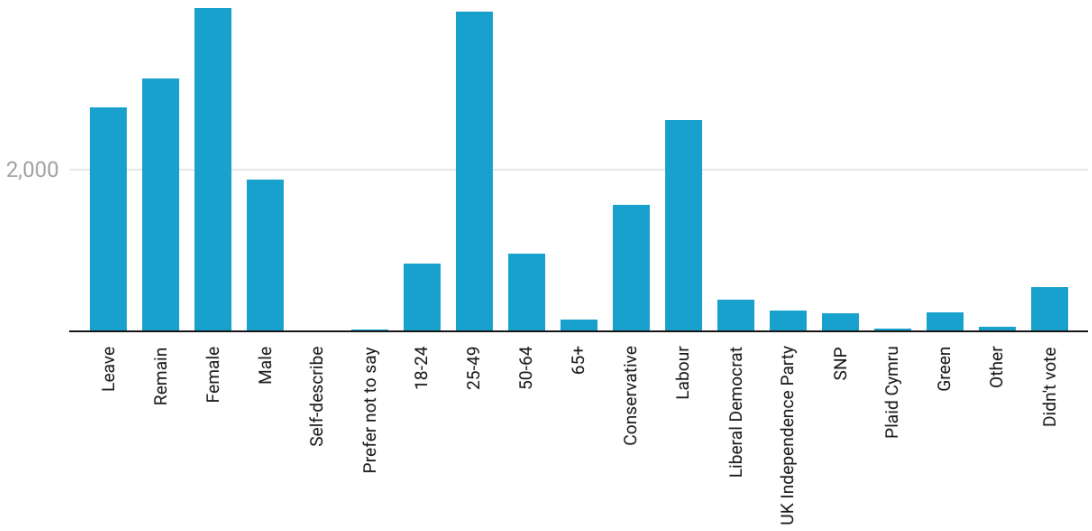
For Study 4a, there were 27 independent variables tested, so the alpha level was set at .05/27=.00185. For Study 4b, there were 26 variables tested across three dependent variables, so the alpha was set at .05/78 = .0006. Significant results are marked with an asterisk.

4.3 Study 4a

4.3.1 Participants

This sample was supplied by Prolific Academic and comprised 5,880 participants, of whom 2,760 were Leave voters and 3,120 were Remain voters, randomly split into 2x23 samples. Some 68% were female and the modal age bracket was 25-49. They were offered 50p for a 4-minute survey. Study 4a was carried out in March and April 2019.

Fig. 4.1: 4a participants



n=5,880. Voting data from 2016 EU referendum and 2017 general election.

Created with Datawrapper

4.3.2 Procedure

Participants were asked for their consent before taking part, and then exposed to the survey questions.

In all but two samples (those in the “No text” control groups), participants were then exposed to a short text about immigration and asked to respond to questions about their views on EU immigration, which was the dependent variable in this study.

4.3.3 Design and stimuli

Study 4a was a between-subjects design. After giving consent, the 5,800 participants responded to: Demographic questions (age, gender, socio-economic status); the 10-item Big Five questionnaire (BFI-10, Rammstedt, John, 2007); six Moral Foundations Questionnaire items, one per foundation, including one on the foundation of Liberty (Graham et al., 2011, Iyer et al. 2012); and a number of political questions (Table 4.4) matching those in the British Election Study.

There were 27 independent variables in Study 4a, so the alpha was divided to allow for multiple comparisons to .05/27=.00185.

In this study, only the responses of two samples exposed to the “No text” controls (120 Leave voters and 163 Remain voters) were considered for the purposes of testing for EU immigration attitudes (RQs 1 and 2). For RQ3, on the inter-correlations, the responses of the full sample (n=5,880) were used for general correlations, while the smaller sample was used to show the inter-correlations for items that were positively and negatively correlated with EU immigration attitudes.

4.3.4 Results

4.3.4.1 Correlations for demographic variables

Table 4.1: Demographic variables correlated with EU immigration attitudes

Question	r	p-value
How old are you?	-0.09	0.15
How do you describe your gender? (Male = 1, Female = 2 Self-describe=3, Prefer not to say =4)	0.04	0.5
Would you say you are... living comfortably on present income (4)… finding it very difficult on present income (1)	0.12	0.04

Correcting for multiple comparisons alpha = 0.05/27=0.00185. N=283.

Once corrected for multiple comparisons, none of the results were significant. However, the size and direction of the correlations was in line with expectations. The correlation for age (r= -.09) suggested that it is likely that older people are slightly less positive about immigration. Gender did not appear to be relevant, but a higher income appeared to be positively associated with attitudes towards EU immigration.

4.3.4.2 Correlations for Big Five

Table 4.2: Big Five items correlated with EU immigration attitudes

I see myself as someone who …	r	p-value
(Open) … has few artistic interests	0.18[+]	< 0.01
(Open) … has an active imagination	0.16	0.01
(Conscientious) … tends to be lazy	0.03	0.58
(Conscientious) … does a thorough job	-0.03	0.61
(Extravert) … is reserved	-0.07	0.27
(Extravert) … is outgoing, sociable	-0.09	0.14
(Agreeable) … tends to find fault with others	0.10	0.09
(Agreeable) … is generally trusting	-0.05	0.39
(Neurotic) … gets nervous easily	0.03	0.67
(Neurotic) … is relaxed, handles stress well	0.00	0.94

Significance level after correction for multiple comparisons is 0.05/27=0.00185.
[+]The p-value for the "unartistic" question is 0.0025, i.e. close to significance.
N=283.

After being corrected for multiple comparisons, the results for the Big Five questions were not significant, although the correlations for the two items testing for Openness came closest to being so. Both were positively correlated with attitudes towards EU immigration. Cronbach's alpha, a measure of this scale's internal consistency, was calculated as being .567 in this dataset.

4.3.4.3 Correlations for Moral Foundations Theory items

Table 4.3: Moral Foundation questions correlated with immigration attitudes

When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking? OR Please read the following sentences and indicate your level of agreement or disagreement.	R	p-value
Whether or not some people were treated differently than others (Fairness)	0.19*	< 0.01
Whether or not someone cared for someone weak or vulnerable (Care)	0.13	0.03
Whether or not someone's actions showed a love for his or her country (Loyalty)	-0.34*	< 0.01
Whether or not someone showed a lack of respect for authority (Authority)	-0.13	0.03
People should not do things that are disgusting, even if no-one is harmed (Purity)	-0.24*	< 0.01
Everyone should be free to do as they choose, so long as they don't infringe upon the equal freedom of others (Liberty)	0.07	0.23

Significance level after correction for multiple comparisons is .05/27=.00185.
N=283.

This dataset included one question per Moral Foundation. While a single item cannot be said to represent an entire foundation, there are significant correlations for items taken from the Loyalty and Purity foundations (both of which were negatively correlated) and for the Fairness foundation, which was positively correlated. An item on the Liberty foundation – a later addition to the original five foundations – appeared to be positively associated with immigration attitudes, but not significantly so.

4.3.4.4 Correlations for political questions

Table 4.4: Political questions correlated with EU immigration attitudes

How much do you agree or disagree with the following statements?	R	p-value
When I make plans, I am almost certain that I can make them work (Locus of control, 5=strongly agree)	-0.07	0.22
Many times, I feel that I have little influence over the things that happen to me (Locus of control, 5= strongly disagree)	0.12	0.04
It is often difficult for me to understand what is going on in government and politics (Political efficacy, 5=strongly disagree)	0.26*	< 0.01
I have a pretty good understanding of the important political issues facing our country (Political efficacy, 5=strongly agree)	0.17+	< 0.01
Things in Britain were better in past (5=strongly agree)	-0.39*	< 0.01
Politicians don't care what people like me think (5=strongly agree)	-0.21*	< 0.01
I'd rather put my trust in the wisdom of ordinary people than the opinions of experts (5=strongly agree)	-0.45*	< 0.01
Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? (Social capital, People can almost always be trusted = 5)	0.11	0.06

Significance level after correction for multiple comparisons is .05/27=.00185.

+The p value for this political question is 0.0037 i.e. close to significance. N=283.

These political questions had been associated with Leave voters in a 2016 BES survey. The correlations with EU attitudes were significant for four items.

These were: a preference for over the wisdom of "ordinary people" over the opinions of experts (r= -.45); the feeling that things in Britain were better in the past (r= -.39); an item testing for political efficacy, which asked if people agreed that it is often difficult for them to understand what is going on in government and politics (r=.26, high score = strongly disagree); and the feeling that politicians "don't care what people like me think" (r= -.21).

4.3.4.5 Regression

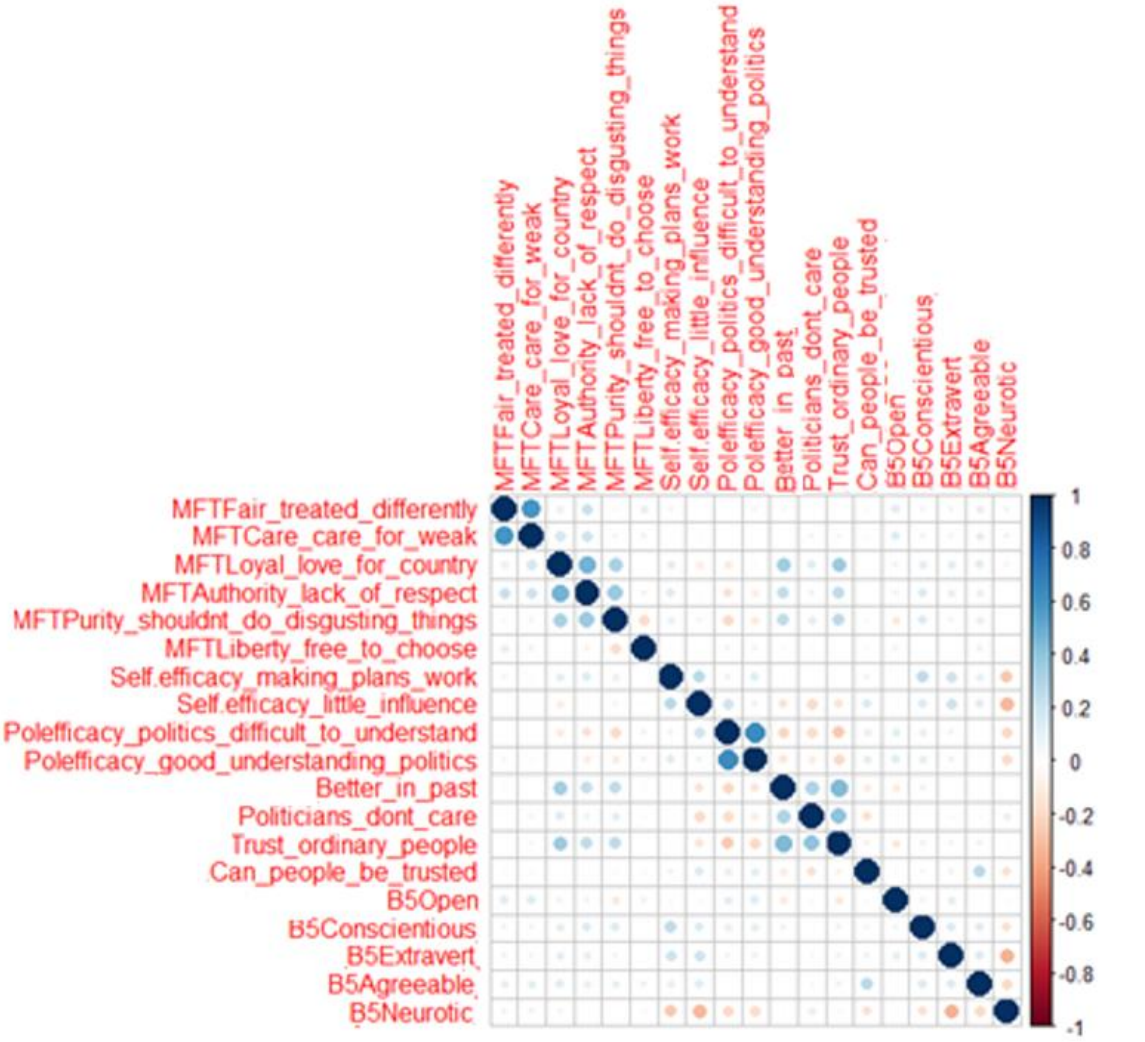
Following on from the correlational study, a regression was carried out using standardised coefficients. The regression explained 38% of the variance ($R2 = .38$, $F(27, 246) = 5.598$, $p < .001$). The independent variables for which there were significant results in this admittedly small sample were the preference for the wisdom of ordinary people over the opinions of experts (labelled in Fig.4.2 as “Trust ordinary people”); the feeling that things in Britain were better in the past; and the Moral Foundation of Loyalty item on love for one’s country. There was also a significant result for the item asking about how comfortable the individual was in terms of their economic wellbeing. There were no significant results for the Big Five items.

Fig. 4.2: Regression using standardised co-efficients

N=283

4.3.4.6 Inter-correlations

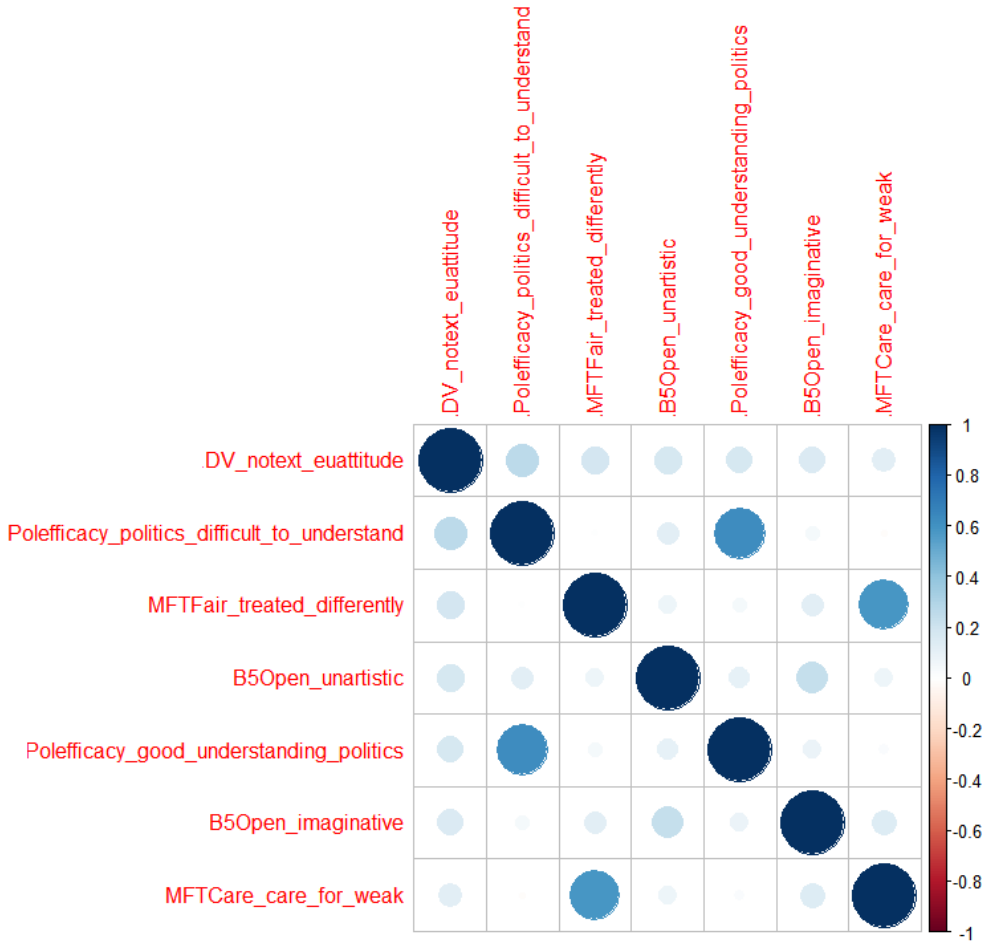
Fig.4.3: Inter-correlations between items in Study 4a



N=5,880

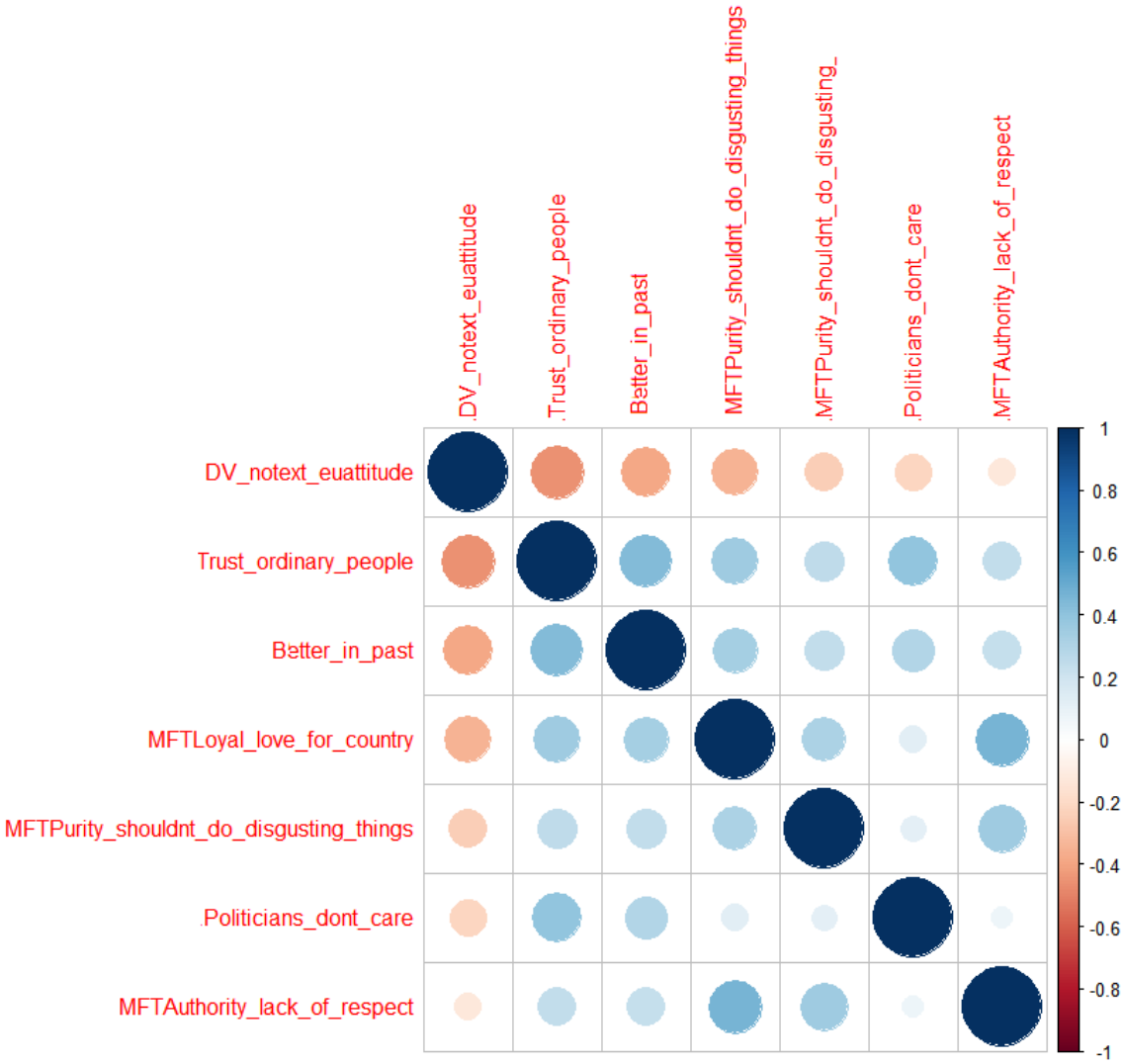
The correlation table (Fig. 4.3) shows the inter-correlations between the Moral Foundations questions used in Study 4a, the 10-item Big Five questionnaire and the political questions. The Moral Foundations items group clearly into the binding and individualising foundations. Of the political questions, it is notable that a belief that things in Britain were better in the past and a tendency to trust in the wisdom of ordinary people over the opinions of experts are correlated with the binding Moral Foundations items, notably the Loyalty Foundation item on love for one's country. There is a negative correlation between these and being high in political efficacy.

Fig. 4.4: 4a Most positive correlations



N=283.

Fig. 4.5: 4a Most negative correlations



N=283

When considering the correlations between the most positively and the most negatively correlated items (Figs. 4.4 and 4.5), it would appear that attitudes towards EU immigration are more closely inter-correlated on this subject among those who view EU immigration negatively rather than positively.

4.3.5 Discussion

Study 4a suggests that demographic items are less highly correlated with immigration attitudes than other variables, including psychological constructs (RQ1).

The two top scoring questions originated with the British Election Study. They concern a preference for the wisdom of “ordinary people” over the opinions of experts (r= -.45); and the feeling that things in Britain were better in the past (r= -.39). There is also a strong correlation for the Moral Foundation of Loyalty item on love for one’s country (r= -.34). The regression confirms that these variables may be better predictors of immigration attitudes than others examined in this dataset (RQ2).

It is interesting that these items are inter-correlated (RQ3). As seen in Figs 4.4 and 4.5, Study 4a suggests that those who oppose EU immigration may have views that are more closely inter-correlated than those who support it on this subject.

A limitation for the correlations and regression in this study is the sample size. The following study has a much larger participant pool.

4.4 Study 4b

4.4.1 Participants

The participants were 30,842 panel members who took part in Wave 15 of the British Election Study in 2019, with data gathered by YouGov. Some 56% were women (coded as 2). The average age was 53 (mean 52.51, standard deviation 16.28).

4.4.2 Procedure

The data had already been gathered by the British Election Study (BES). Many respondents would have taken part in waves of research in which they answered numerous questions covering a wide range of topics.

4.4.3 Design and stimuli

Given the wide range of questions asked by the BES, there was an issue as to which should be considered in Study 4b. The decision was largely guided by the questions that had been asked in Study 4a. However the scale also included the BES authoritarianism measures (Evans, Heath, Lalljee, 1996)[18] and the SDO-7 scale (Ho et al., 2015[19]). Added to the list was a left-right self-report measure, to see how this conventional question for testing political attitudes compared to the correlations for the other items. A further three questions were also included which measure prejudice, asking whether equal rights have gone too far for three groups – ethnic minorities, gays and lesbians, and women.

[18] The Cronbach's alpha for the SDO-7 scale in this dataset was .8517.
[19] The Cronbach's alpha for this authoritarianism scale in this dataset was .8524.

For Study 4b, there were 26 variables tested across three dependent variables, so the alpha was set at .05/78 = .0006.

4.4.4 Dependent variables

For the dependent variables, three different items were picked to reflect different aspects of attitudes towards immigration: an economic question, a cultural question and a general question about the numbers of migrants that should be allowed to come to the country.

> Do you think immigration is good or bad for Britain's economy?
>
> (ImmigEcon) (Likert scale, 1-7, 7 = good)

> Do you think that immigration undermines or enriches Britain's cultural life?
>
> (ImmigCultural) (Likert scale 1-7, 7 = enriches)

> Some people think that the UK should allow *many more* immigrants to come to the UK to live and others think that the UK should allow *many fewer* immigrants. Where would you place yourself and the parties on this scale? Yourself…
>
> (ImmigSelf) (Likert scale 1-10, 10 = Many more)

4.4.5 Results

Table 4.5: Correlations between the BES survey items and immigration attitudes

Question: (High score = “strongly agree” unless stated otherwise)	immigEcon	immigCultural	immigSelf	Average
Please say whether you think these things have gone too far or have not gone far enough in Britain. Equal rights for ethnic minorities.	-0.48*	-0.55*	-0.54*	-0.52
For some crimes, the death penalty is the most appropriate sentence (al2)	-0.44*	-0.46*	-0.49*	-0.46
Young people today don’t have enough respect for traditional British values (al1)	-0.42*	-0.47*	-0.49*	-0.46
In politics, people sometimes talk of left and right. Where would you place yourself on the following scale? (10 right) (leftRight)	-0.39*	-0.44*	-0.46*	-0.43
People who break the law should be given stiffer sentences (al5)	-0.38*	-0.40*	-0.44*	-0.41
I’d rather put my trust in the wisdom of ordinary people than the opinions of experts (antiIntellectual)	-0.40*	-0.39*	-0.40*	-0.40
Please say these things have gone too far or have not gone far enough in Britain. Attempts to give equal opportunities to gays and lesbians	-0.34*	-0.41*	-0.40*	-0.38
Schools should teach children to obey authority (al3)	-0.32*	-0.36*	-0.39*	-0.36

We should do what we can to equalize conditions for different groups (sdoantiegal3).	0.33*	0.39*	0.35*	-0.36
We should all work together to give all groups an equal chance to succeed (sdoantiegal4)	0.34*	0.37*	0.34*	-0.35
Some groups of people are simply inferior to other groups. (sdodominance2)	-0.31*	-0.35*	-0.32*	-0.33
At what age did you finish full-time education?	0.30*	0.31*	0.34*	-0.32
Please say whether you think these things have gone too far or have not gone far enough in Britain. Attempts to give equal opportunities to women (femaleEquality)	-0.27*	-0.33*	-0.31*	-0.30
It is unjust to try to make groups equal (sdoantiegal2)	-0.26*	-0.32*	-0.30*	-0.30
Censorship of films and magazines is necessary to uphold moral standards (al4)	-0.24*	-0.23*	-0.27*	-0.25
Generally speaking, would you say that most people can be trusted, or that you can’t be too careful in dealing with people? (standardised order of scores, 1 = most people can be trusted, 2 = you can’t be too careful)	-0.25*	-0.23*	-0.25*	-0.24
Politicians don’t care what people like me think (efficacyPolCare)	-0.23*	-0.24*	-0.24*	-0.24
An ideal society requires some groups to be on top and others to be on the bottom (sdodominance1)	-0.21*	0.26*	0.24*	-0.24
Groups at the bottom are just as deserving as groups at the top (sdodominance4).	0.22*	0.24*	0.21*	-0.22
Group equality should not be our primary goal (sdoantiegal1).	-0.19*	-0.25*	-0.23*	-0.22

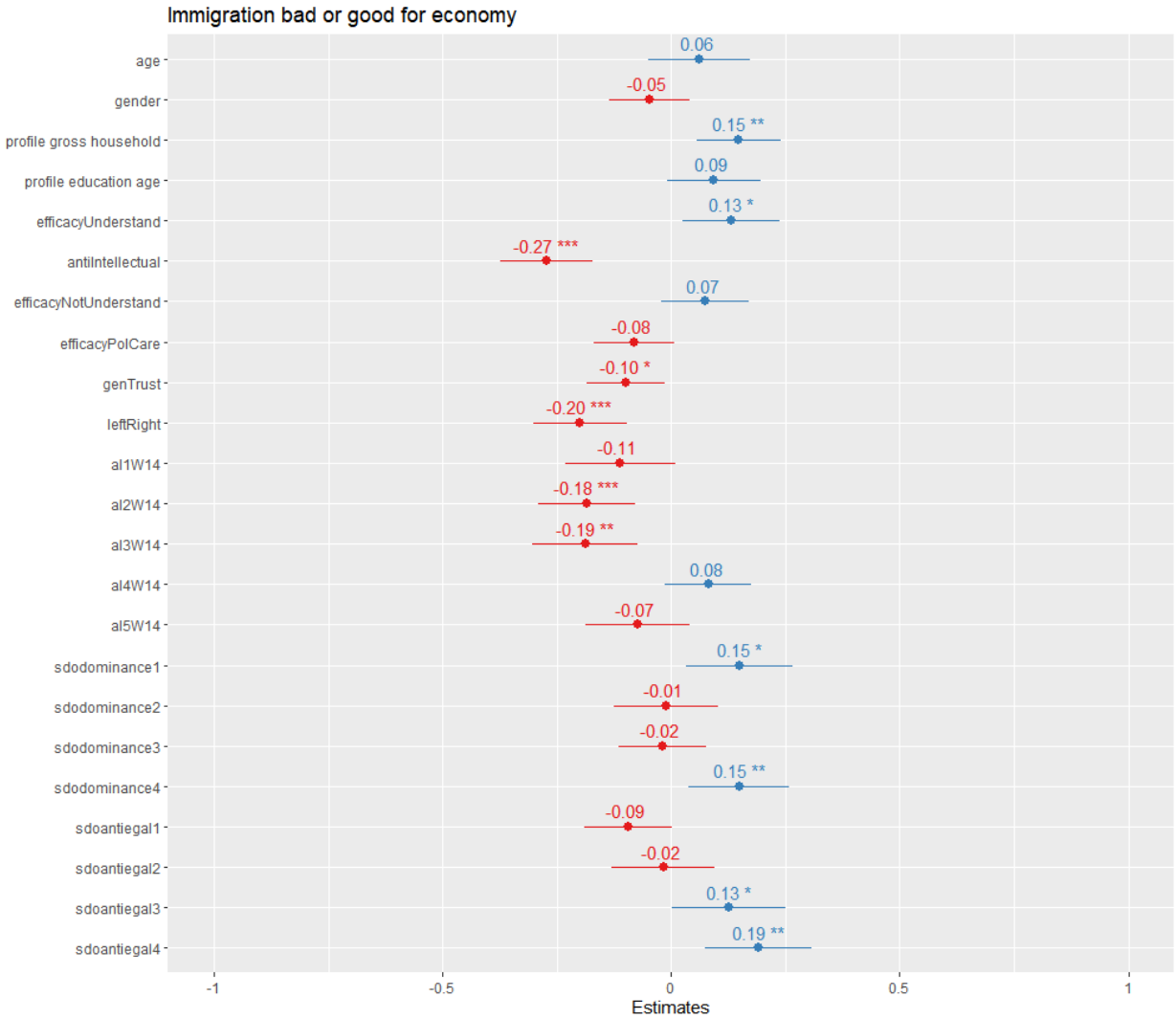
How old are you?	-0.15*	-0.20*	-0.21*	-0.19
Gross household income	0.17*	0.15*	0.16*	-0.16
No one group should dominate in society (sdodominance3)	0.15*	0.16*	0.15*	-0.14
Political efficacy – It is often difficult for me to understand what is going on in government and politics (standardised scoring to 5=agree) (efficacyNotUnderstand)	-0.15*	-0.11*	-0.15*	-0.14
Political efficacy – I have a pretty good understanding of the important political issues facing our country (efficacyUnderstand).	0.12*	0.07*	0.10*	-0.09
Gender	-0.03*	0.05*	-0.01	0.03

N=30,842. Correcting for multiple comparisons, the alpha level is set at 0.05/78 = 0.0006.

4.4.6 Regressions

Fig. 4.6: Regression for economic impact of immigration

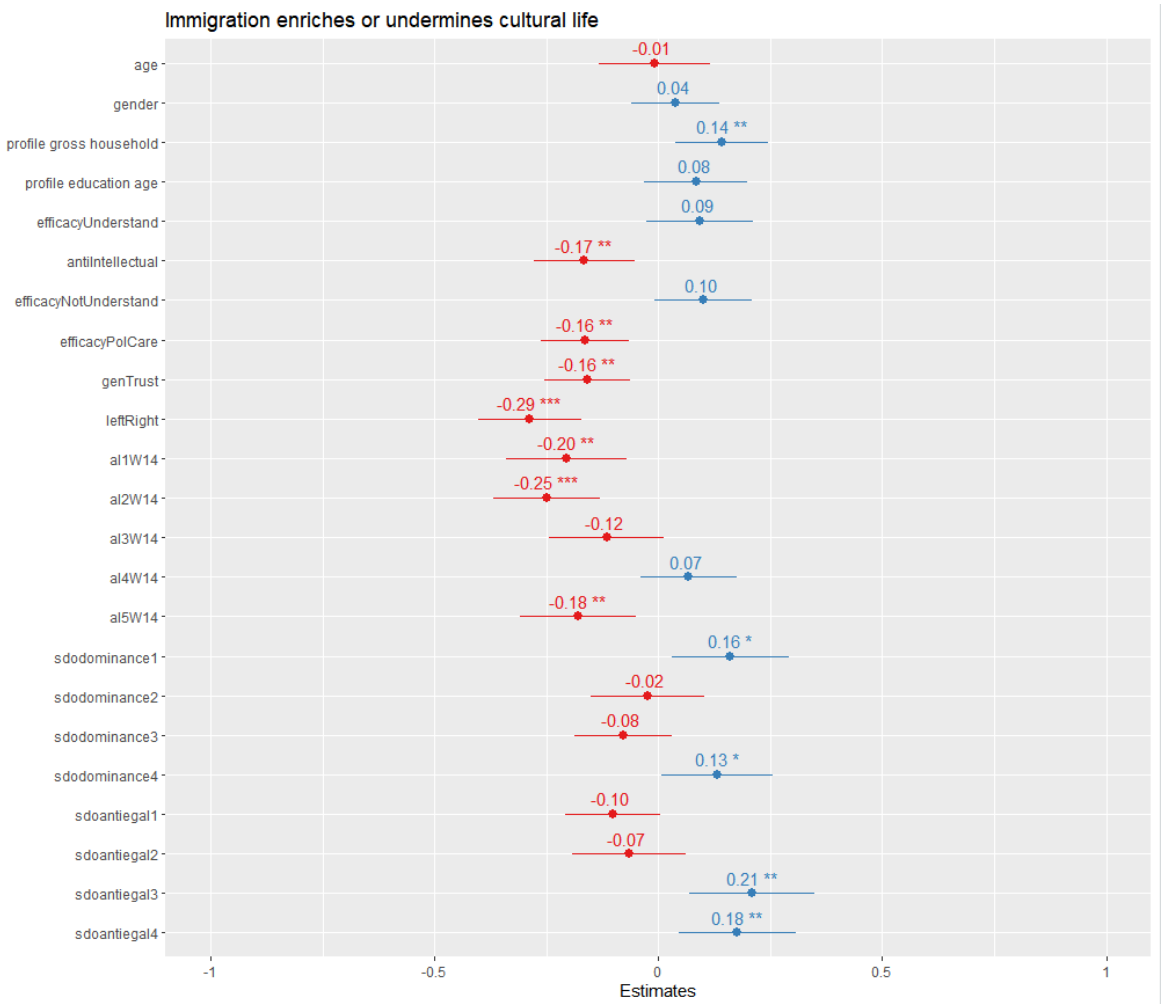
Regressions based on standardised variables were run for each of the dependent variables. Fig.4.6 shows the regression for the variable asking whether immigration is bad or good for the economy. The model explained 36% of the variance (R2=.356, F(23, 1155) = 27.74, p<.001).



N=30,842

Fig. 4.7 shows the regression for the variable asking whether immigration enriches or undermines cultural life. The model explained 40% of the variance (R2=.399, F(23, 1165) = 33.59, p<.001).

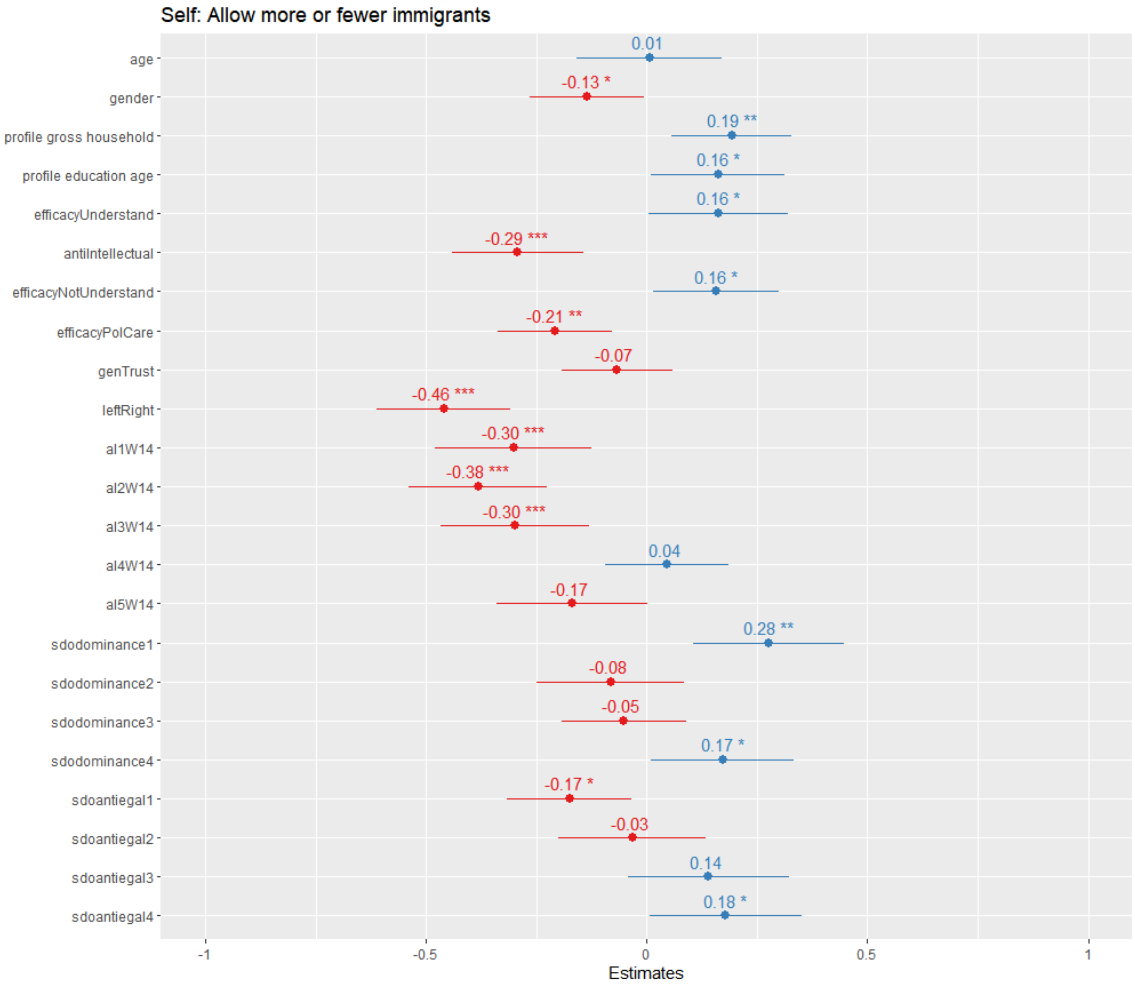
Fig. 4.7: Regression for cultural impact of immigration



N=30,842

Fig. 4.8 shows the regression for the variable asking whether more or fewer immigrants should be let into the country. The model explained 42% of the variance (R2=.424, F(23, 1145) = 36.68, p<.001).

Fig. 4.8: Regression for more or fewer immigrants



N=30,842.

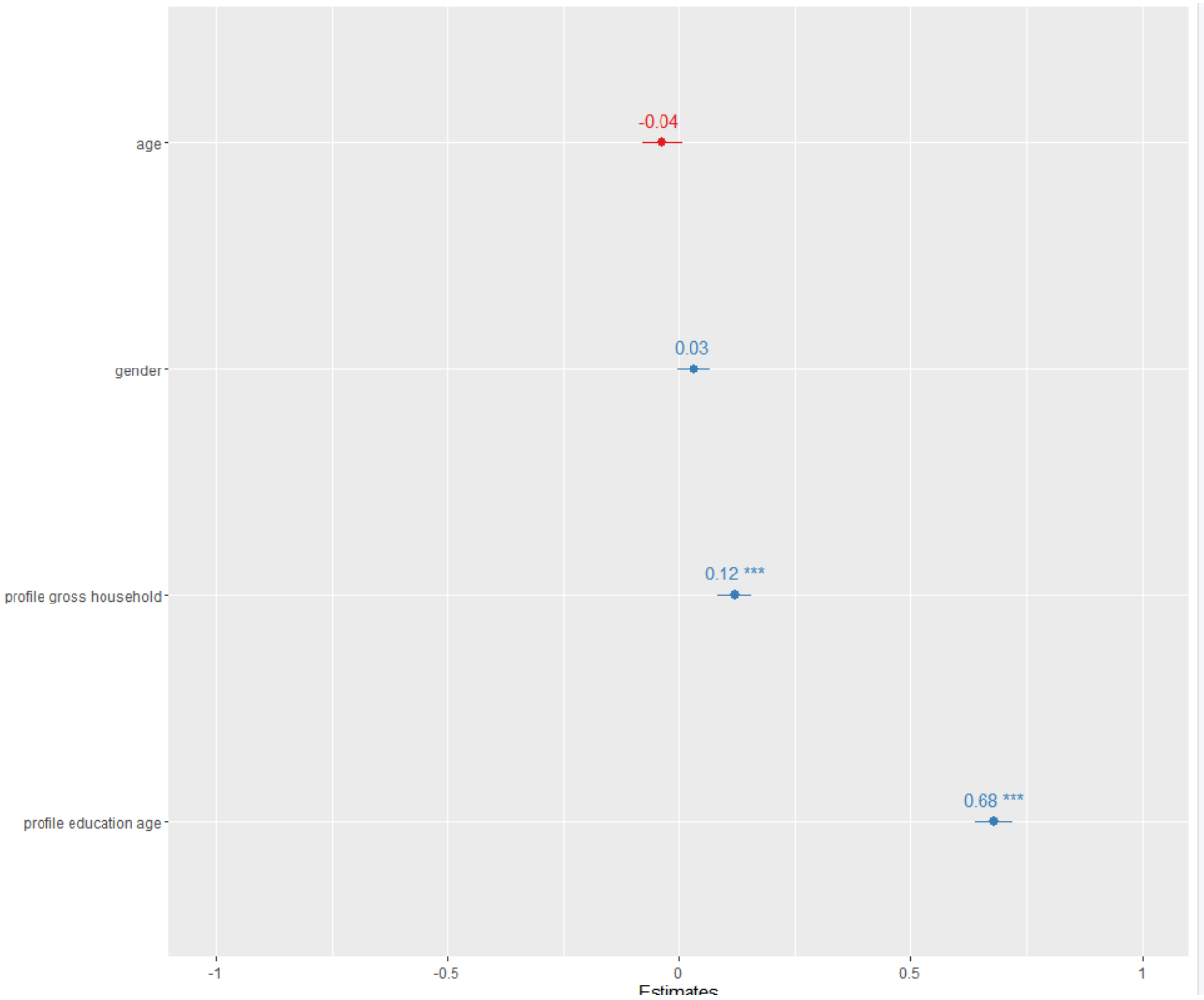
4.4.7 Hierarchical regression

A hierarchical regression was then run using an average from these three variables. The first model tested the demographic measures, which explained 13% of the variance (R2 = .134, F(4, 10917) = 420.7, p < .001).

Adding on the authoritarianism measures raised the amount of variation explained to 35% (R2 = .346, F(9, 7763) = 456.9, p < .001).

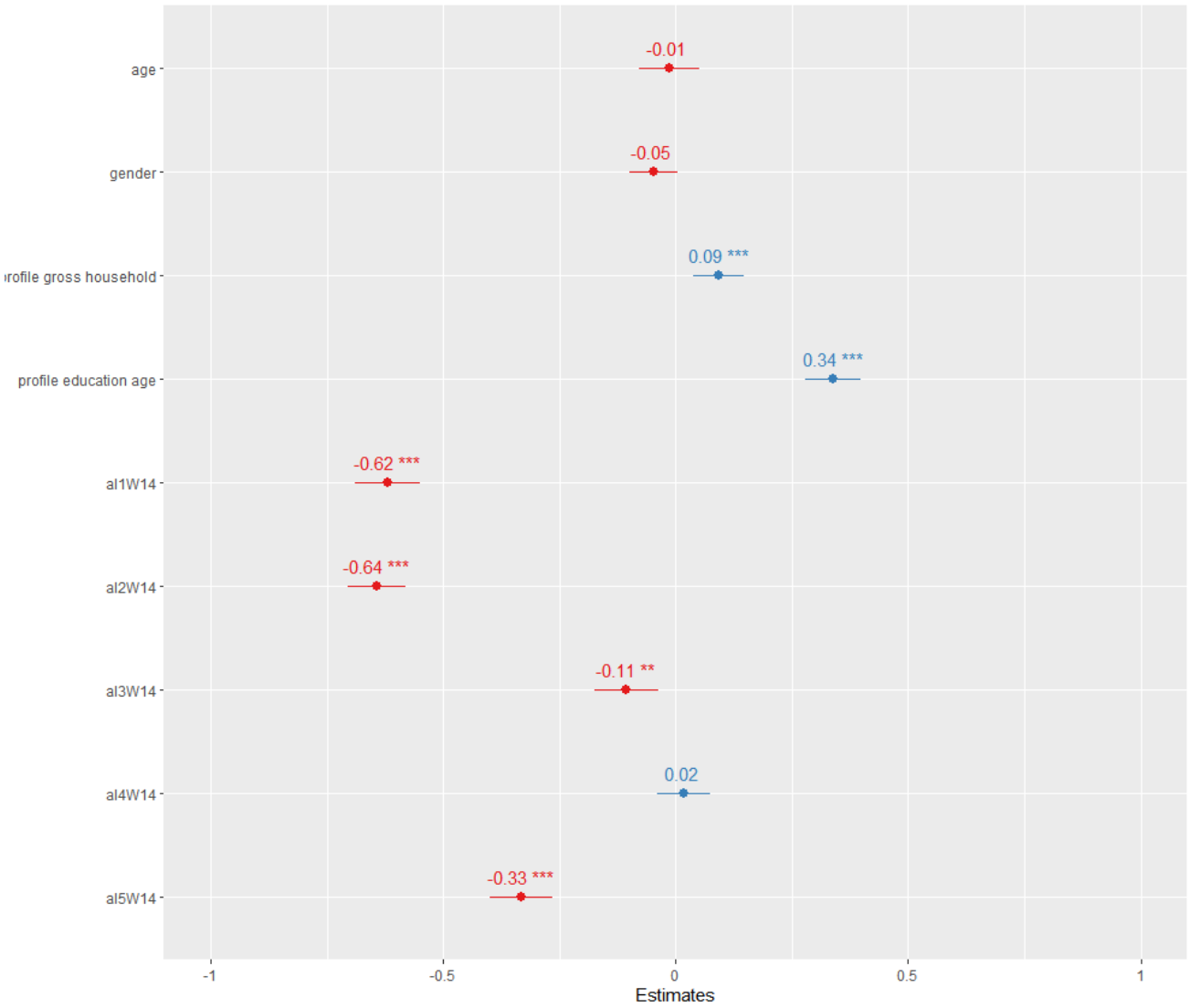
In the previous regressions, the left-right scale was a strong predictor. For the purposes of comparison, an additional regression was run using demographic measures and the left-right scale. This raised variance explained to 27% (R2 = .269, F(5, 9683) = 711.3, p < .001) i.e. less than for the combined authoritarianism measures.

Fig. 4.9: Regression: average immigration score and demographic measures



N=30,842

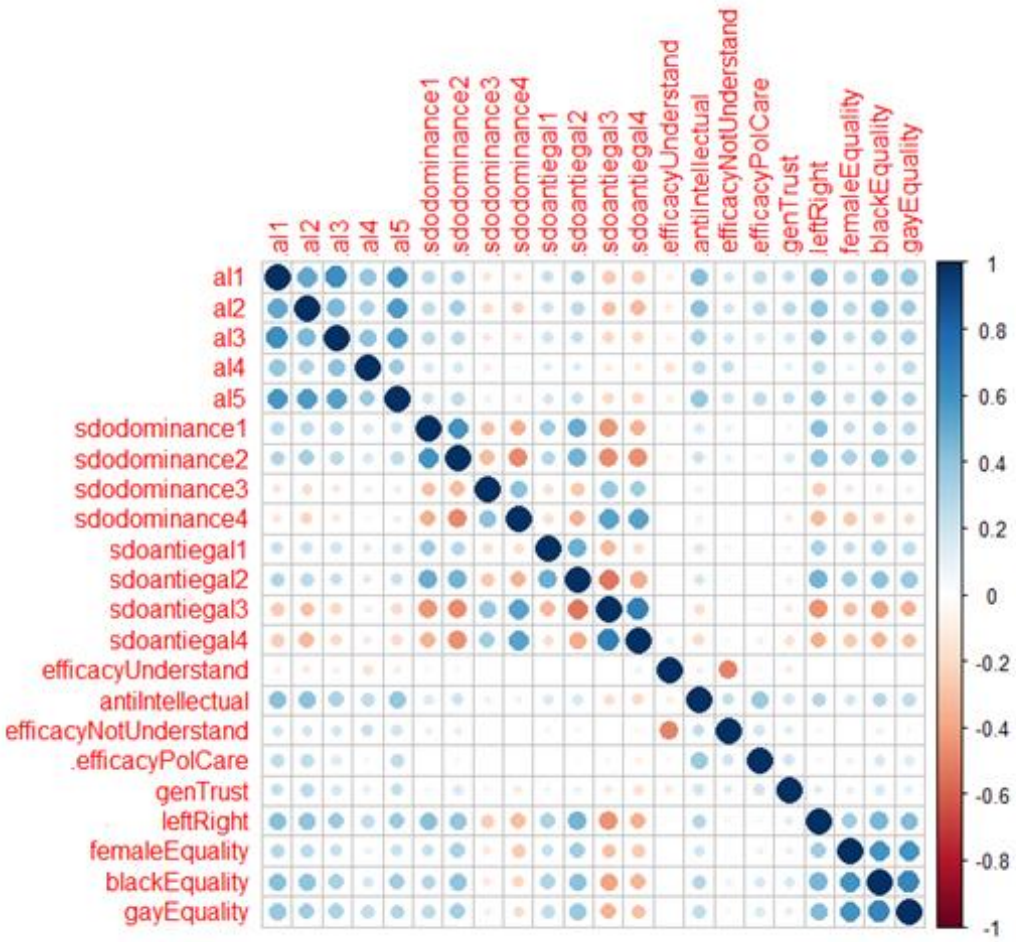
Fig. 4.10: Regression: average immigration score with demographics and authoritarianism



N=30,842

4.4.8 Inter-correlations

Fig. 4.11: Inter-correlations



N=30,842

As regards RQ3, this correlational chart suggests that the political items about trusting the wisdom of ordinary people over the opinions of experts (described in this dataset as "anti-intellectual"), social capital ("genTrust"), and political efficacy may be more closely related to authoritarianism than to SDO. The anti-intellectual item appears to be correlated with both the binding foundations in Study 4a and with authoritarianism in Study 4b. The questions about equal rights going too far appear to be correlated with both authoritarianism and the anti-egalitarian items of the SDO scale.

4.4.9 Discussion

Study 4b adds authoritarianism to the list of psychological constructs that correlate with attitudes towards immigration. Both the correlations and the regressions showed that the authoritarianism items were among the items most closely associated with these attitudes and that the relationship is stronger than the relationship between immigration attitudes and demographic variables such as age, gender and socio-economic status, but also education which was not a variable in the previous study (RQ1, RQ2).

The hierarchical regression confirms the relevance of authoritarianism measures. Adding these items to the regression more than doubles the amount of the variance explained as compared to the result for demographic measures alone. It also explains more variance than when the left-right scale is added to the demographic measures, despite the left-right scale being a strong predictor individually.

In the correlational study of Study 4b, items testing for Social Dominance Orientation are among the top correlates of anti-immigration attitudes and they appear to be correlated with the items asking if equal rights have gone too far for ethnic minorities, lesbians and gays and women.

4.5 Conclusion

This chapter began by noting that political campaigners often focus on demographic variables. The results presented here suggest that in terms of predicting immigration attitudes, these do not set a very high bar. Study 4a found no correlation between gender, age, and self-declared socio-economic status, although there was a significant result for socio-economic status in the regression.

In Study 4b, education was shown to be more highly correlated with immigration attitudes than other demographic measures (r=.32), however this score was still less than the correlations for other items, notably those testing for authoritarianism. These results

suggest that the answer to the first research question (whether psychological characteristics are better than age, socio-economic status and education at predicting immigration attitudes) holds true for authoritarianism at least.

The second research question asked whether some psychological constructs were more highly correlated with immigration attitudes than others. Corrected for multiple comparisons, the results for the Big Five were largely insignificant, although the directions for the correlations were as predicted by the literature (Carlson et al., 2019).

Social Dominance Orientation scored more highly than the individual Moral Foundation items considered in Study 4a, but authoritarianism measures were among the most highly correlated of the psychological constructs examined here. There were correlations of r=.46 on average for items asking about support for the death penalty or the need for young people to respect traditional British values.

The single highest correlation found in Study 4b was for a question about whether equal rights for ethnic minorities had gone too far. It is one of a set of three items, for which the average score across the three immigration variables is r=.40. One of the primary assumptions of Social Dominance Theory (Sidanius, Pratto, 1999, p. 38) is that age and gender-based hierarchies tend to exist within all social systems, alongside arbitrary-set systems (e.g. race, caste). The three items in Study 4b ask about rights for women, LGBT+ people and ethnic minorities. The latter two would count as arbitrary-set categories, so these items might reflect views on group dominance. However, the inter-correlations (Fig. 4.11) show that these questions are related to both SDO and authoritarianism, so they may additionally reflect unease at changes in conventional positions or a desire to punish those who seek to change social norms, reflecting the Conventionalism and Aggression sub-dimensions of authoritarianism.

The third research question concerned inter-correlations. It is hard to draw firm conclusions when the data is split between data sets with different sample sizes, but it appears that some of the political questions that are correlated with anti-immigration attitudes are correlated with either authoritarianism or SDO. One finding that could be followed up is the question of whether it is indeed the case that those who are most opposed to immigration have more in common on this subject than those who support it.

Based on these results, an additional literature review has been included as the next chapter which looks at the origins of authoritarianism and how it is related to the constructs studied here. Based on its inclusion in Duckitt & Sibley's (2009) Dual Process Model, the review also considers Social Dominance Theory (Pratto et al., 1994). The aim of Ch. 5 is to understand what authoritarianism is, where it comes from, and how it might affect attitudes towards immigration in the UK.

Chapter 5: Authoritarianism, Social Dominance Orientation and the Dual Process Model

Abstract: The finding in Ch.4 that authoritarianism is a leading predictor of immigration attitudes in the UK is of central importance to this thesis. This chapter is a supplementary literature review summarising several decades of research into authoritarianism. In Part 1, it considers the historical development of authoritarianism as a psychological construct, and how it relates to Social Dominance Theory, the Dual Process Model and other constructs studied in the previous chapters. These relationships will be explored further in Ch.6. In Part 2, it looks at the origins of these concepts and whether these theories can shed light on the influences that shape British attitudes towards immigration, suggesting ways in which they could be made more positive. This will inform the final experiment on immigration attitudes in Ch 7.

5.1 Introduction

The finding in the previous chapter that authoritarianism is one of the best predictors of immigration attitudes in the UK is of central importance to this thesis. This chapter is a supplementary literature review that seeks to summarise several decades of research on authoritarianism, looking at how this construct has developed, how it relates to other psychological constructs and whether it might play a role in making attitudes towards immigration in the UK more positive.

Part 1 describes the historical development of authoritarianism (Adorno et al., 1950; Allport, 1954; Altemeyer, 1981), and how it relates to the more modern Social Dominance Theory (Pratto et al., 1994) and the Dual Process Model (Duckitt & Sibley, 2009). It identifies common links between authoritarianism and several of the theories explored in previous chapters. These will be followed up with experiments in Ch. 6 that test how these theories fit together.

In Part 2, this chapter looks at the origins of authoritarianism and seeks to establish whether this understanding can shed light on ways in which British attitudes towards immigration might be changed. This will inform the final experiment on immigration attitudes in Ch. 7.

5.2 Part 1: Literature review

5.2.1 Authoritarianism

A meta-analysis by Paluck and Green published in 2009 (see Ch.2) was one of the studies that set the direction of this thesis. They found that there were not enough empirical broad-based studies looking at how to reduce prejudice. In 2021, with Porat and Clark, they

published a follow-up looking at 418 experiments reported in 309 manuscripts from 2007 to 2019. While at first glance, it looked like the field was flourishing, they said that much of the research effort was US-based and theoretically unsuited to providing actionable, evidence-based recommendations for reducing prejudice. They called for an increase in the number of pre-registered studies, wider use of open data and more comparison between methods. Their advice was that researchers should broaden their horizons, looking beyond nudge interventions and back towards older theoretical propositions that harness complex and powerful forces such as authority, social norms and hierarchy.

The previous chapter established that among the leading predictors of anti-immigration attitudes in the UK are authoritarianism and Social Dominance Orientation – two constructs that are based on authority, social norms and hierarchy, the forces identified by Paluck and Green. They have known links with many of the influences on political attitudes that are explored in previous chapters. As such, a deeper understanding of these constructs could be instructive in helping to determine how British immigration attitudes could be made more positive.

The question of when and why people prefer authority and hierarchy over openness and equality is one that predates political psychology.

Aristotle maintained that “man is by nature a political animal” (*Politics*, 350 BCE, Book I, Parts II-IV). He believed that people were heterogenous and might have different preferences for political systems. The open-minded and egalitarian fared best in a democracy; oligarchy was suited to wealthy conservatives who favoured hierarchies; but there were also those who wished to obey a strong king or an autocrat “who is supreme and commands well” in return for a stable life.

Hobbes (1651) believed that strong government was needed to repress the selfishness and aggressiveness of humans in their natural state. Without this, life would be "solitary, poor, nasty, brutish, and short" (p.186). In contrast, Rousseau (1762) believed in governments that allowed people to exercise what he saw as their inherently cooperative and compassionate natures. Meanwhile, J.S. Mill (1861) observed that in every society, the need

for obedience to the authorities, or Order, was counterbalanced by the need for Progress, which was marked by originality and free-thinking.

In the 1930s, as psychologists rushed to explain the rise of fascism in Germany, their attention focused on the personality types that favoured a strong, stable and ordered government. Brown (1965, p. 477-478) recounts how the psychologist and Nazi party member Jaensch (1938) proposed that there were two types of personality. The J-type made for good Nazis. They made definite, unambiguous judgements, they were tough, masculine, reliable and firm, and considered that human behaviour was fixed by blood, soil and national tradition. The other category, the S-type, was liberal and individualistic, believing that education and the environment were determinants of behaviour. They felt comfortable with ambiguous and indefinite judgement. Alongside communists and Parisians (a curiously specific choice), Jaensch considered that Jewish people and those of mixed race fell into this latter category (Carney et al., 2008).

Fromm, a German Jewish psychologist, published his book *Escape to Freedom* in 1941. He said that the German people's support for the Nazis could not be attributed to an anomaly, trickery or a mistake. There were certain people for whom freedom was an unbearable burden, who longed to submit to a leader, and who regretted the loss of certainty and social bonds that existed in the past. For them, subsuming their individuality into a larger whole gave them the strength that they did not have on their own. Such people wanted a cause to submit to blindly, and to persecute those who rejected their ideology. They could not be alone, because alone they felt that they were nothing. Equally, he said there were those who sought to make people submit to them and could be Machiavellian in achieving this aim (pp. 139-142). The dominant and the submissive were inter-dependent, he maintained.

Drawing on Fromm's work, Maslow published his 1943 article on 'The Authoritarian Character Structure', which was based on five years of study. The clue to understanding people with this characteristic was to understand their world view, he said. They were not eccentric or mad, but they were responding to a different logic which rendered their own actions, from their point of view, quite justifiable and correct. In a passage which could be describing the debate between Hobbes and Rousseau, Maslow said that such people felt that the world was dangerous and threatening and humans were essentially selfish and evil.

In these circumstances, love and kindness come across as sentimental, unrealistic, weak or degenerate. Democrats, by contrast, tended to feel that people were essentially good, likeable and deserving of respect. Maslow noted that people with authoritarian tendencies were known to be prejudiced. The object of such prejudice could be accidental or fortuitous – it might as well be people with blue eyes or long ears. What mattered was that they would want to express hatred and hostility against an out-group. For authoritarians, anyone with a different set of values was to some extent a threat.

In 1950, the classic work *The Authoritarian Personality* was published by Adorno, Frenkel-Brunswik, Levinson and Sanford (1950). The book is regarded as the first systematic analysis of authoritarianism (Duckitt, 2022). The authors say that one of their major contributions was the discovery that: "individuals who show extreme susceptibility to fascist propaganda have a great deal in common… individuals who are extreme in the opposite direction are much more diverse (p.2)."

Adorno et al. identified nine themes common to authoritarians (Fig. 5.1).

Fig. 5.1: Nine themes common to authoritarians, as identified by Adorno et al. (1950)

Conventionalism

Authoritarian submission

Authoritarian aggression

Anti-intraceptivity ("rejection of all inwardness, of the subjective, the imaginative, the tender-minded, and of self-criticism")

Superstition and stereotypy

Power and toughness

Destructiveness and cynicism

Projectivity ("a tendency to see the world as fearsome and dangerous")

Exaggerated moralistic concerns over sex.

They established that those who were prejudiced against one minority group would be more likely to be prejudiced against others (p.9). Importantly, they produced the 'F' scale, which was an instrument designed to test for "fascist receptivity at the personality level" (p.447) and a person's "anti-democratic potential" (p.375). What surprised people at the time was that Americans were not immune to such ideas. The pull towards fascism was not an exception, it was at the heart of modern experience (Gordon, 2019, xxiii).

This work was followed up by Allport's seminal work on *The Nature of Prejudice* (1954) in which he set out a range of other characteristics shared by people who were prone to prejudice. This he defined as "antipathy based on a faulty and inflexible generalization. It may be felt or expressed. It may be directed towards a group as a whole, or towards an individual because he is a member of that group" (1954, p.9).[20]

[20] Dovidio (2008) notes that more modern conceptions of prejudice don't assume that prejudice must be based on antipathy. As with sexism, it can be benevolent (p.10-11).

Allport (pp. 395-408) said that those high in authoritarianism were more likely to exhibit prejudice because they were unusually sensitive to social norms and inclined to accept the opinions and values of others. Other characteristics they shared included a strong sense of morality related to cleanliness and good manners, a tendency to think in black-and-white terms and to bifurcate into good and bad. They had a need for definitiveness and were narrow-minded. They liked institutions and social order, and were patriotic, but they disliked personal freedom and had a tendency to stereotype. They were defective in self-insight and felt they had no control over their destiny. People who were high in prejudice accepted what they were told and were able to hold two logically incongruous opinions in their head at the same time.

According to Allport, prejudiced people were motivated not so much by hate for the outgroup but by love for the in-group (1954, pp. 25-27). They tended to look for differences between groups, which they then overweighted for significance. This is consistent with Social Identity Theory (Tajfel, Turner, 1979), whereby even minimal group membership can lead to in-group biases and favouritism.

Allport proposed Contact Theory as a general remedy for overcoming prejudice. He found that prejudice will be reduced between people when they are working together under conditions of equal status, common goals, cooperation and with institutional support. A 2006 meta analysis of 515 studies on the effects of contact found that it was effective at decreasing prejudice between groups, raising empathy and decreasing anxiety (Pettigrew, Tropp, 2006), but this was notably when the conditions were met. Paluck et al. (2021) found that a large proportion of the studies that they considered in their meta-review were using contact in one form or another.

Allport also warned that under certain circumstances, authoritarians could be riled up by demagogues and persuaded to revolt against the authorities. Summarising Lowenthal and Guterman (1949), Allport said the arguments used were often the same as those described in Fig. 5.2.

Fig. 5.2: The demagogue's arguments

You've been cheated.

There is a widespread conspiracy against us.

The conspirators are sexually corrupt too.

Our present government is corrupt.

Doom is just around the corner.

Capitalism and communism both threaten us.

We can't trust foreigners.

Our enemies are low animals.

There is no middle ground.

There must be no polluting of blood.

With disaster around the corner what can you do (I can be the solution).

The situation is too urgent to permit the luxury of thought.

Everyone is against me (trying to shut me up).

Maybe we'll march on Washington.

Underlying the modern-day relevance of his work, similar arguments could be heard in the BBC documentary about the 6 January 2020 assault on Washington's Capitol Hill ('Four Hours at the Capitol') directed by Jamie Roberts, and broadcast on BBC in October 2021. Some of the insurrectionists speaking on the programme repeated allegations, including about the sexual abuse of children, which were a key element of the QAnon conspiracy theory (Mangan, 2021; Miller, 2021).

Not long after Allport's book appeared, interest in authoritarianism began to wane (Sibley, Duckitt, 2008). Concern began to surface about the psychometric qualities of the F scale. To this day, the central theory is considered to be sound (McFarland et al., 2020) but the scale was psychometrically unreliable and prone to acquiescence bias. Doubt was also cast on

Adorno et al.'s use of Freudian analysis to suggest that authoritarianism developed as the result of strict parenting in childhood (Lipset, 1950).

There were various attempts to develop better scales, including by Rokeach, who produced the Dogmatism scale (1956) on the basis that rigid beliefs might predispose people to authoritarianism, whether they be on the right or the left. His scale was seen as problematic, containing vague, non-neutral items (Duckitt, 2022). He also produced the Rokeach Value Survey (1973), arguing that rather than understanding politics in terms of left or right, terms on which there was little cross-cultural or cross-historical consensus, politics could be explained by freedom or equality values. Capitalism was low on equality but high on freedom, communism was high on equality but low on freedom, fascism was low on both, and socialism was high on both. His 1973 book *The Nature of Human Values* was cited as a reference by Evans, Heath & Lalljee (1996) when they developed two scales of their own to measure the "left-right dimension" and the "libertarian-authoritarian" scales. These are used in the British Election Study, with which Evans is associated.

Interest in authoritarianism did not pick up until 1981, when Altemeyer published his book on Right-Wing Authoritarianism. Developing an interest after failing a PhD candidacy question on the subject (Altemeyer, 1994), he conducted factor analysis on the F scale and found that it had three sub-dimensions, which he defined as per Fig. 5.3.

Fig. 5.3: The three dimensions of authoritarianism defined by Altemeyer

Authoritarian aggression: a general aggressiveness, directed against various persons, which is perceived to be sanctioned by established authorities.

Authoritarian submission: a high degree of submission to the authorities who are perceived to be established and legitimate in the society in which one lives.

Conventionalism: a high degree of adherence to the social conventions which are perceived to be endorsed by society and the established authorities.

Source: Robert Altemeyer, *Right-Wing Authoritarianism* 1981

It is notable that these pick up only a subset of the nine characteristics identified by Adorno et al. in their book.

Altemeyer produced the Right-Wing Authoritarianism (RWA) scale which was psychometrically sound and reliably predicted a range of authoritarian behaviours such as punitiveness, support for anti-democratic actions, political intolerance, prejudice, extreme right-wing party preference, and ethnocentrism better than conventional measures of social conservatism (Altemeyer, 1981, 1996). One feature of the lengthy scale was that it didn't separate out the three sub-dimensions. Instead, Altemeyer chose to keep some items double or triple-barrelled. While this was an obvious restriction for those who wished to explore the sub-dimensions further, even now, Bizumic & Duckitt (2018) describe this scale as being the researchers' scale of choice for measuring this construct. Another issue was that Altemeyer's scale identified authoritarianism as being a right-wing characteristic, sparking a debate as to whether left-wing authoritarianism exists as well (Costello et al., 2022).

Like Allport, Altemeyer found that people high in authoritarianism uncritically memorise information from the authorities and can simultaneously hold conflicting views. Those high in this characteristic like to believe they are the "good people".

The next major advance to the authoritarianism theory came with Feldman and Stenner (1997; Stenner, 2005, 2009, 2012, 2020). They argued that authoritarianism is a predisposition that addresses the fundamental question of the appropriate balance between group authority and uniformity and individual autonomy and diversity. Under normal circumstances, people with this predisposition are indistinguishable from everyone else. However, they respond to a particular kind of threat – normative threat – which is a threat towards cultural values, social norms or to society in general. When this is present, they feel an increased need for social conformity, they long for strong leaders and to punish those who break social norms.

Stenner (2009) investigated the World Values Survey and showed that there was a distinction between those who were conservative and avoided change, and those who were authoritarian and disliked difference. She said that for authoritarians, the conditions which were most threatening to their sense of oneness and sameness were questionable authorities, disrespect for leaders and a lack of conformity with or consensus in group norms. Polarisation and political bickering would be highly distressing to people with this predisposition. What might lower their defences was normative reassurance, which included restoring belief in their leaders and consensus around group norms.

Electorally, the insight that a large section of the population can be politically volatile is very relevant. Analysing the 2016 EuroPulse-plus-US dataset, Haidt and Stenner (2018) found that under conditions of normative threat, authoritarians were much more likely to vote for Donald Trump in the USA, for Brexit in the UK and for the National Front in France. In the US, people who would normally vote for left-wing candidates became seventeen percentage points more likely to vote for Donald Trump in 2016 when faced with normative threat.

Consistent with this, with research based on 33 countries, Gelfand et al. (2011) found that in countries that experienced threats of violence or scarcity, social norms were tighter with low tolerance of deviant behaviour as compared to areas which were not experiencing such threat, where looser behaviour was tolerated. Like Stephan and Stephan (2000), she found that perceived threat was enough to spark this reaction.

Gelfand's work links into the research on authoritarianism, but also into another construct called Social Dominance Orientation (SDO, Pratto et al., 1994). A sense of feeling physically threatened is usually related to authoritarianism but a sense of scarcity, or the competition for resources, is usually linked to SDO (Duckitt, Sibley, 2010).

5.2.2 Social Dominance Theory

Social Dominance Theory was developed by Sidanius, Pratto, Stallworth and Male (1994). A person's Social Dominance Orientation (SDO) is a measure of a person's preference for an egalitarian society (low SDO) versus an unequal society (high SDO). It is "a general attitudinal orientation toward inter-group relations, reflecting whether one prefers such relations to be equal, versus hierarchical" (Sidanius, Pratto, 1999, p.742).

Sidanius and Pratto (1999) said that group-based social hierarchies exist where individuals obtain status due to their membership of a socially-constructed group, and they happen wherever societies have sustainable economic surpluses. Age and gender usually count as two such groups, but there are often arbitrary-set groups such as race, religion, class, tribe or class (much as Maslow had argued about the potential for authoritarians to be prejudiced against blue eyes or long ears). Legitimising myths can develop to explain why privileges accrue to these groups and become part of a commonly-accepted narrative. Those high in SDO are known to discriminate against outgroups and this construct is a reliable predictor of prejudice.

It subdivides into two sub-dimensions: Dominance (SDO-D) and Anti-egalitarianism (SDO-E). SDO-D is more predictive of aggressive intergroup phenomena and attitudes than SDO-E, both in the USA and in the context of the Israeli-Palestinian context, while those high in SDO-E employ more subtle, legitimising myths to a greater extent to justify their views (Ho et al., 2015).

Researchers into authoritarianism welcomed the new theory. Altemeyer excitedly described SDO as "The Other Authoritarian Personality" in a 1998 article. Certainly, looking back on

the writing by Fromm (1941) on the authoritarians who wanted to make people submit to them and who could be Machiavellian to get their way, the two constructs seemed to be conflated in the early literature. Duckitt (2015) commented that SDO appeared to reflect elements that were dropped from Adorno et al.'s nine-point list such as power/toughness, cynicism/destructiveness and anti-intraceptivity. Taking the argument a step further, Jost, Glaser, Kruglanski and Sulloway (2003) developed their motivated cognition theory arguing that authoritarianism and SDO were only elements of a broader concept of political conservatism, which was driven by the need to reduce and manage threat and anxiety.

Pratto and Sidanius (1999, p.96) say however that SDO is not just another measure of authoritarianism or political conservatism, and that these are theoretically, conceptually and empirically distinct. SDO and authoritarianism are considered to be independent predictors of prejudice with authoritarianism being related to intra-group preferences for submission to the authority, while SDO relates to preferences for inter-group hierarchies (p. 74). In empirical studies, the correlations between SDO and RWA in the data they tested were small. The correlation found in the Pratto et al. 1994 study was r=.14. Altemeyer (1998) found correlations of r=.08 to r=.28 between the two constructs, although a meta-analysis by Roccato & Ricolfi (2005) found substantially higher correlations of up to r=.66 in some instances, with higher correlations found in countries where there was a higher degree of ideological contrast.

In this thesis, authoritarianism and SDO are treated as distinct constructs. One reason for this is that they are used as two separate axes in Duckitt & Sibley's Dual Process Model (2009).

5.2.3 The Dual Process Model and its correlations

In 2009, Duckitt and Sibley proposed their Dual Process Model, arguing that a single left-right axis was insufficient to explain political divergence. Instead, they proposed a model with one axis measured by authoritarianism and the other by SDO. Empirical analysis found that this two-dimensional structure fitted better with the results of exploratory factor analysis and offered better internal consistency and external validity.

While researchers such as Jost et al. (2003) had suggested that SDO and RWA were part of the same political conservatism construct, this model showed that RWA and SDO were predictably dissimilar.

Duckitt and Sibley explained that while threat was relevant to both constructs, the worldview held by people high in these traits differed. Like Maslow, they found that those who were high in authoritarianism were prone to believe that the world was a dangerous place. However, those who were high in Social Dominance Orientation believed that the world was competitive like a jungle. Altemeyer (1998, p.75) commented that whereas those high in RWA would be worried about being eaten in the jungle, those high in SDO already saw the world as a “dog-eat-dog” environment and were determined to be the ones doing the eating.

Duckitt and Sibley (2010) found that both RWA and SDO predicted opposition towards immigration, but those high in RWA opposed immigrants who were perceived as threats in terms of crime or terrorism, or who challenged cultural norms. Those high in SDO opposed immigrants who were of lower economic status. Thomsen et al. (2008) showed that RWA predicted hostility towards immigrants who did not wish to integrate, while SDO predicted hostility towards immigrants who did as this would disrupt group boundaries.

The two axes were related to different Big Five personality traits (McCrae, Costa, 1996). Meta-analytic findings showed that Openness predicted lower levels of RWA (the correlation varied between r=-.36 and r=-.39) while Conscientiousness predicted higher levels of RWA, albeit more weakly (Sibley, Duckitt, 2008). Agreeableness predicted lower

levels of SDO, with a correlation of r=-.29, and there was also a negative correlation between SDO and the HEXACO trait of Honesty-Humility (Sibley, Duckitt, 2008; Lee, Ashton, Ogunfowora, Bourdage, Shin, 2010). Meta-analyses at the sub-dimension level found that high levels of SDO were particularly associated with lower empathy or altruism (van Hiel et al., 2020).

Looking at the Moral Foundations, RWA was associated with the binding foundations of Authority, Loyalty and Purity, while SDO was negatively correlated with the individualising foundations of Care/Harm and Fairness (Federico et al., 2013).

For the Schwartz values, high levels of RWA were correlated with Conservation values of Conformity, Tradition and Security as opposed to the Openness values of Stimulation and Self-Direction. SDO was meanwhile associated with the Self-Enhancement values of Power, Achievement and Hedonism as opposed to the self-transcendence values of universalism and benevolence (Duckitt, Sibley, 2017).

Authoritarianism was also linked to cognitive inflexibility (Zmigrod et al., 2018) and social conformity (Duckitt et al., 2002).

SDO was positively correlated with the Dark Triad traits (i.e., Narcissism, Psychopathy, and Machiavellianism) (Jones, Figueredo, 2013), a readiness to do whatever it takes to win and low ethical standards (Wilson, 2003).

Sinn and Hayes (2017) found that those high in RWA were inclined to pursue strategies of cooperation, planning and control, investing in family relationships and religiosity. Those high in SDO preferred ruthless self-advancement and deceptive tactics.

5.3 Part 2: The origins of authoritarianism

The question of where authoritarianism comes from is a matter of scholarly debate.

While Adorno et al. (1950) drew on Freudian analysis to suggest that it was the parent-child relationship that determines levels of authoritarianism, this account is no longer believed to be credible (Altemeyer, 1981). Recent studies have shown that there are strong genetic influences on Right-Wing Authoritarianism, which is up to 50% heritable, as is SDO, albeit to a lesser degree (Duckitt, 2022; McCourt et al., 1999).

Claessens, Chaudhuri, Sibley and Atkinson (2022) suggest that a combination of evolutionary and environmental factors may be involved. Anthropologists have found that humans across the world live in social groups, cooperate, favour the in-group, adhere to social norms and punish norm violators, while there are examples of competition, dominance struggles and Machiavellian social intelligence among primates. Funk et al. (2013) suggested that there was a common genetic root to authoritarianism, SDO and the Moral Foundations, with a small overlap for the Big Five. Kandler, Bell & Reiman (2016), using the Jena Twin Study of Social Attitudes, also found a substantive underlying common aspect to RWA and SDO: Aggression against subordinate groups. They found that individual differences in RWA were primarily genetic, whereas variance in SDO was largely attributable to environmental sources with only a small or negligible genetic component.

Fromm (1941) and Maslow (1943) suggest that the roots of authoritarianism lie in anxiety, and a lack of self-confidence, and they are exacerbated by small social circles and the experience of threat in what they see as a dangerous world. A point made by Maslow, writing in World War II, is that these worldviews may not be wrong. Those people who have experienced the world as a frightening place and who have been treated like wild animals are entirely justified in their suspicions, hostilities and anxieties (p.403). If they are not strong enough to defend themselves, they will seek a strong protector who can be relied on. It is only when people are not cruel and the world is not a jungle that the authoritarian is wrong. Like Feldman and Stenner, who discussed how people with an authoritarian predisposition behaved like everyone else when unthreatened, Maslow said that

authoritarians seek the power to defend themselves and if they have this, and if nothing contradicts their world view, then they can be relatively contented.

Allport identified three root causes of prejudice. The first was related to how the mind worked. Stereotypes, which can lead to both negative and positive prejudice, were an inevitable consequence of cognitive processes that tried to simplify the world. The second was motivation. Insecurity, fear and lack of self-esteem could stimulate a desire to improve a person's status by judging themselves as superior to an outgroup.[21] The third was sociocultural processes, such as fear of the strange (p. 300) that can be passed down in childhood and fixed in words, which can be chauvinistic (pp.178-183).

Allport added that it takes much more effort to deal with people who are not your own kind, and don't think or act as you do. In his view, foreigners are a strain for many people, so too were people of a higher or lower social class. There are parallels here with Stephan and Stephan's (2000) Inter-Group Threat Theory. They maintain that dealing with other groups can provoke intergroup anxiety, accompanied by fear and discomfort. The fear of others does not need to be real, they maintain. It can be perceived competitive threats or perceived symbolic threats to a group's norms, values and beliefs.

Stenner also described the manifestation of authoritarian attitudes as being a "defensive stance" ('The Authoritarian Dynamic, 2005, p.25). Based on her work with the World Values Survey, Stenner (2018) suggests that authoritarians can be riled up by the appearance of disunity and the promotion of diversity. They can be calmed by the reinforcement of common rituals, beliefs and institutions.

Altemeyer (1981) and Maslow (1943) point out that people high in this trait see themselves as being good people acting in accordance with their worldviews.

> "The RWA Highs are not irredeemable Nazi-types as a rule, but fearful people whose circumstances have kept them in those tight circles… if one can get past the defenses

[21] In Allport's words: "The hunger for status is matched by a haunting fear that one's status may not be secure" p.371, 1954.

> they have thrown up to protect their vulnerabilities, however, Highs may be remarkably capable of change." Altemeyer (1996, *The Authoritarian Specter*, p.124).

While Allport said that authoritarianism levels are set at an early age (p.407), Altemeyer (1981) found that authoritarianism develops in a person's teenage years and is shaped by experience (1981, 1996). He notes that university attendance tends to reduce authoritarianism and assumes this is because people are exposed to a wider circle of views. This would be consistent with Contact theory (Allport, 1954) and the idea that people become less frightened of outgroups over time when they are working side by side in conditions of equality with institutional support. Other scholars have also found that levels of authoritarianism or prejudice tend to go down when levels of education rise (Scott, 2022; Cavaille, Marshall, 2019) and when people are induced to feel physically safe (Napier et al., 2018).

Altemeyer demonstrated that levels of authoritarianism rose when students were given texts about a future Canadian society facing crisis (Altemeyer, 1988, pp. 290–310). They were higher among survivors of the 9/11 attacks (Bonnano, Jost, 2006), and van de Vyver et al. (2016) found that prejudice rose after the 2005 London bombings. Meanwhile, Wu and Paluck (2020) found that authoritarianism fell between two groups of workers after they took part in participatory meetings once a week for six weeks.

5.4 Discussion

Ch.4 established that immigration attitudes are linked to authoritarianism. The literature reviewed in Part 1 of this chapter shows that authoritarianism is in turn linked to many of the individual influences on political attitudes that were described in Ch. 2 and experimented with in Ch. 3.

These individual influences included adherence to social norms (Asch, 1955; Cialdini 1984; Feldman, Stenner, 1997) and disgust (Aaroe et al., 2017), which are captured by the authoritarian sub-dimensions of Submission and Conventionalism. The tendency for authoritarians to stereotype and to use black-and-white thinking evokes the essentialist thinking styles highlighted by Bastian and Haslam (2008), and the inflexible thinking styles identified by Zmigrod et al. (2018).

Moral Foundations (Graham, Haidt, Nosek, 2009; Koleva et al., 2012) and the Big Five personality traits (Gallego, Pardos-Prado, 2013; Dinesen et al., 2016) have known associations with authoritarianism. Meanwhile, the British Election Study (2016) found that Leave voters, who tend to oppose immigration, felt they had an external locus of control, lower social capital, nostalgia for the past, and lower self-efficacy, all of which were associated with authoritarianism by Allport.

Adorno et al.'s (1950) finding that those who are high in authoritarianism are more alike than those who are not might explain the results found in Studies 4a and 4b, whereby the items that best predicted negative attitudes towards immigration were more closely inter-correlated than the items that best predicted positive attitudes, although these results would be more compelling if they were replicated on larger samples.

In the Dual Process Model, authoritarianism is associated with Social Dominance Orientation as a potential predictor of political attitudes more generally.

The following chapter (Ch. 6) will use this model to explore how some of these concepts fit together. To use the parable of the blind men describing the elephant, it may be possible

that researchers looking into individual influences on immigration attitudes are describing parts of a greater whole.

Part 2 of this chapter looked at what is known about the origins of authoritarianism and what this suggests about ways in which attitudes towards immigration might be changed, which will be relevant for Ch. 7.

The literature shows that levels of authoritarianism, or perhaps the expression of authoritarian behaviours, can change.

If normative threat is what riles up authoritarians, then normative reassurance is the immediate salve. This might involve stressing common ground and values shared between the audience and an immigrant, who should be presented as non-threatening. The themes might involve enforcing common norms and respect for institutions and traditions. Hygiene is an additional element to be considered.

However, Part 2 also raises longer-term issues about how a society might seek to manage levels of authoritarianism. If it is the case that a percentage of the population will behave in authoritarian ways because they are feeling under threat, incapable, lost, small and alone; and if feeling this way disadvantages them by making it harder for them to behave like everyone else, then long-term solutions aimed at boosting their self-esteem and sense of self-efficacy might be considered if the evidence suggested that such approaches were likely to be effective.

To test such propositions, future research directions (beyond the scope of this thesis) might involve seeking what happens to levels of authoritarianism when people are given boosts to their self-esteem or feelings of self-efficacy; or when they are surrounded by those they love and trust. Longitudinal studies might then follow up, looking at what happens to these people in the medium-to-long term.

Chapter 6: The Dual Process Model and immigration attitudes

Abstract: This chapter explores in greater depth the relationships between authoritarianism, Social Dominance Orientation and other predictors of immigration attitudes. In Part 1, a pre-registered study using a large quota sample of UK citizens (N=948) tests whether a single model that combines these variables, based on the Dual Process Model, is better at predicting immigration attitudes than one which assumes they each have an independent effect. Structural Equation Modelling is used to test the combined model, which fails to meet pre-registered fit criteria but provides support for the finding in Ch.4 that authoritarianism is a strong predictor of immigration attitudes. In Part 2, exploratory and then confirmatory factor analysis is used to break down the Right-Wing Authoritarianism scale into three sub-dimensions. These are identified as Aggression, Conventionalism and Submission, of which Aggression (r=.60) is most closely correlated with immigration attitudes. Cultural threat (r=.65) is also a strong predictor. Strong correlations are found between authoritarianism and its sub-dimensions and the binding Moral Foundations. Part 3 is a pre-registered study (N=1,005) in which a new Moral Foundations questionnaire is compared against two surveys that measure authoritarianism and its sub-dimensions. High correlations are found between the Authority foundation and the overall authoritarianism score (r=.71, r=.74), but also between the Authority foundation and the two sub-dimensions of Authoritarian Aggression (r=.61, r=.64) and Submission (r=.60, r=.69), and between the Purity foundation and the sub-dimension of Conventionalism (r=.63, r=.58). The conclusion considers whether these close relationships suggest that authoritarianism could be used to frame persuasive texts in the same way that the Moral Foundations is often used.

6.1 Introduction

In Ch. 4, authoritarianism (Adorno et al., 1950; Allport, 1954; Altemeyer, 1981) emerged as one of the strongest predictors of British immigration attitudes. The correlational analysis also showed that some of the predictors of immigration attitudes were inter-correlated.

Ch. 5 reviewed the literature on authoritarianism and established that there were known relationships between some of these variables. The Dual Process Model proposed by Duckitt & Sibley (2009) combines authoritarianism with Social Dominance Orientation (SDO, Pratto et al., 1994). It is known to be related to the Moral Foundations, Dangerous and Competitive World views, and normative (or cultural) and economic threat (Graham, Haidt, Nosek, 2009; Duckitt, Sibley, 2017; Feldman, Stenner, 1997).

In the previous experiments, these constructs were not available in the same dataset. Part 1 of this chapter rectifies this, gathering data from a large quota sample (N=948) sourced from Prolific Academic, and including some of the other predictors of immigration attitudes identified in Ch.4.

A model based on the Dual Process Model is constructed to see if these variables are better at predicting immigration attitudes when they are combined into a single model than when it is assumed that each variable has an independent effect. Structural Equation Modelling is used in the analysis.

Part 2 of this chapter compares different scales that have been used to measure authoritarianism. The revised RWA scale (Altemeyer, 1998) is considered a reliable scale, but it is lengthy (32 items) and uni-dimensional. Consideration is given to two potential substitutes: the 5-item libertarian-authoritarianism scale developed by Evans, Heath & Lalljee (1996) and an 8-item child-rearing scale developed by Engelhardt et al. (2021).

Exploratory factor analysis and confirmatory factor analysis is then carried out on the RWA scale, which is found to break down into three sub-dimensions. To identify what these sub-dimensions are, a proxy is constructed for another scale, the 6-item Very Short Authoritarianism (VSA) scale developed by Bizumic & Duckitt (2018).

Part 3 of this chapter follows up on a finding in Part 1. The best functioning model for predicting immigration attitudes was one that included authoritarianism and the Moral Foundations of Purity and Authority. The penultimate model had included SDO. This raised a question about the inter-relationship between the Dual Process Model and Moral Foundations. It was curious that the Purity and Authority foundations were so closely associated with authoritarianism. At face value, there appeared to be substantial overlap with the Conventionalism and Aggression sub-dimensions of authoritarianism, as identified by Altemeyer (1981). If they were indeed roughly equivalent, then the final model would resemble authoritarianism and two of its sub-dimensions. The penultimate model, which additionally included SDO, would have looked much like the Dual Process Model.

This section reports the results of an investigation carried out with a fresh sample (N=1,005) which compares a new Moral Foundations scale and two scales that measure authoritarianism and its sub-dimensions: the VSA scale (Bizumic, Duckitt, 2018), and the RWA-3D scale developed by Funke (2005).

6.2 Literature review

There are three elements to this literature review. The first considers the literature relevant to Part 1, looking for evidence about how different predictors of immigration attitudes might be related to the Dual Process Model. The second considers the authoritarianism scales that are compared in Part 2, and the third considers the relationship between Moral Foundations Theory and authoritarianism.

6.2.1 The Dual Process Model and other predictors of immigration attitudes

The literature reviewed for Part 1 of this chapter explores how the various predictors of immigration attitudes in the UK might fit together into a model based on the Dual Process Model, which has authoritarianism and Social Dominance Orientation as its two axes. Schumacker & Lomax (2010) suggest that Structural Equation Modelling (SEM) is an

appropriate tool for comparing hypothesised models for relationships between variables, whether latent or observed, and this is the technique that will be used in the analysis.

In a 2008 paper, Sibley and Duckitt proposed a diagram for the Dual Process Model in which personality traits predict Dangerous and Competitive worldviews which in turn predict levels of authoritarianism and SDO. These then predict levels of perceived threat or competition which predict prejudice. In their reasoning, Sibley and Duckitt say that authoritarianism and SDO might be described as basic dimensions of social attitudes or values that can be affected by external stimuli and are driven by the more stable personality traits. Their model included the Big Five personality traits of Openness, Conscientiousness and Agreeableness (McCrae, Costa, 1996).

Moral Foundations are regarded as "nativist" or partly innate (Atari, Haidt, 2022). As such, the literature might suggest that they too would predict authoritarianism and SDO. Kugler, Jost & Noorbaloochi (2014) found that the relationship between conservative and liberal attitudes and the Moral Foundations is statistically mediated by authoritarianism and Social Dominance Orientation. The binding foundations of Authority, Loyalty and Purity are known to be related to authoritarianism, while the individualising foundations of Care and Fairness have an inverse relationship with SDO (Federico et al., 2013).

Allport (1954) said that authoritarians have "black-and-white" thinking styles and are prone to stereotyping, which may be analogous to the essentialist thinking described by Bastian and Haslam (2008), which is known to predict immigration attitudes.

Questions that are included in the British Election Study (2016), which were identified as predictors of immigration attitudes in Ch.4, reflect attitudes that Allport (1954) associated with authoritarianism and prejudice. The BES uses a measure of social trust as a proxy for social capital (Putnam, 2000; Halpern, 2009), which could be assumed to matter to authoritarians who value their communities. It has items asking about levels of patriotism; a belief that life was better in the past; anti-intellectualism (preferring the wisdom of ordinary people over the opinions of experts); and a feeling that the individual doesn't understand or has no influence over politics (political efficacy).

Feldman & Stenner (1997) say that those with an authoritarian predisposition can be riled up when they believe that the authorities are no longer worthy of their respect. The BES

dataset includes an item asking if the individual agrees that politicians don't care what people like them think.

Feldman & Stenner also found that a pre-disposition to authoritarianism can be activated by normative threat, or threats to a person's values or culture. There are two items in the BES dataset that measure cultural threat. The first tests the extent to which an individual agrees or disagrees that "British values and beliefs are being undermined and cherished traditions are under threat." The other directly relates cultural threat to immigration, asking if an individual feels that "immigration undermines or enriches Britain's cultural life."

Since SDO is associated with anti-egalitarianism and maintaining hierarchies (Sidanius, Pratto, 1999), it might be assumed that it is also associated with the questions asked by the British Election Study about whether equal rights have gone too far for minorities, women and homosexuals.[22]

Sidanius, Pratto and Bobo (1996) found that education levels were related to SDO. In the EU referendum, more highly educated people voted for Remain, suggesting they were less opposed to immigration (Ashcroft, 2016).

While RWA is associated with cultural threat, SDO rises along with heightened exposure to social competition and resource scarcity (Guimond et al., 2003; Sibley et al., 2007b). The BES dataset has two questions relating to economic threat. The first asks the extent to which an individual agrees or disagrees with the statement that "British jobs are insecure right now and our future prosperity is under threat." The second question makes a direct link with immigration, asking the individual the extent to which they think immigration is good or bad for Britain's economy.

When considering the expected relationship between RWA and SDO, the literature suggests that it varies from country to country, with correlations ranging from weak to high (Zakrisson, 2005). In their meta-analysis, Roccato & Ricolfi (2005) found correlations of up to r=.66.

[22] Conway et al. (2017) found that a revolt against political correctness was associated with support for Donald Trump.

6.2.2. Measuring SDO and RWA

To measure Social Dominance Orientation in this study, the 16-item SDO-7 scale (Ho et al., 2015) was selected.

There are multiple scales to measure authoritarianism. A core focus of this chapter was to understand the relationships between them.

The 'F' scale was developed for this purpose by Adorno et al. (1950, pp. 226-227), but criticised almost immediately for being unreliable, prone to acquiescence bias and focused on right-wing attitudes (Christie & Jahoda, 1954; Titus & Hollander, 1957). In 1981, Altemeyer produced the Right-Wing Authoritarianism scale (RWA), a reliable scale for measuring prejudice, which has been described as the measure of choice for researchers (Feldman, 2003, p.43; Bizumic, Duckitt, 2018).

There are well-known critiques of the RWA scale, as listed by Bizumic & Duckitt (2018, p.841). The items do not separate out the three sub-dimensions of Aggression, Submission and Conventionalism since Altemeyer chose to create a uni-dimensional scale with items that were "double-" or even "triple-barrelled." It is a lengthy scale. For this reason, some researchers have sought to shorten it, either by selecting items at random, or based on ad hoc criteria (Bizumic & Duckitt, 2018). Zakrisson (2005) is among those who developed a version of her own. Her scale has 15 items but it was published with the caveat that it is presumed to tap into a somewhat narrower concept of authoritarianism.

At face value, the RWA scale appears to measure attitudes towards issues that are likely to be more controversial among Americans than among people from other nations (e.g. abortion)[23]. It also focuses on right-wing authoritarianism, ignoring the possibility of authoritarianism on the left (Duckitt, 2022).

Another, more substantial, critique is circularity. Feldman & Stenner (1997, p.747) say that F-scale type measures (of which the RWA scale is one) are uncomfortably close to the consequences of the authoritarianism they are trying to explain. In developing the F scale,

[23] In data published in September 2022, 50% of Americans supported a national right to abortion, according to YouGov.com (N=1,500 US citizens). In the UK, as of February 2023, 87% said women should have the right to an abortion (YouGov, bimonthly tracker N= 1646 – 1820 GB adults per wave).

Adorno et al. (1950, p.447) sought to create indirect measures that did not hint at the overt prejudice they sought to measure. However, Feldman & Stenner argue that it is even less obtrusive to test attitudes towards child-rearing since these are known to associated with authoritarianism and are more universal and deeply seated. The 8-item scale produced by Engelhardt, Feldman & Hetherington (2021) is an example of such a scale. It is noteworthy that the F-scale, the RWA scale and the Authority foundation (Graham, Haidt, Nosek, 2009) all contain items asking about the importance of children learning respect for authority. However, the child-rearing scales have met with criticism. Jost, in his book *Left and Right* (2021, p.200), said the use of such scales had led to "a weak and impoverished conception of authoritarianism." Other critiques are that they fail to capture the aggression element of authoritarianism, they are unreliable over time and across the racial divide, and they may reflect the submission facet of authoritarianism alone (Bizumic, Duckitt, 2018; Pérez, Hetherington, 2014).

There are alternative scales that have been used to measure authoritarianism. Evans, Heath & Lalljee's (1996) five-item authoritarian-libertarianism scale is frequently used in political studies that draw on data from the British Election Study (BES) with which Evans is associated. Items from this scale were used when testing for correlations in the BES dataset.

Another option is the Very Short Authoritarianism (VSA) scale developed by Bizumic & Duckitt (2018), which contains just six items that are almost identical to the existing items in the RWA scale on which they are based. One advantage of this scale is that it separates out the three sub-dimensions of authoritarianism and tests each with one positive and one negative item.

One way of comparing these scales is to look at their Cronbach's alpha scores (Cronbach, 1951), a measure that tests the internal reliability of a scale. Carmines and Zeller (1979, p.51) say that Cronbach's alpha scores should be at least .7 and preferably around .8 for widely-used scales. Writing in 2022, Altemeyer found scores that were generally above .8 for his RWA scale. Similarly, Evans, Heath and Lalljee (1996) found scores of above .8 for their scale. However, Engelhardt et al. (2021) found Cronbach alpha scores for their child-rearing scale averaging .62. Bizumic and Duckitt (2018) found that the forced choice child-rearing items that comprise the second version of the Authoritarian Child Rearing Values (ACRV-2) developed by Feldman and Stenner (1997), while being an improvement on the

earlier version of the scale which produced a pooled alpha of only .26, still generally pooled in the range of .54 and .66. By contrast, their Very Short Authoritarianism scale had a Cronbach's alpha of .73. [24]

In this study, the primary aim was to select a high-quality measure of authoritarianism to ensure that the research aims of the experiment would be met. Brevity was relevant but of secondary importance. Three authoritarianism scales were therefore selected for the experiment with the intention of comparing them in advance to decide which should be used in the Structural Equation Modelling. These were the well-respected RWA scale (Altemeyer, 1998); the Engelhardt et al. (2021), scale, which was a short (8 items) and modern representation of a child-rearing scale; and the British Election Study authoritarianism scale which was short (5 items) and commonly used in the UK (Evans, Heath, Lalljee, 1996).

6.2.3 The relationship between RWA, SDO and Moral Foundations

The third part of this literature review considers the relationships between RWA, SDO and the Moral Foundations.

The original Moral Foundations survey breaks down into two broader dimensions (Graham, Haidt, Nosek, 2009). As described above, authoritarianism is related to the binding foundations and SDO to the individualising foundations (Federico et al., 2013). Scholars are divided as to what this implies. The question raised by Claessens et al. (2022, p.26) was whether Moral Foundations has "independently converged upon the same two dimensions of ideology that have been repeatedly identified in political psychology."

When assembling and validating the original Moral Foundations scale, the authors (Graham et al., 2011) were aware of both authoritarianism and SDO. They describe how they sought out external criteria for each foundation. These were external scales they expected to be related to *one* [my italics] particular Moral Foundation.

[24] Looking at other scales used in this thesis, the SDO scale developed by Pratto et al. (1994) had an average Cronbach's alpha over 13 samples of .83.

For the Authority foundation, Zakrisson's (2005) authoritarianism scale was selected as an external criterion, and a correlation of r=.65 was duly found (Graham et al., 2011, Table 7, p.369). The Fairness foundation was tested against a reverse-scored SDO scale (Pratto et al., 1994), and a correlation of r=.56 was found. However, no remark was made on the strong correlations between authoritarianism, SDO and other Moral Foundations. In their study, authoritarianism was correlated at r.=56 with the Loyalty foundation and r=.70 with the Purity foundation, and the SDO scale had a negative correlation of r=.57 with the Care/Harm foundation.

Some scholars (Soto, John, 2009; Paunonen et al., 2001; Ekehammer, Akrami, 2007; Mondak, 2010) argue that the study of personality characteristics at the sub-dimension level can provide a deeper insight into political attitudes.

SDO divides into the sub-dimensions of SDO-D (Dominance) and SDO-E (Anti-Egalitarianism) (Ho et al., 2015).

For Right-Wing Authoritarianism, Robert Altemeyer (1981) identified the three sub-dimensions of Aggression, Submission and Conventionalism. However, researchers interested in studying them further have been hampered by the uni-dimensionality of the RWA scale he devised.

Other scholars have attempted to prise this scale apart, creating their own scales to measure the three sub-dimensions. Bizumic & Duckitt (2018) devised the Very Short Authoritarianism (VSA) scale, which has six items (two for each sub-dimension), while Funke (2005) produced a 12-item scale, known as the RWA-3D with four items per dimension.

Where studies do separate out the facets of authoritarianism, it is common to find a close relationship between Aggression and Submission. Funke (2005) says that these are "two sides of the same medal." Adorno (1951) used a bicycle metaphor to say that authoritarians, like cyclists, bow their heads above but kick out below. Experimental results have shown that when the RWA scale is broken down, the two most prominent factors are Authority and Conventionalism (Duckitt, Fisher, 2003).

A recent pre-print from Atari et al. (2022) has proposed a new Moral Foundations scale, MFQ-2, which has been tested in 25 populations and which splits the Fairness foundation into two new foundations: Equality and Proportionality. The study, which lists Graham and

Haidt as co-authors, has replaced the original Moral Foundations questionnaire on the yourmorals.org site (run by the authors of Moral Foundations Theory) and has been included in the World Values Survey. In Figure 5 of their paper (pp. 39-40), diagrams show how the foundations inter-relate across the 25 populations. One of the strongest relationships – reminiscent of the Aggression-Submission relationship – is between the Authority and Loyalty foundations.

Atari et al. include validation data in which they test the scale against an RWA scale (Altemeyer, 2006) and the SDO-7 scale (Ho et al., 2015). As with the first Moral Foundations scale, there is a high correlation between RWA and the Authority foundation (r=.69), but similarly high correlations with the Loyalty (r=.61) and Purity foundations (r=.73) go unremarked. The authors then note the correlation of r=.-18 between the SDO-7 scale and the new Equality foundation, but not the correlations of r=-.36 with the Care foundation, r=.36 with the Loyalty foundation, r=.40 with the Authority foundation and r=.50 with the Purity foundation.

Part 3 of this chapter explores the relationship between this new scale and the VSA and RWA-3D scales, to see if further light can be shed on the relationships by studying them at sub-dimension level.

6.3 Part 1

6.3.1 Methodology

Ch.4 demonstrated that there were multiple predictors of British immigration attitudes, and the correlational analysis suggested that some of these were inter-related. Ch.5 showed that a number of these relationships were well-established in the literature.

In Part 1 of this chapter, the first research question is whether these variables are more predictive of immigration attitudes when they are combined into a single model based on the Dual Process Model (Model 1, Fig. 6.1).

In constructing the model, various assumptions were made. As per Sibley and Duckitt's 2008 model, the Dangerous Worldview was associated with authoritarianism, while the Competitive Worldview was associated with SDO. In that model, the Big Five traits of Openness and Conscientiousness predicted authoritarianism, and Agreeableness predicted SDO. In this model, they were replaced by the Moral Foundations.[25]

Essentialism was also included. Based on the inter-correlations in Ch.4, it was assumed to be related to the binding Moral Foundations. Education was related to SDO in this model, although in any future iterations, it might arguably be associated with authoritarianism (Altemeyer, 1981).

With the exception of the items on "equal rights going too far," which were associated with SDO, the British Election Study items were assumed to be associated with authoritarianism, as was age.

Structural Equation Modelling was used to test this model against another model (Model 2, Fig. 6.2) in which it was assumed that each of these variables had an independent effect.

Hypotheses were pre-registered. The intention for this experiment was to establish how various constructs inter-related. If Model 2, where the variables were independent,

[25] The Big Five were considered for inclusion but the model was already crowded and they had not been very predictive of immigration attitudes in Ch.4.

provided a closer model fit, this would be a clear indication that Model 1 was poorly conceived.

> H1a was that Model 1 would provide an adequate fit to the data.
>
> H1b was that Model 1 would not be significantly worse than Model 2 at predicting immigration attitudes.

If the model failed to meet the pre-registered criteria (a Comparative Fit Index, CFI, greater than .9 and a Root Mean Square Error of Approximation, RMSEA, of at least .08; Hu, Bentler, 1999), then the pre-registration set out a procedure whereby the least highly correlated branch in Model 1 would be trimmed away from both models until the fit criteria were met.

The second research question was whether there was a relationship between levels of RWA and perceived cultural threat, and SDO and perceived economic threat.

Model 3 (Fig. 6.3) contains a variable for cultural threat, which is assumed to be related to RWA, and Model 4 (Fig. 6.4) contains a variable for economic threat, assumed to be related to SDO.

> H2a was that adding an interaction between authoritarianism and perceived cultural threat (Model 3) would increase the variance explained in immigration attitudes when compared to Model 1.
>
> H2b was that adding an interaction between SDO and perceived economic threat (Model 4) would increase the variance explained in immigration attitudes when compared to Model 1.
>
> In both cases, the smallest effect size of interest was pre-registered as an increase of 2% in the R-squared value.

A final hypothesis related to the threat specifically posed by immigrants. A simple linear regression was proposed.

> H3a was that authoritarianism would be better at predicting variance in the perceived cultural threat posed by immigrants as compared to SDO.

H3b was that SDO would be better at predicting variance in the perceived economic threat posed by immigrants as compared to authoritarianism.

Again, the smallest effect size of interest was an increase of 2% in the R-squared value.

Fig. 6.1: Model 1

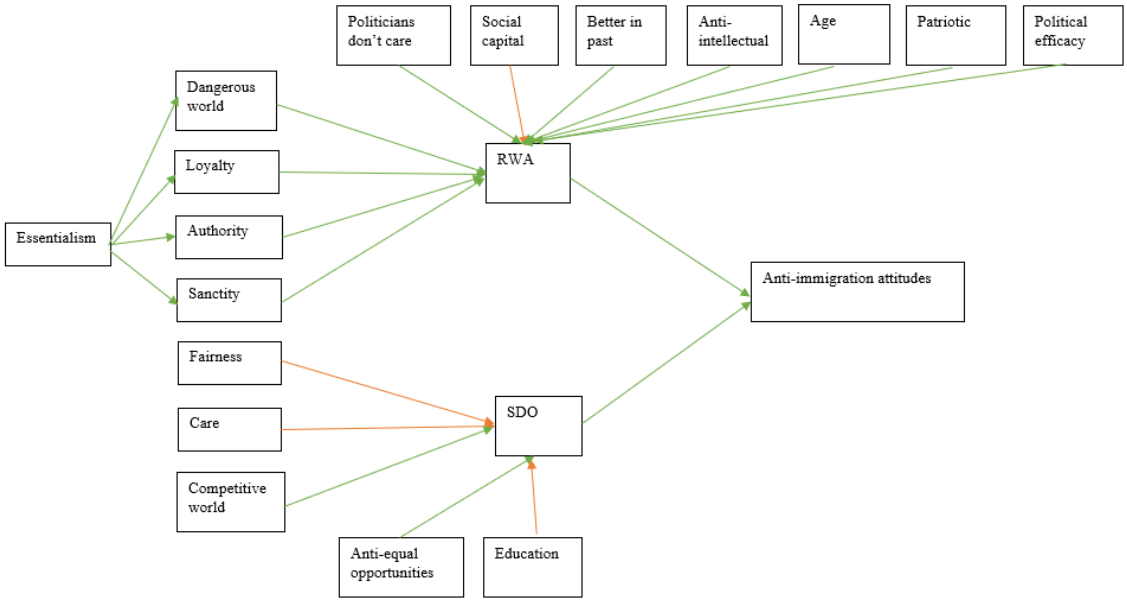


Fig. 6.2: Model 2

Fig. 6.3: Model 3

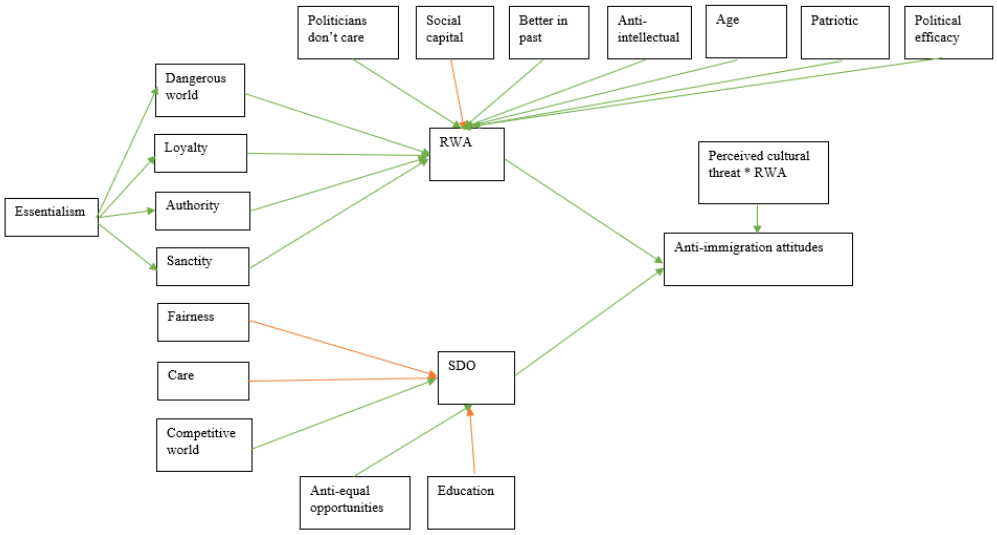
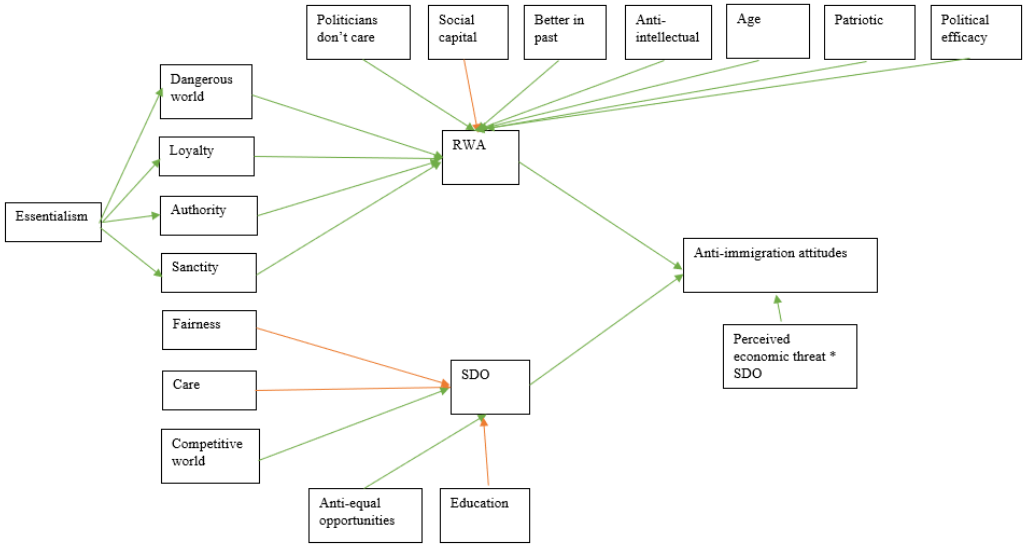


Fig. 6.4: Model 4



6.3.2 Participants and procedure

Data was gathered in August and September 2021 as part of a wider data collection exercise using a quota-based sample of 948 people, representing the British public in terms of age, gender, ethnicity and political affiliation. The participants were sourced via Prolific Academic and the survey was conducted in Qualtrics. The mean age was 46.6, and there were 434 men and 504 women (10 chose to self-describe or did not want to disclose their gender). After a preamble in which consent was sought, the participants answered demographic and political questions. They were then faced with a series of psychological scales which were presented in random order, before being asked about immigration attitudes.

6.3.3 Dependent variables

The dependent variables used to test anti-immigration attitudes were intended to capture attitudes towards both the stock and the flow of immigrants. Blinder & Richards (2020) note that it is possible to be positive towards one and negative towards the other, hence it was considered appropriate to use an average. Each item included a 7-point Likert scale in order to capture a wide variance in attitudes.

Participants were asked:

> DV1: To what extent do you agree or disagree with the following statement: "There are too many immigrants in the UK right now"? (1 Strongly disagree, 7 Strongly agree).
>
> DV2: Some people think that the UK should allow *many more* immigrants to come to the UK to live and others think that the UK should allow *many fewer* immigrants. Where would you place yourself on this scale? (1 Many fewer, 7 Many more).

In analysing the results, the coding in DV2 was reversed so that higher numbers represented a more anti-immigration stance. The scores across these two questions were then averaged to create the score for anti-immigration attitudes for that individual.

Two other dependent variables were included to test for the cultural and economic threat posed by immigrants. The 7-point Likert scales were organised such that a score of 1 would be anti-immigration on the first question and pro-immigration on the second.

> DV3: Do you think that immigration undermines or enriches Britain's cultural life? (1 =Strongly Undermines, 7=Strongly enriches).
>
> DV4: Do you think immigration is good or bad for Britain's economy? (7-point Likert scale, 1 =Very good, 7=Very bad).

All participants were required to complete the same questionnaire. As this was part of a wider data-gathering exercise, this survey included scales and questions that did not relate to the research questions above.

6.3.4 Results

Testing authoritarianism measures

Before beginning the SEM modelling, the question arose as to which authoritarianism scale to use in the analysis. It was regarded as being of primary importance to use a high-quality scale, but if the scale were brief, that would be an additional benefit. The RWA scale was seen as the default option, but the pre-registration specified that if either the Engelhardt et al. (2012) child-rearing scale or the British Election Study (BES) authoritarianism scale (Evans, Heath, Lalljee, 1996) met a correlation threshold of r=.8 with the RWA scale, they could be substituted for it in the analysis.

There were strong and significant correlations between the two scales and the RWA (BES r=.64, Engelhardt et al. r=.62), but they fell below the threshold. As a secondary, pre-registered step, a set of American-specific questions (e.g. on abortion) were removed from the RWA scale and the correlations were re-tested but they remained below the threshold.

Computing the Cronbach's alpha coefficients using the data gathered in this dataset, the alpha coefficient for the 32-item RWA scale was high at .96; the alpha coefficient for the five-item BES authoritarianism scale was .82; and the alpha coefficient for the eight-item

Engelhardt et al. scale was .78. Judged against this criterion, the RWA was the more internally consistent or reliable scale.[26]

For these reasons, the RWA scale was used in the Structural Equation Modelling.

The SEM analysis

In the SEM analysis, the two models were built up in R and tested against each other. The initial models did not meet the pre-registered fit criteria (Model 1 CFI=.636, RMSEA=.152; Model 2 CFI=.563, RMSEA=.166), so the least highly correlated branches were successively trimmed away until a model was reached that was closest to them. SDO was the penultimate variable to be trimmed leaving a final model which contained RWA linked to the Moral Foundations of Authority and Purity (Model 1 CFI=.957, RMSEA=.188; Model 2 CFI=.605, RMSEA=.570).

The pre-registered fit criteria were for a Comparative Fit Index (CFI) > .9 and Root Mean Square Error of Approximation (RMSEA) < .08. In almost every case, Model 1 was closer to these than Model 2, however, while the best fitted version of Model 1 met the CFI criteria, it did not meet the RMSEA criteria.

In terms of the hypotheses, H1a was that Model 1 would provide an adequate fit to the data. This was only partially supported. H1b, that Model 1 was not significantly worse than Model 2 at predicting immigration data, was accepted.

[26] As a comparison, the Cronbach's alpha coefficients for other scales included in this dataset were .93 for the 44-item Big Five Inventory, .94 for the 16-item SDO scale, .88 for the 5-item BES economic scale and .87 for the 32-item Moral Foundations Questionnaire.

Refining the model by testing the effect of perceived threat interactions

The second research question was whether adding in an interaction term for perceived threat would improve the fit, testing first an interaction for perceived normative/cultural threat (assumed in Model 1 to be related to RWA) and then for perceived economic threat (assumed in Model 1 to be related to SDO). The smallest effect size of interest was a difference of 2% in the R-squared value.

Testing Model 3, an item asking if the respondent believed that “British values and beliefs are being undermined and cherished traditions are under threat" (7 = Strongly agree) was added as an interaction term to RWA. It improved the CFI fit slightly from .64 to .65, but not the RMSEA, which rose from .15 to .20. However, the variance explained rose from R2 = .355 to R2 = .472 i.e. a rise of over 2%, so H2a was accepted.

An item asking whether the respondent agreed that “British jobs are insecure right now and our future prosperity is under threat" (7=Strongly agree) was then added to the model and related to SDO. This did not improve the fit of the model, so H2b was not accepted.

Testing the perceived threat posed by immigrants

The extent to which RWA and SDO predicted different aspects of anti-immigration attitudes was then tested using a simple linear regression. H3a was that RWA would predict more of the perceived cultural threat posed by immigrants than SDO, and H3b was that SDO would predict more of the perceived economic threat posed by immigrants than RWA. The smallest effect size of interest was pre-registered as a change of 2% in the R2 value.

RWA was shown to predict the cultural threat posed by immigrants ($R2=.31$, $F(1,946)=421.1$, $p<.001$) and the economic threat posed by immigrants ($R2=.22$, $F(1,946)=265$, $p<.001$).

SDO was also shown to predict the cultural threat posed by immigrants ($R2=.27$, $F(1,946)=345.2$, $p<.001$), and the economic threat predicted by immigrants ($R2=.17$, $F(1,946)=190$, $p<.001$).

Since the variance in cultural threat posed by immigrants predicted by RWA was R2= .31 as compared to R2=.17 for SDO, H3a was accepted.

However, the variance in the economic threat posed by immigrants predicted by SDO was less than that predicted by RWA, so H3b could not be accepted. ,

An additional regression was carried out to investigate whether authoritarianism and generalised cultural threat predicted immigration attitudes, as hypothesized by Feldman and Stenner (1997). The main effect of RWA was significant ($b = .61$, $SE = .09$, $t(944) = 6.81$, $p < .001$). Similarly, the main effect of cultural threat was significant ($b = .65$, $SE = .07$, $t(944) = 9.11$, $p < .001$), and a significant interaction effect was observed between RWA and cultural threat ($b = -.05$, $SE = .02$, $t(944) = -2.53$, $p = .012$).

6.3.5 Discussion

This exercise did not produce a model that determines exactly how authoritarianism interacts with other predictors of immigration attitudes.

It may be that the initial model set out in the pre-registration was too complex and a simpler model would have worked better. Further exploratory research might be needed to establish if that is the case. It is also notable that the correlation between Social Dominance Orientation (SDO) and RWA (r=.59) was at the higher end of the expected range. With a lower value, the model might have worked better. Then there is a debate in the literature about what the appropriate cut-off points should be (Hu, Bentler, 1999).

However, this exercise does increase the level of confidence with which it is possible to assert that authoritarianism is one of the leading predictors of immigration attitudes in the UK. Using a large sample that was broadly representative of the UK population, the analysis confirms that authoritarianism is a much better predictor of immigration attitudes than demographic factors, even those regarded as important in the EU referendum such as age and education.

The best-performing version of the model was one that linked Right-Wing Authoritarianism (RWA) with the Moral Foundations of Authority and Purity. In this dataset, there appears to

be a substantial overlap between the RWA scale and these two Moral Foundations. This will be explored in Part 3 of this chapter.

Furthermore, as the authoritarianism theory predicts (Feldman, Stenner, 1997), this study finds that when people feel that their traditions and culture are under threat, they are more likely to oppose immigration, particularly when they are high in authoritarianism,

Perceptions of economic threat did not have the same effect. There was no relation between immigration attitudes and responses to the question as to whether the future of the British economy was at stake and jobs were under threat, nor with views about whether immigration was good or bad for the economy.

Looking back at the results of the 2016 EU referendum vote, where immigration and the economy were seen as the two key issues (BES, 2016), just under half of those in the top socio-economic group voted for Leave while a third of those in the bottom socio-economic group voted for Remain (Ashcroft, 2016[27]), suggesting that the result was not primarily driven by perceived or real economic threat.

Curtice (2017) found that a majority in the country (55%) felt that leaving the EU would reduce immigration, but there was no majority opinion about the potential economic impact.[28]

[27] In the top socio-economic group, 57% voted to Remain (as against 43% who didn't), and in the bottom socio-economic group 64% voted for Leave (as against 36% who didn't) (Ashcroft 2016).
[28] Some 23% felt the economy would improve if the UK left the EU, 32% felt it would stay the same and 40% felt it would get worse. By contrast, a majority (51%) did feel that EU membership undermined Britain's identity as against 34% who disagreed and 16% who neither agreed nor disagreed, so a cultural element may have been present.

6.4 Part 2: Breaking the RWA scale into sub-dimensions

In Part 2 of this chapter, exploratory and confirmatory factor analysis is carried out on the RWA scale. The pre-registration specified that this would happen if RWA was correlated at less than r=.8 with the British Election Study scale (Evans, Heath, Lalljee, 1996) and the Engelhardt et al. (2021) scale. The model fit was tested against the criteria of a Tucker Lewis Index > .9 and RMSEA <.08.

6.4.1 Participants and procedure

The dataset from Part 1 was used for the factor analysis.

Ahead of the analysis, the sample was split randomly into two. The exploratory factor analysis was carried out on one half of the sample. The confirmatory factor analysis was carried out on the other half.

6.4.2 Results

Table 6.1 shows some of the top-loading items that were allocated to the three factors in the exploratory factor analysis. When performing this analysis, each time the sample was randomly split, a new sample was generated, and some survey items moved between different factors. The RWA1 and RWA2 factors were relatively stable, but the items allocated to RWA3 were more subject to change.[29] This is consistent with other experimental evidence that when breaking down the RWA scale, the first two factors emerge more strongly than the third (Duckitt, Fisher, 2003). The most reliable questions for RWA3 in this dataset were about applauding free thinkers and praising those who challenge others.

[29] The full list of items included in the three factors can be found in Appendix 3.

Table 6.1: The top-loading items in each factor

RWA1
The situation in our country is getting so serious, the strongest methods would be justified if they eliminated the troublemakers and got us back to our true path.
Once our government leaders give us the “go ahead,” it will be the duty of every patriotic citizen to help stamp out the rot that is poisoning our country from within.
What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path.
RWA2
There is nothing wrong with premarital sexual intercourse.
God’s laws about abortion, pornography and marriage must be strictly followed before it is too late, and those who break them must be strongly punished.
A “woman’s place” should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.
RWA3
It is wonderful that young people today have greater freedom to protest against things they don't like, and to make their own "rules" to govern their behaviour.
Our country needs free thinkers who have the courage to defy traditional ways, even if this upsets many people.
Some of the best people in our country are those who are challenging our government, criticising religion, and ignoring the “normal way things are supposed to be done.”

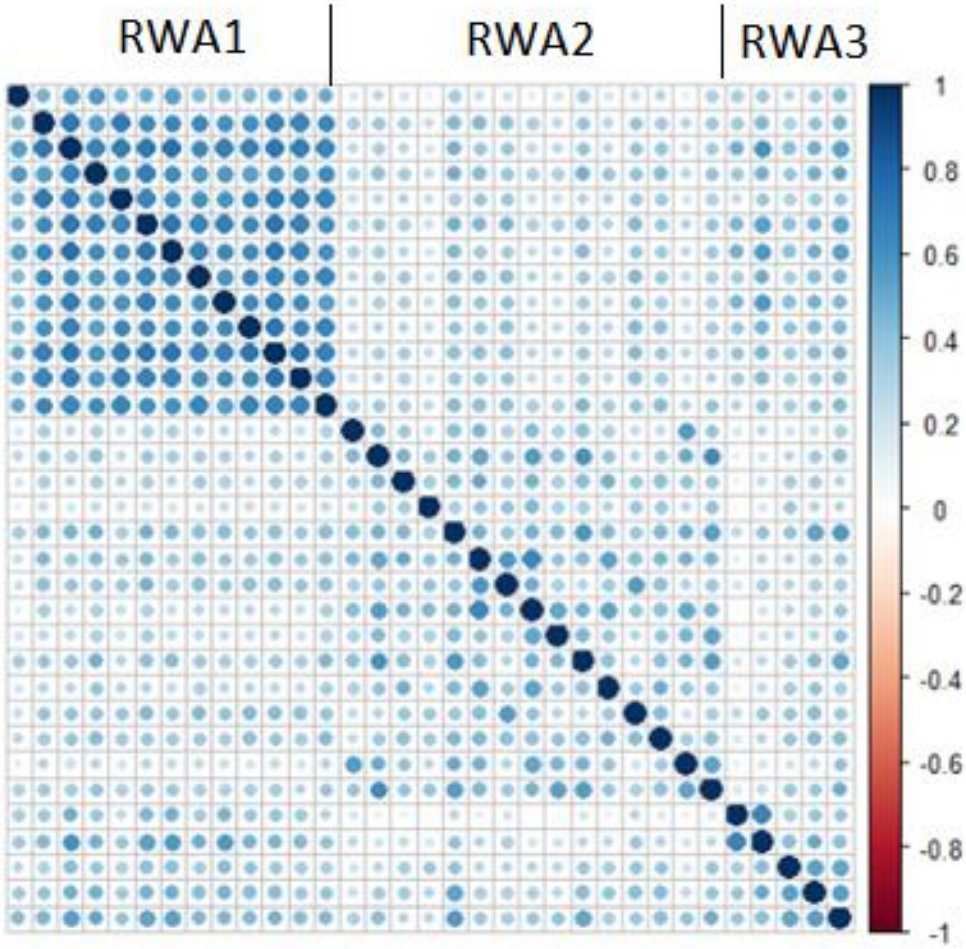
Table 6.2: Factor analysis: Comparing 1, 2 and 3 factors

	Chi-square	prob	TLI	RMSEA	BIC
RWA 1 factor	7945.67	<0	0.69	0.115	4832.84
RWA 2 factors	3435.58	<0	0.87	0.076	537.92
RWA 3 factors	2473.17	< 0	0.90	0.066	-216.49

N=474

When the items in the scale are organised into their sub-dimensions and the correlations are plotted against each other (Fig. 6.5), the sub-dimension RWA1 is very distinct, RWA2 is also visible, and RWA3 is the least clear.

Fig. 6.5: RWA sub-dimensions



N=474

To identify which sub-dimensions these factors represent, a proxy scale was created for the Very Short Authoritarianism scale (Bizumic, Duckitt, 2018) in which the sub-dimensions of authoritarianism are labelled. The RWA scale has six items which are close equivalents of those used in the VSA scale (Table 6.3).

Table 6.3: Comparing VSA and RWA items

VSA Qs	RWA Qs
Aggression: The facts on crime and the recent public disorders show we have to crack down harder on troublemakers, if we are going to preserve law and order.	The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.
Aggression: Our society does NOT need tougher government and stricter laws. (R)	The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.
Conventionalism: God's laws about abortion, pornography, and marriage must be strictly followed before it is too late.	God's laws about abortion, pornography and marriage must be strictly followed before it is too late, and those who break them must be strongly punished.
Conventionalism: There is nothing wrong with premarital sexual intercourse.	There is nothing wrong with premarital sexual intercourse.
Submission: It's great that many young people today are prepared to defy authority.	It is wonderful that young people today have greater freedom to protest against things they don't like, and to make their own "rules" to govern their behaviour.
Submission: What our country needs most is discipline, with everyone following our leaders in unity.	What our country needs most is discipline, with everyone following our leaders in unity.

The six questions were extracted from the RWA scale, and correlations were then carried out between this new proxy scale and the remaining RWA items (Table 6.4). For transparency, the correlations before these items were removed from the scale are provided in brackets.

Table 6.4: VSA proxies and RWA Factors

	VSA Aggression	VSA Conventionalism	VSA Submission
RWA 1	.88 (.92)	-	-
RWA 2	-	.78 (.84)	-
RWA 3	-	-	.70 (.80)

N=474

The correlation for Aggression was r=.88, so RWA1 can confidently be labelled as Aggression. RWA2 was found to have a strong correlation with Conventionalism (r=.78). RWA3 was the least strongly correlated, but it still had a correlation of r=.7 with the VSA Submission items.

The three factors were then cross-checked against other variables in the dataset to see whether they were interrelated and to check how they compared at predicting immigration attitudes.

Table 6.5: Investigating RWA Factors 1, 2 and 3 – how are they related to other measures?

	RWA 1	RWA 2	RWA 3	RWA	SDO	Immig. attitudes
RWA	.92	.83	.74	-	.59	.56
SDO	.57	.42	.53	.59	-	.51
RWA1	-	.60	.69	.92	.57	.60
RWA2	.60	-	.57	.83	.42	.33
RWA3	.69	.57	-	.74	.53	.46
BES Authoritarianism	.69	.46	.56	.64	.48	.58
BES Equality	.25	.21	.41	.30	.46	.22
Engelhardt et al. scale	.62	.50	.58	.62	.41	.40
VSA Aggression (proxy)	.92	.52	.67	.82	.53	.55
VSA Conventionalism (proxy)	.45	.84	.37	.62	.22	.20
VSA Submission (proxy)	.80	.61	.80	.80	.53	.52
SDO Dominance	.59	.41	.53	.60	.93	.47
SDO Anti-Egalitarianism	.47	.38	.46	.52	.94	.47
Cultural threat	.62	.37	.45	.58	.45	.64
Economic threat	.03	-.02	-.13	-.01	-.07	.12
MFTQ Authority	.65	.40	.61	.62	.48	.50
MFTQ Loyalty	.60	.39	.51	.57	.41	.44
MFTQ Purity	.60	.61	.48	.64	.32	.36

MFTQ Harm	-.11	-.19	-.17	-.19	-.37	-.14
MFTQ Fairness	-.17	-.25	-.28	-.26	-.49	-.21
Big Five – Open	-.00	-.00	-.11	-.01	-.04	-.01
Big Five – Conscientious	-.12	-.11	-.09	-.11	-.03	-.02
Big Five – Extravert	.14	.08	.09	.12	.05	-.05
Big Five – Agreeableness	.02	.04	.02	.02	-.03	-.03
Big Five – Neuroticism	-.11	-.09	-.09	-.12	-.08	-.06

N=474

The results showed that RWA1 has a higher correlation (r=.60) with anti-immigration attitudes than RWA, SDO or any other measure reported here, except for cultural threat (r=.64), and there is a high correlation (r=.62) between RWA1 and cultural threat.

Other points of note include the correlation between the SDO sub-dimension of Dominance and RWA1 (r=.59).

The Engelhardt et al. (2021) child-rearing scale is correlated at r=.62 with the RWA scale overall. However, it is much less strongly correlated with anti-immigration attitudes (r=.40) than the other authoritarianism measures (BES r=.58, RWA scale r=.56). Of the authoritarianism sub-dimensions, the highest correlations for the Engelhardt scale are with RWA1 (r=.62) and RWA3 (r=.58).

RWA1 has a high correlation (r=.65) with the Moral Foundation of Authority. RWA2 – which contains items on conventional morality – has an r=.61 correlation with the Moral Foundation of Purity, and there are high correlations between the Moral Foundation of Loyalty and both RWA1 (r=.60) and RWA3 (r=.51). SDO has negative correlations with the Moral Foundations of Care (r=-.37) and Fairness (r=-.49).

Of the Big Five personality traits, Extraversion and Conscientiousness have the highest correlations with RWA1 of r=.14 and r=.12 respectively.

6.4.3 Discussion

Part 2 explored whether the RWA scale could be broken down into sub-dimensions. Three factors emerged from the exploratory and confirmatory analysis. Using a proxy for the Very Short Authoritarianism scale (VSA; Bizumic, Duckitt, 2018), these were labelled as Aggression, Conventionalism and Submission.

Of these three factors, RWA1, or Aggression, was the best predictor of anti-immigration attitudes. This is consistent with a recent study carried out by Peresman et al. (2021) who used the Funke RWA-3D (2005) scale to test immigration attitudes in the UK and also found that Aggression drove these attitudes, notably as regards immigrants from Muslim countries, who might be assumed to be more culturally distant.

Altemeyer (1981) conceptualised Aggression as a predisposition to enforce group norms that are sanctioned by the authorities, Submission is related to submission to these norms and Conventionalism to the acceptance of norms particularly related to morality.

Feldman and Stenner (1997) suggest that an authoritarian disposition can be riled up by normative threat. Consistent with their predictions, in this dataset, Aggression was strongly correlated with cultural threat, which proved to be the strongest factor overall predicting opposition towards immigration.

Feldman and Stenner also argue in favour of using child-rearing items to measure for authoritarianism. Feldman is a co-author of the Engelhardt et al. (2021) child-rearing scale. While the correlation with RWA overall was strong (r=.62), this scale was considerably less good at predicting immigration attitudes than the other authoritarianism measures (r=.40). Other researchers (Bizumic, Duckitt, 2018) have critiqued the child-rearing scales by saying that they fail to capture the Aggression element of authoritarianism, which might explain the difference.

One aim for this study was to compare authoritarianism scales. The 5-item BES and the 8-item Engelhardt et al. scales were compared to the 32-item RWA scale but failed to meet pre-registered standards of correlation. However, when a proxy scale for the 6-item Very Short Authoritarianism scale was constructed, this did have high correlations with the three

factors of the RWA scale. For future studies, this appears to be a useful, high-quality and short scale.

A final point to note was the high correlations between the sub-dimensions of RWA and SDO and the Moral Foundations. There have been critiques of the original Moral Foundations scale that it is over-factored (Harper, Rhodes, 2021) and that its theoretical foundations are weak (Suhler, Churchland, 2011). At face value, there are thematic overlaps between the sub-dimensions of RWA and the binding foundations, which seem to tap similar ideas such as respect for authority, sexual morality and submission to group norms; and also with SDO, where the sub-dimension of Anti-Egalitarianism has a thematic overlap with the Fairness foundation. These relationships are investigated further in Part 3.

6.5 Part 3: Exploring the relationships between RWA, SDO and the new Moral Foundations scale at sub-dimension level

In 2022, a new Moral Foundations scale emerged (Atari et al., 2022), which splits the Fairness foundation into new Equality and Proportionality foundations. In Part 3 of this chapter, the relationship is explored between this scale and two scales that measure the sub-dimensions of authoritarianism: the VSA scale and the RWA3-D scale (Funke, 2005). The SDO-7 scale (Ho et al., 2015) is included in the analysis to allow for comparison between the new scale and the sub-dimensions of SDO Dominance and SDO Anti-egalitarianism.

In this study, relationships between the scales will be studied at sub-dimension level, but where there is a thematic overlap, as on child-rearing and chastity, individual items may be considered to see what is driving these higher-level correlations.

Hypotheses were pre-registered on the Open Science Framework that there would be positive correlations between authoritarianism and the binding foundations. It was also hypothesised that the Aggression sub-dimension would be positively correlated with the Authority foundation, Submission with the Loyalty foundation and Conventionalism with Purity.

A further hypothesis was pre-registered that the new Equality foundation would be negatively correlated with SDO Anti-Egalitarianism and that the new Proportionality scale would be negatively correlated with SDO-Dominance.

6.5.1. Participants and procedure

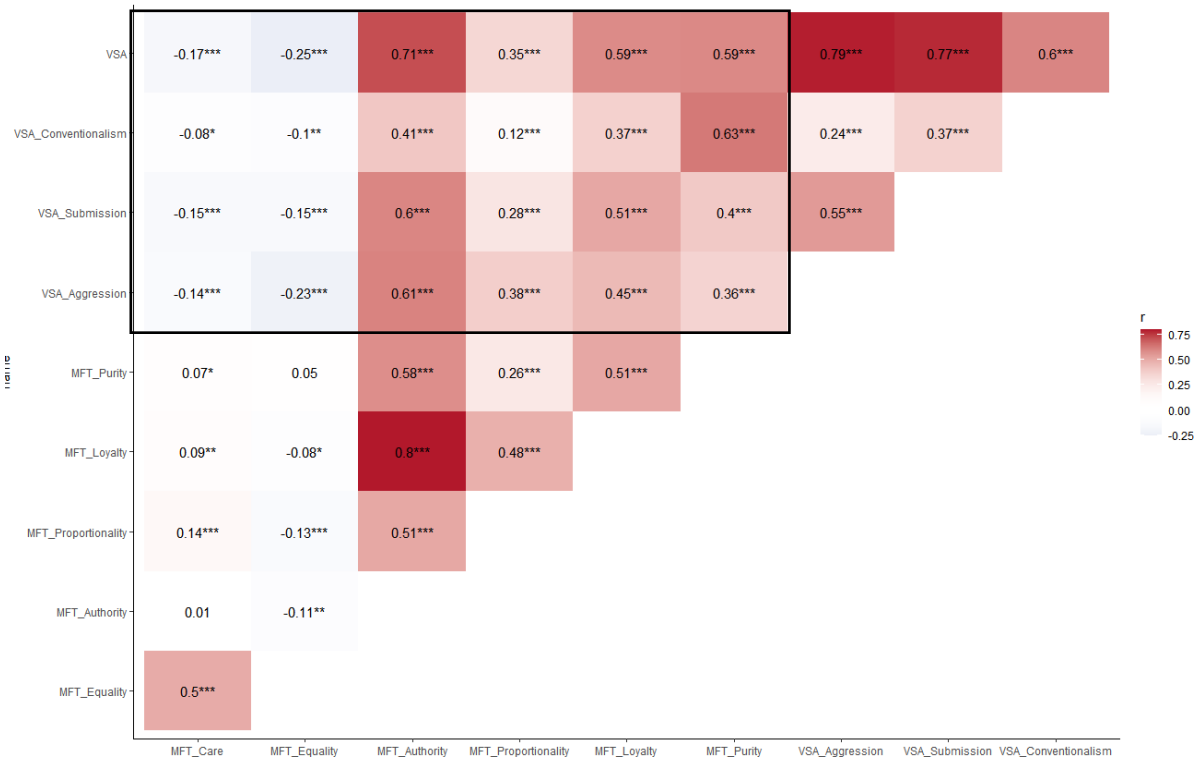
Data was gathered in the spring of 2023 via Prolific Academic with an even split between those who voted Leave and Remain in the 2016 EU referendum, and a 50:50 split between men and women. In the first round of data collection, 1,005 people were exposed to the VSA scale (Bizumic, Duckitt, 2018), the revised Moral Foundations Questionnaire (MFQ-2, Atari et al., 2022) and the SDO-7 survey (Ho et al., 2015).

In the second round of data collection, the same people were asked to respond to the RWA-3D scale (Funke, 2005). Some 891 of those who took part in the first round did so.

The new Moral Foundations scale was found to have a Cronbach's alpha coefficient of .91; the six-item Very Short Authoritarianism scale had an alpha coefficient of .88, and the 12-item Funke scale had an alpha coefficient of .67.

6.5.2 Results

Fig.6.6: MFQ-2 correlated with the Very Short Authoritarianism scale



N=1,005

Fig.6.7: MFQ-2 correlated with the RWA-3D scale

	MFT_Care	MFT_Equality	MFT_Authority	MFT_Proportionality	MFT_Loyalty	MFT_Purity	Funke_Aggression	Funke_Submission	Funke_Conventionalism
Funke_all	0.27***	0.31***	-0.74***	-0.36***	-0.58***	-0.55***	0.86***	0.89***	0.84***
Funke_Conventionalism	0.19***	0.26***	-0.59***	-0.24***	-0.49***	-0.58***	0.52***	0.68***	
Funke_Submission	0.23***	0.27***	-0.69***	-0.32***	-0.55***	-0.48***	0.66***		
Funke_Aggression	0.26***	0.27***	-0.64***	-0.37***	-0.47***	-0.38***			
MFT_Purity	0.07*	0.05	0.58***	0.26***	0.51***				
MFT_Loyalty	0.09**	-0.08*	0.8***	0.48***					
MFT_Proportionality	0.14***	-0.13***	0.51***						
MFT_Authority	0.01	-0.11**							
MFT_Equality	0.5***								

N=891

Fig.6.8: MFQ-2 correlated with the SDO7 scale

	MFT_Care	MFT_Equality	MFT_Authority	MFT_Proportionality	MFT_Loyalty	MFT_Purity
SDO	-0.45***	-0.54***	0.39***	0.37***	0.31***	0.24***
SDO_Equality	-0.44***	-0.55***	0.32***	0.31***	0.27***	0.18***
SDO_Dominance	-0.39***	-0.45***	0.38***	0.36***	0.29***	0.26***

N=1,005

Looking at the correlations between the MFQ-2 and the authoritarianism scales, the highest correlations are between the Authority foundation and the overall authoritarianism score (VSA r=.71, RWA-3D r=-.74).

There are also strong correlations between the Authority foundation and the sub-dimensions of Authoritarian Aggression (VSA r=.61, RWA-3D r=-.64) and Submission (VSA r=.60, RWA-3D r=-.69), and between the Purity foundation and the sub-dimension of Conventionalism (VSA r=.63, RWA-3D r=-.58).

The strongest relationships for the Loyalty foundation are with authoritarianism overall (VSA r=.59, RWA 3-D r=-.58) and with the sub-dimension of Submission (VSA r=.51, RWA 3-D r=-.55).

The new Equality foundation is found to be negatively correlated both with SDO overall (r=-.54) and with the Anti-Egalitarianism sub-dimension of SDO (r=-.55), as hypothesised. The strongest correlation for the new Proportionality foundation is with the authoritarian sub-dimension of Aggression (VSA r=.38, RWA 3-D r=-.37). The Proportionality foundation's predicted relationships with SDO (r=.37) and SDO Dominance (r=.36) were of a similar order.

The Care foundation is negatively related to SDO (r=-.45) and the Anti-Egalitarianism sub-dimension of SDO (r=-.44).

Consideration was also given to items where there was a thematic overlap (Table 6.6), where moderate to strong correlations were found.

Table 6.6: Correlations of items where there is a strong thematic overlap

MFQ-2	VSA	Correlation
MFTQ Authority 5: I believe that one of the most important values to teach children is to have respect for authority.	VSA SubmissionR: It's great that many young people today are prepared to defy authority.	R=.58
Purity 2: I believe chastity is an important virtue.	VSA ConventionalismR: There is nothing wrong with premarital sexual intercourse.	R=.57
Purity 2: I believe chastity is an important virtue.	VSA Conventionalism: God's laws about abortion, pornography, and marriage must be strictly followed before it is too late.	R=.57
Purity 6: I admire people who keep their virginity until marriage.	VSA ConventionalismR: There is nothing wrong with premarital sexual intercourse.	R=.58
Purity 6: I admire people who keep their virginity until marriage.	VSA Conventionalism: God's laws about abortion, pornography, and marriage must be strictly followed before it is too late.	R=.60

6.5.3 Discussion

Part 3 of this study contributes to the literature by mapping out the relationship between the new Moral Foundations Questionnaire and the sub-dimensions of authoritarianism and Social Dominance Orientation.

The hypothesis that the foundations of Authority, Loyalty and Purity would be positively related to authoritarianism is accepted, as are the hypotheses that there would be positive correlations between the Authority foundation and Aggression, the Purity foundation and Conventionalism, and the Loyalty foundation and Submission.

However, these relationships are not exclusive. The Authority foundation is also related to the Submission sub-dimension, which is consistent with the literature that suggests that Aggression and Submission are closely inter-related.

This study finds that Social Dominance Orientation has a moderate inverse relationship with the new Equality foundation and with the Care foundation, while the new Proportionality foundation appears related to both SDO Dominance and Authoritarian Aggression.

Claessens et al. (2020) make the point that the Moral Foundations come from a different background in the literature as compared to the components of the Dual Process Model (Duckitt, Sibley, 2009).

Graham, Haidt, Koleva, Motyl, Iyer, Wojcik and Ditto (2011) said their motivation in developing Moral Foundations Theory was to show that morality had more than one dimension.

Social Dominance Theory was described by Sidanius and Pratto (1999) as an ambitious attempt to explain the root cause of inter-group prejudice, synthesising a wide range of theories that included authoritarianism and the work of Rokeach, author of the 1973 book, *The Nature of Human Values.*

Authoritarianism, by contrast, is a far older concept. It stems from an attempt to understand the growth of Nazism in 1930s Germany. After a flourishing start with the launch of Adorno et al.'s (1950) book and the follow-up by Gordon Allport (1954), it fell into long years of neglect before being revived by Robert Altemeyer in 1981.

Part 3 of this chapter shows that there is no small degree of convergence between the three theories, including at sub-dimension level, when they are used to address similar subjects. There are a number of interesting points.

The first is that while considerable theoretical work and psychometric analysis is invested in constructing reliable and distinct scales, for the respondents, it might be hard to differentiate between them. Table 6.6 shows the overlap between items asking about authority; children and respect; and chastity. These are themes that Adorno et al. (1950) and Allport (1954) identified as being indicative of an authoritarian personality (Ch.5). The correlations between the items in the different scales are strong, but given the similarities, it is perhaps surprising that they are not even higher.

The second point is the way in which the sub-dimensions interact. There may be parallels in the close relationship between the Aggression and Submission sub-dimensions and that between the Loyalty and Authority foundations. The Conventionalism sub-dimension, like the Purity foundation, stands slightly apart. The relationship between the individualising foundations and SDO is less pronounced.

As a third point, rather than looking at where the theories are similar, it may be instructive to look at where they are not. An argument to support the idea that these theories are not direct equivalents is that authoritarianism, notably the Aggression sub-dimension, appears to be marginally better than the Moral Foundation of Authority at predicting immigration attitudes. In Part 2, the factor identified as Aggression was correlated at r=.60 with immigration attitudes, while the Authority foundation was correlated at r=.50 (which still compares favourably with the r=.40 correlation for the Engelhardt et al. child-rearing scale). If immigration attitudes are related to the Aggression sub-dimension, then it may be that this element is missing from the Authority foundation which presumably looks for “moral” or “good” behaviour – arguably the case for the child-rearing scales too – as opposed to the full range of “human” behaviour which may capture a predisposition to deal aggressively with normative threat.

6.6 Conclusion

This chapter set out to explore the relationships between the various predictors of immigration attitudes identified in Ch.4 and discussed in Ch5.

Part 1 can be seen as a first attempt to construct a model in which these variables are combined. It was not wholly successful, failing to meet one out of two fit criteria, but it did bolster the impression that authoritarianism is a strong predictor of immigration attitudes. Consistent with the literature, there was a definite relationship between authoritarianism and cultural threat, which was not the case for economic threat.

In the next part of this chapter, the RWA scale was broken down into three sub-dimensions, which were identified with the help of a proxy scale. Authoritarian Aggression was found to have a strong relationship with immigration attitudes (r=.6), but also with the perceived cultural threat posed specifically by immigrants. Additionally, it was related to another variable measuring cultural threat in general, which was a strong predictor of anti-immigration attitudes (r=.65).

Part 3 of this chapter looked more deeply at the relationship between the binding foundations and authoritarianism. The highest correlations were between the Authority foundation and the overall authoritarianism score (r=.71, r=.74), but there were also strong correlations between the Authority foundation and the two sub-dimensions of Authoritarian Aggression (r=.61, r=.64) and Submission (r=.60, r=.69), and between the Purity foundation and the sub-dimension of Conventionalism (r=.63, r=.58).

In Ch.3. texts were framed to reflect individual constructs that were related to immigration attitudes. It proved challenging to generate a distinct text that reflected just one individual construct. If these constructs are interrelated as closely as authoritarianism and Moral Foundations seem to be, then it may be that authoritarianism researchers can learn from the moral framing exercises that are being carried out by their academic peers.

In Ch.7, this idea is taken forward by asking whether attitudes towards immigration can be changed when texts are framed to reflect the levels of authoritarianism of the recipient.

Chapter 7. Can authoritarianism framing help to make British attitudes towards immigration more positive?

Abstract: In three studies involving over 9,000 British people, a series of pro-immigration texts are tested to see if they result in more positive attitudes towards immigration. In the first study (N=5,006), high authoritarians reported that their values overlapped more with a fictitious immigrant reflecting high rather than low authoritarianism values (d=.81), while those low in authoritarianism responded more positively to an immigrant reflecting low rather than high authoritarianism values (d=.28). There was no change in other immigration variables, suggesting that common ground alone is not enough to shift attitudes. In the second experiment (N=1,006), a longer authoritarian compatible text is tested incorporating the additional elements of a logical argument and an emotional appeal. This resulted in more positive assessments about shared values, but also more positive attitudes towards EU immigration and the flow of immigrants to the UK. In the final pre-registered experiment, involving a nationally representative sample provided by YouGov (N=3,067), the percentage saying their values overlapped with a fictitious immigrant was 31 percentage points higher among those exposed to an authoritarianism compatible text as compared to a control (36% v 67%, d=.49). There was a 20 percentage point difference in those who ranked immigration from the European Union as slightly, moderately or very good (73% v 53%, d=.36), attitudes towards immigration overall were more positive (d=.14), both on the flow of immigrants to the UK and on the stock of immigrants already in the country. The experiment demonstrates that attitudes towards immigration can change, it suggests that authoritarianism framing may be effective in changing attitudes, and that there may be a place for logic and emotion alongside values in making persuasive political arguments.

7.1 Introduction

In Ch. 3, the first experiment of this thesis, participants were exposed to texts containing arguments in favour of EU immigration that were framed to represent different individual psychological constructs. Compared to the attitudes of those who had been exposed to no arguments at all, these participants' attitudes towards EU immigration were notably more positive, however it was not clear which texts had been most effective at generating this result. The second study (Ch. 4) conducted correlations and regressions between different variables and immigration attitudes and found that rather than demographic characteristics, the Big Five personality traits (McCrae, Costa, 1996; Mondak, Halperin, 2008) or Moral Foundations items (Graham, Haidt, Nosek, 2009), one of the top correlates with immigration attitudes in the UK is a psychological construct known as authoritarianism (Adorno et al., 1950; Altemeyer, 1981). A study of the literature related to authoritarianism (Ch. 5) showed that there were known associations between this trait and other constructs that have been shown to influence political attitudes. This finding was bolstered by the results of the Structural Equation Modelling described in Ch. 6, which found that authoritarianism, notably the sub-dimension of Aggression, was related to immigration attitudes, as was the experience of cultural threat, as the literature would predict (Feldman, Stenner, 1997).

Ch. 6. investigated the relationship between the Moral Foundations and authoritarianism. It found that there was a strong relationship between the Authority foundation and authoritarianism overall, and between this foundation and the authoritarianism sub-dimensions of Aggression and Submission. There was also a relationship between authoritarianism and the two other binding foundations of Purity and Loyalty.

Building on these findings, the theoretical question addressed by this study is whether framing texts to reflect the levels of authoritarianism of British survey participants might be effective at making attitudes towards immigration more positive.

This chapter introduces a 2x2 grid based on the Dual Process Model (Duckitt, Sibley, 2009) on which characteristics associated with high and low levels of authoritarianism (Bizumic, Duckitt, 2018) and Social Dominance Orientation (Ho et al., 2015) can be mapped out.

In the first experiment of this chapter, participants were exposed to a short text and then asked to say how close they felt to a fictitious immigrant mentioned in that text. They were then asked about their views on the number of immigrants already in the country (the stock of immigrants), and the numbers who should be allowed to arrive in future (the flow of immigrants). These last two figures were averaged to make a composite variable measuring immigration attitudes.

Following this first experiment, an interim experiment was conducted in which a longer authoritarianism compatible text was tested against the same control as that used in the earlier experiment (Appendix 5.1). This longer text contained the additional elements of a logical argument and an emotional appeal. A new dependent variable was added to the study, measuring attitudes to EU immigration (as tested in the experiment in Ch. 3).

In the final experiment of this chapter, a control text, a low authoritarianism text and an authoritarian compatible text were tested on a nationally and politically representative sample of 3,067 people sourced from YouGov, split into three equal groups.

7.2 Literature Review

This section reviews the evidence that targeting audiences with texts framed to match their psychological characteristics is an effective persuasion technique. It then considers what specific content might be appropriate when drafting authoritarian-compatible texts.

7.2.1 Can attitudes be changed with framed texts?

The experiments in Chapter 3 demonstrated that attitudes towards immigration could be changed using framed texts (Ch.3). There are numerous examples in the literature of this technique being used. In 2022, Amsalem and Zoizner analysed 138 experiments (total N=64,083) to see if framing was effective in the political domain. They considered both equivalency frames, where the information presented is logically identical, and emphasis

frames, where different aspects of a political issue can be stressed or alternative arguments used.[30] They found that framing can result in medium-sized effects on political attitudes (d=.41), although the effect size was diminished when competing frames were introduced.

In an equivalency frame, the choices of what to include in the text are limited. However, for communicators, a decision to use emphasis framing raises questions as to which arguments are likely to be effective.

Homophily is a technique that can be used. There is a deep vein of literature which shows that people are attracted to those who are similar to them. Expressed rather drily, Byrne (author of *The Attraction Paradigm*, 1971) and Griffitt (1973) note that attraction, as assessed by the Interpersonal Judgment Scale, varies as a positive linear function of the proportion of shared similar attitudes or opinions between subject and target. In a more recent example, Baron et al. (2023) found that individuals prefer to vote for candidates who signal proximity to their own attitudinal positions rather than for candidates who signal opposing views.

According to Haidt (2013, p.277), emphasising shared values, similarities and a common identity is a way to widen social circles and include outgroups. As to the appropriate level of similarity, Cialdini (2016, pp.175-191) says that people should be able to say that someone is not just "like us" but rather "of us," being merged in a kin-type relationship, as when they are caring for a loved one.

However, while an individual may feel warmer towards a single outgroup member who is similar to them, that does not necessarily mean that they will become more accepting of the outgroup as a whole. Allport (1954) warns that people are prone to making exceptions to the rule that allow them to retain their pre-existing beliefs.

In their framing studies, Feinberg & Willer (2015) found that texts were more effective when they were targeted to reflect the same Moral Foundations (Graham, Haidt, Nosek, 2009) as those held by an individual. Four years later (2019), they reviewed the field and found numerous articles describing experiments that used this moral reframing technique to

[30] They found no significant difference between the two types of effects.

change attitudes on subjects as varied as climate change, support for political candidates, vaccine hesitancy and diversity and inclusion.

How these arguments should be presented is a matter for debate.

Portolano & Evans (2005, p.123) say that modern social psychologists can draw on "a vast and ancient family tree" of persuasion techniques that date back to Aristotle's classic work *The Art of Rhetoric* (BCE350). Aristotle maintained that persuasive argument should contain three elements – *ethos*, *logos* and *pathos*. An appeal to common values is an *ethos* or character appeal, in which the speaker appeals to the audience's values, making them feel that these values are shared by the speaker, who is therefore seen as one of them. The other two rhetorical proofs (in Aristotle's terminology) are *logos*, setting out the logical arguments, and *pathos,* an appeal to the emotions that stirs the audience into action.

If making a logical argument *(logos)* around UK immigration, then the costs and benefits would be relevant (Chong, 2013). There is information available from the Office for Budgetary Responsibility (2023) and the Office of National Statistics (2019), both of which can be regarded as authoritative sources, about the long-term contribution made by immigrants to the UK's Exchequer and the National Health Service (NHS).

In rhetoric, the *pathos* or emotional appeal often comes at the end of a persuasive argument. Perspective-taking (Broockman, Kalla, 2016) is one way to encourage people to feel the emotions of others. Ekman (1992) says that the primary function of emotion is to "mobilise the organism" to act.

Another technique that Aristotle proposed was to include rhetorical questions. Are these effective? Blankenship and Craig (2006) found that they made texts more persuasive and can prompt more thoughtful consideration of the topic.

7.2.2 What arguments might appeal to authoritarians?

There is guidance in the literature on the arguments that are likely to appeal to those high in authoritarianism. Stenner (2012) suggests that they value those who look and think the same way that they do, and who seek to integrate into society. They are also sensitive to

social norms, appreciating consensus. Oyamot et al. (2012) found that when high authoritarians were told that Americans in general had positive opinions about immigrants, their own tendency toward intolerance was attenuated.

Considering the three sub-dimensions of authoritarianism identified by Altemeyer (1981), authoritarians high in Aggression might respect those who value duty and want to punish norm transgressors, those high in Conventionalism might value hygiene and cleanliness, and those high in Submission might value those who respect traditional behaviour and what are conventionally regarded as good manners. None of them would be expected to like those who are individualistic, or who behave and think in open-minded, creative and diverse ways.

Those who are additionally high in SDO might be expected to be opposed to equality, and keen to maintain dominance over groups they regard as inferior.

7.2.3 Introducing the 2x2 grid

The Dual Process Model (Duckitt, Sibley, 2009) links authoritarianism with Social Dominance. These two concepts can be mapped onto a 2x2 grid with authoritarianism on one axis and Social Dominance Orientation on the other.

Fig. 7.1 is a visual representation of the Dual Process Model. It was generated with data gathered for Part 3 of Ch. 6, including responses to the Very Short Authoritarianism scale (Bizumic, Duckitt, 2018) and the SDO-7 scale (Ho et al., 2015). Each dot represents an individual who can be described not just in terms of their SDO and RWA scores, but also in terms of their attitudes, beliefs, values, morals, and threat sensitivities. In this case, using colour, immigration attitudes have been layered onto the grid. The dots in blue represent the individuals who are most opposed to immigration. Appendix 5 gives examples of other characteristics that can be layered onto the grid such as the authoritarianism sub-dimensions, the Moral Foundations, or political voting histories and views on Brexit. The two axes show the median scores.[31]

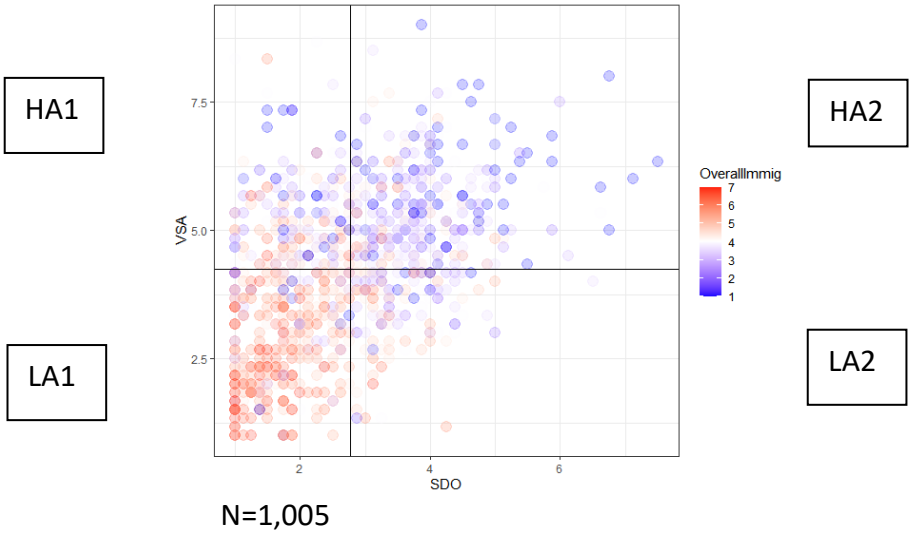
[31] Two alternative options were considered. A mean score would be vulnerable to outliers, and a z-score might disguise any skew in the extent to which people actually agreed or disagreed with the statements they were asked to respond to.

The intention in developing the 2x2 grid was to create a simple tool that would provide insight for communicators who are required to develop arguments for all sections of the population. Whether they are seeking to address a centrist audience, or those at the extremes, the grid should allow them to build up layers of information about their intended audiences.

2x2 grids are occasionally used in political science or the media to show how support is distributed for political parties, often using a left-right axis, rather than an SDO axis. Surridge (2021) used such a grid based on British Election Study data to map out attitudes towards Brexit and British politics.

Sibley & Duckitt (2009) said that while in Western democracies, there is typically a positive and sometimes strong relationship between those high in RWA and SDO, who are seen as conservatives or right-wingers, and those low in RWA and SDO, who are seen as liberals or left-wing, their model can explain where motivations diverge, and can better predict political attitudes than a single axis model.

Fig. 7.1: The 2x2 grid showing attitudes towards immigration (blue = opposed).



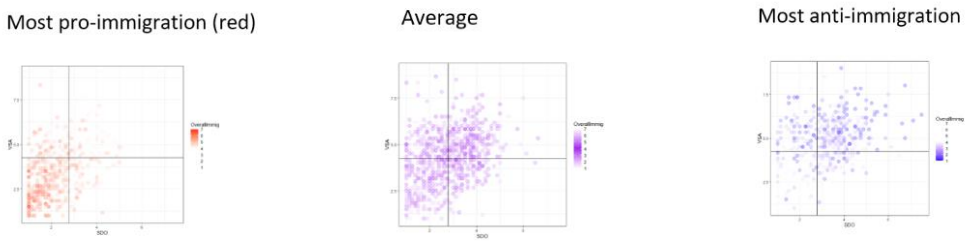


Fig.7.1 shows that the majority of people in the UK are gathered either in the top right quadrant (described here as HA2), where scores are high for both authoritarianism and SDO, or in the bottom left quadrant (described here as LA1) where scores are low for both authoritarianism and SDO. These groups would typically be described as right- and left-wing respectively. The graph suggests that if this data were collapsed onto a single left-right axis it might produce a good first pass at predicting political attitudes.

However, a single axis might not predict the attitudes of those in the quadrant described as HA1, where people are high in authoritarianism but low in SDO, who can be expected to be socially conservative yet in favour of equality; nor the attitudes of those in the quadrant described as LA2, who are low in authoritarianism and high in SDO, and thus can be expected to be open-minded and supportive of inequality and inter-group social dominance.

As this graph and those in the Appendix show, many of those individuals in the top right-hand corner (HA2) are not only high in RWA and SDO, but also high in Authoritarian Aggression and the Moral Foundation of Authority, and opposed to immigration.

7.3 Part 1: Testing high and low authoritarianism texts

7.3.1 Methodology

7.3.1.1 Creating the texts

In this experiment, six texts were drafted. There was a text for each of the quadrants and one for a general audience, where the arguments were pitched just above the centre of the two axes since those in the lower quadrants could be assumed to be more in favour of immigration. A control text was also drafted.

Since the most highly populated quadrants were LA1 and HA2, the texts drafted for these quadrants were regarded as the primary texts. The texts drafted for HA1 and LA2 were intended as precautionary back-ups in case the primary texts proved ineffective.

Each of the texts was around 250 words long. They are listed in the Appendix. To ensure maximum comparability, they were built up on the same textual framework.

Each text began with the words: “Thinking back over the last three years, can you bring to mind an occasion….”. This was a rhetorical question, intended to draw on availability bias, bringing the personal experience of the individual to the front of mind, as Broockman and Kalla did with their 2016 experiment on reducing transphobia.

Other references common to each of the texts were to the late Queen Elizabeth II’s Platinum Jubilee in 2022, an event which could be framed in different ways, such as its celebration of diversity (a low authoritarianism argument) or alternatively the role of the

security services in keeping the event safe, an argument likely to appeal to those high in authoritarianism.

Each text contained a reference to a fictitious Polish immigrant called “Sonia”. Data published by the Office of National Statistics in 2021 showed that Polish is the most common non-British nationality in the UK. In the control condition, the reference to this immigrant is fleeting. In the treatment texts, “Sonia” was described in ways that should appeal to those high and low in authoritarianism, including a mention of her occupation, her likes and dislikes and her favourite television programme. Each text said she wanted to stay in the UK and had applied for citizenship; they ended by setting out her plans for the future.

The neutral control text discussed the house and garden retail sector, balancing themes of the virtues of relaxation (e.g. watching television) and of being busy. There was a one-sentence mention of a woman called Sonia from Poland who found the Queen’s Jubilee gave her some extra spare time to get on with doing what she loves (for the full text, see Appendix 7.1.2, p.343).

Fig. 7.2: A low authoritarianism text – LA1

Elements common to all the texts are shown in grey.

LA1

Thinking back over the last three years, can you bring to mind an occasion when you've been struck by someone's sensitivity towards others? As society changes, we are becoming a more accepting place where race or religion matter less and less.

Britain's creative community - our musicians, film industry and artists - have been breaking boundaries and leading the way. But it's not just artists who explore new territory. Every part of our lives, including what we eat and drink, has been influenced by people from overseas.

Take Sonia, who's from Poland. She came here five years ago to sell clothes in London's Camden Market. She enrolled at Central St Martin's College and is now producing fashion that pushes the creative boundaries, using new and unusual materials in original ways.

She loved the way that drag queens and Bollywood were included in the Queen's Jubilee. For her, it is important that national institutions are finally giving diversity a fair hearing, and that increasingly you see different types of people represented in theatre, film and on television.

Sonia has been volunteering in her spare time at a food bank. At home, she likes to watch 'Glow Up', the television competition where make-up artists compete to create extraordinary designs.

Sonia would like to stay in the UK and has applied for British citizenship. Her dream is to design an environmentally-friendly version of the Dr Martens boot, and then to sell it internationally, using London as her global base.

Fig. 7.3: A high authoritarianism text – HA2

HA2

Thinking back over the last three years, can you bring to mind an occasion when someone has taken charge and made everyone stick to the rules? There are some people for whom this is a way of life.

We can be proud that we are a law-abiding nation. It's a feature of this country that is much admired overseas and a major draw for those who want to live here. Interestingly, now that we have control over who comes, the vast majority of people in Britain (over 70%) no longer think that immigration is a major concern.

Take Sonia, who's from Poland. When she arrived here five years ago, she joined the British police.

She loved the Queen's Jubilee – she can't stand it when people criticise the monarchy. For her, it was important that millions were able to celebrate a historic, national occasion together, and she appreciated the way the security forces made sure that events ran smoothly at Buckingham Palace.

Sonia's speciality is tracking down illegal activity on the internet. It requires resilience and strong determination. Her first role was with the police team that tackles cruelty towards pets. After an online investigation, she broke up a vicious dog-fighting ring. It is no surprise that her favourite television programme is "Line of Duty."

Sonia would like to stay in the UK and has applied for British citizenship. In future, she wants to develop her skills so that she can work in the police team that protects children from dangerous predators online.

Table 7.1: Examples of elements included in the different texts

	HA1	HA2	LA1	LA2	General	Control
Can you bring to mind an occasion …	… when you saw someone putting in the effort and going the extra mile to help their community?	…when someone has taken charge and made everyone stick to the rules?	… when you've been struck by someone's sensitivity towards others?	…which clearly shows the rapid pace of change in our everyday lives?	… when you had to rely on the kindness of a stranger?	… when you've wished your home or garden looked better?
"Sonia"	Teacher	Policewoman	Artist	Entrepreneur	NHS nurse	No details
Queen's Jubilee	Loved the focus on tradition and joined the millions celebrating.	Can't stand it when someone criticises the monarchy & appreciated the role of the security services.	Loved the celebration of drag queens and Bollywood.	Loved the business energy generated.	Loved the recognition for staff in hospitals, schools and essential services.	Spent the bank holiday "doing what she loves."
TV programme	"Bake Off"	"Line of Duty"	"Glow Up"	"Dragon's Den"	"The Blue Planet"	-

To assess the validity of these framings, seven members of the Psychology Department who were familiar with the concept of authoritarianism but not involved in the experiment were asked to determine whether these texts reflected high or low levels of authoritarianism. Three of the texts were correctly identified by all seven people, and "HA2" was correctly identified by six.

Once ethical approval had been granted (PRE.2022.075), the study went ahead.

7.3.1.2 Participants

In total, 5,006 participants took part in the first survey experiment, with data gathered on 22 and 23 January 2023.

Three samples were gathered simultaneously on Prolific Academic. At the time, Prolific Academic offered “nationally representative” samples for an extra fee, however these were only representative in terms of age, sex and ethnicity and not politically representative. For the purposes of this experiment, it was important to find a sample that was reflective of people with a range of views on authoritarianism. Leave voters were assumed to be high in this construct and Remain voters were assumed to be low.

On Prolific Academic, one sample was gathered with 2,000 Leave voters (assumed to be high in authoritarianism) who were randomly assigned to read one of the following texts: HA1, HA2, LA1 or the general text. Another sample was gathered of 2,000 Remain voters (assumed to be low in authoritarianism) who were randomly assigned to read one of the following texts: LA1, LA2, HA2 or the general text.

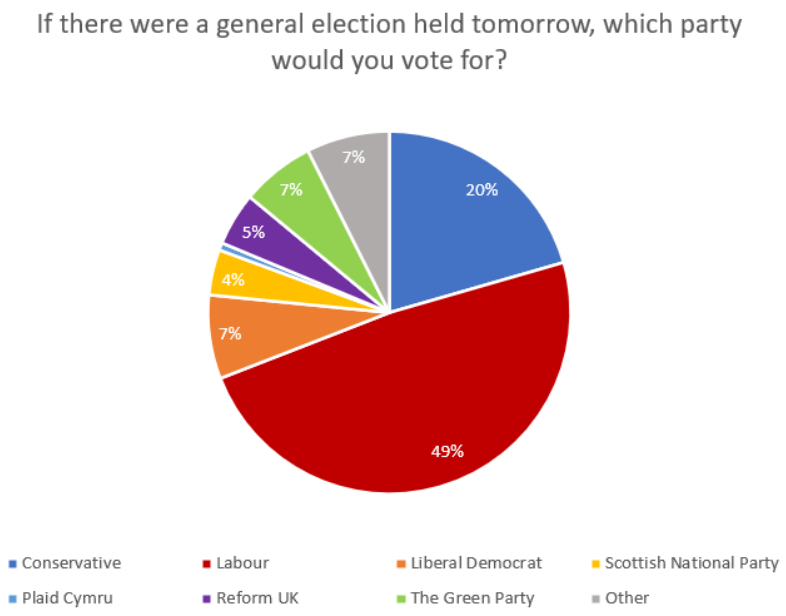
A separate sample of 1,000 people (500 Leavers and 500 Remainers) were exposed to the control text and, after completing the survey, responded additionally to other questions.

The sample was split 50:50 between men and women. Since the survey required participants to have voted in the 2016 referendum, no one younger than 25 years old could take part. The average age was 44 years old. Payment was 75p for those who took the standard survey and £1.35 for those in the control condition, who were asked additional questions.

7.3.1.3 Procedure

To test the political representativeness of the sample, those respondents who consented to take part were asked who they would vote for if a general election were held tomorrow (Fig. 7.4). At the time when the data was collected, the polling agency YouGov (2023) was reporting that support for the UK's main political parties stood as follows: Labour 47%, Conservative 25%, Liberal Democrat 9%, Scottish National Party 5%, Green Party 5%, Reform UK 7% and other parties, 1%. The political breakdown of this sample was a close match.[32]

Fig.7.4: Political breakdown of the sample

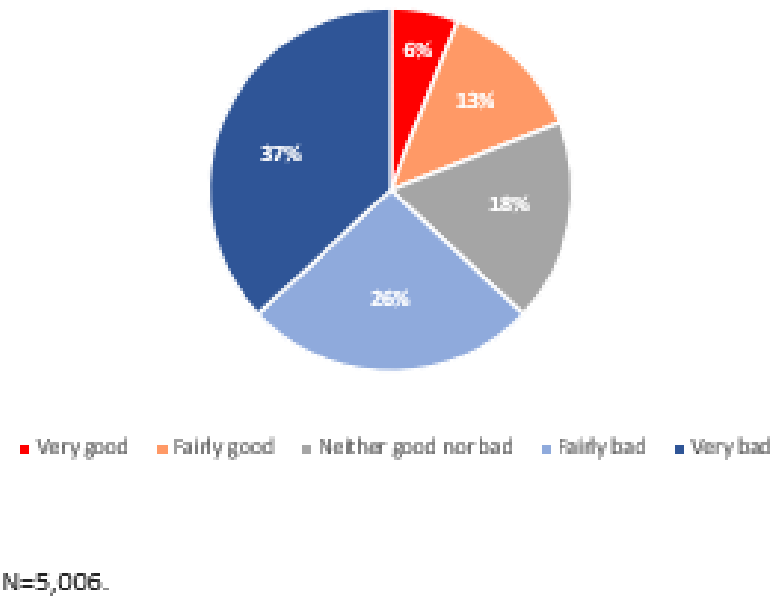


N=5,006.

[32] The greater support for "Other" parties may reflect the regional break-down of YouGov's sample which excludes Northern Ireland from its polling.

They were then asked for their views on the Brexit process (Fig. 7.5). A majority in the sample (63%) thought Brexit was going either badly (26%) or very badly (37%). Comparing this sample to a nationally-representative sample, a YouGov survey from November 2022 found that 59% felt it was going either "fairly badly" or "very badly", so the sample generally reflected the national mood at the time of the survey on this subject.

Fig. 7.5: To what extent do you feel Brexit is going well or badly?



After this, participants were exposed to the six-item Very Short Authoritarianism (VSA) scale (Bizumic, Duckitt, 2018) and the SDO-7 scale (Ho et al., 2015). They were then either exposed to a control or a treatment text. Those in the control condition additionally answered the new 36-item Moral Foundations scale (Atari et al., 2022), and the Ten-Item Personality Inventory (Gosling et al., 2003).[33]

[33] Some of this data was used in Ch.6 and some will be used in future experiments.

7.3.1.4 Stimuli

The control text and three of the conditions (LA1, HA2, Gen) were seen by around 1,000 people. Of the two back-up conditions, LA2 was seen by 499 Remain voters, and HA1 by 462 Leave voters.

Table 7.2: Sample size per condition

	Control	HA1	HA2	LA1	LA2	Gen
Total N=5,006	1,005	462*	1,005	1,036	499+	999

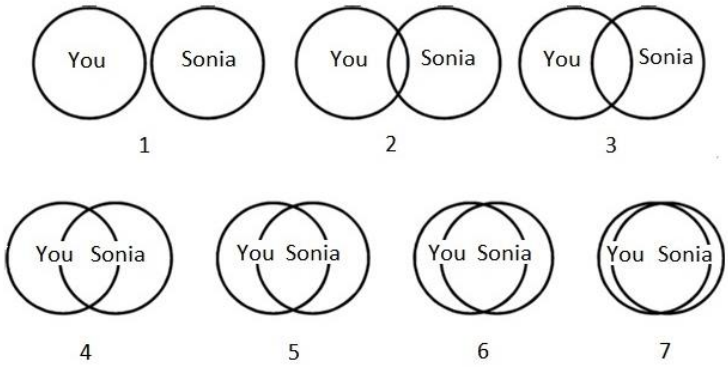
*Leave voters only, +Remain voters only.

7.3.1.5 Dependent variables

The first dependent variable (SoniaValues) used a set of overlapping circles based on the 'Inclusion of Other in Self' scale (Aron, Aron, Smollan, 1992). Participants were asked to choose the pair of circles which best reflected the extent to which the fictitious immigrant shared or didn't share their values. A score of 1 was "Doesn't share at all", and a score of 7 was "Shares completely". Since those exposed to the control condition would have very little detail about the immigrant, respondents who felt they did not have enough information were told to "go with their gut instinct".[34]

[34] Most people in the control condition opted for a mid-range score: 4.16 on a 1-7 scale.

Fig. 7.6: To what extent does "Sonia" share or not share your values?



(Adapted from Aron et al., 1992)

The second dependent variable (immigstock) asked if the participant agreed or disagreed with the statement that there are too many migrants in the UK right now (scored 1-7, where 1 was "Strongly agree"). The third dependent variable (immigflow) asked how many immigrants the participant thought should be let into the country (1 was "Many more" and 7 was "Many fewer"). As with the experiment in Chapter 6, a composite score (immig) was created, which averaged these last two variables, with the values for the second item reversed.[35] Lower composite scores in this experiment hence reflected more opposition to immigration.

The following hypotheses were pre-registered.

> **Hypotheses 1 and 2** The participant would feel that their values overlapped more with the fictitious immigrant if exposed to a text that was framed to reflect their levels of authoritarianism. Specifically, those high in authoritarianism would share more values with the immigrant described in the high authoritarianism text (Hypothesis 1) and those low in authoritarianism would share more values with the immigrant described in the low authoritarianism text (Hypothesis 2).

[35] To avoid acquiescence bias, one item had a low score for the response suggesting most opposition towards immigration and the other had a high score.

Hypothesis 3: Those exposed to an argument in favour of immigration (Gen) would be more positive about immigration than those exposed to a control (Control).

Hypotheses 4 and 5: Participants would be more in favour of immigration if exposed to an argument that was framed to match their levels of authoritarianism. Specifically, Hypothesis 4 was that those high in authoritarianism would have higher scores if exposed to a high authoritarianism argument, as opposed to a low authoritarianism argument. Hypothesis 5 was that those low in authoritarianism would have higher scores if exposed to a low authoritarianism argument as opposed to a high authoritarianism argument.

7.3.1.6 Results

Testing for Hypotheses 1 and 2

A two-way ANOVA was performed to analyse the effect of being exposed to either the LA1 and HA2 text on the first dependent variable, which measured the extent to which the respondent felt that the fictitious immigrant ("Sonia") shared or didn't share their values (the "values overlap").

The ANOVA revealed that there was a statistically significant interaction between the effects of exposure to LA1 or HA2 for those high or low in authoritarianism ($F(df1, 1) = 146.445$, $p<.001$). Simple main effects analysis showed that exposure to LA1 as opposed to HA2 had a statistically significant effect on the values overlap variable ($p<.001$), and that being high or low in authoritarianism also had a statistically significant effect on this variable ($p=.03$).

Hypotheses 1 and 2 were therefore accepted. For those high in authoritarianism, the percentage feeling close (scores 5-7) to the immigrant described in the high authoritarianism text was 74% as opposed to 41% for the immigrant described in the low authoritarianism text (Cohen's $d= .81$). For those low in authoritarianism, the percentage feeling close to the immigrant described in the high authoritarianism text was 51% compared to 61% for the immigrant described in the low authoritarianism text.

Testing for Hypothesis 3

Hypothesis 3 was that those exposed to a treatment text would be more positive about immigration than those exposed to a control text. To test this hypothesis, the responses of two groups were compared. The first was a group of 999 participants (50:50 Leave/Remain) who were exposed to the authoritarianism-compatible text framed for a general audience Gen. The second was a group of 1,005 (50:50 Leave/Remain) who were exposed to the control text ('Cont').

A t-test showed that there was no statistically significant difference between the effects of exposure to "Gen" (M=4.08, SD=1.69) or "Cont" (M=4.06, SD=1.65); (t= .38, df= 2000, p=.7, conf int [-.118, .174], d=.02).

Testing for Hypotheses 4 and 5

The test for these hypotheses involved two groups: 1,005 (50:50 Leave/Remain) who were exposed to the HA2 text (the policewoman); and 1,036 participants (50:50 Leave/Remain) who were exposed to LA1 text (the artist).

Data from the two groups was combined and the overall authoritarianism scores were calculated using the participants' responses to the Very Short Authoritarianism (VSA) scale. Two subsets were created, one for those above the median score of 4.33, and one for those below it.

A two-way ANOVA was performed to analyse the effect of being exposed to either the LA1 and HA2 text on the overall immigration score.

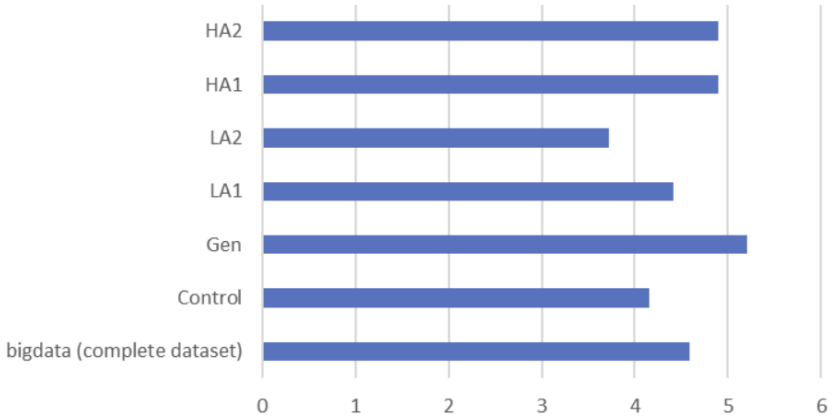
The ANOVA revealed that there was no statistically significant interaction between the effects of exposure to LA1 or HA2 (F(df1, 1) = .3, p=.71).

Hypotheses 3 and 4 were therefore rejected.

The back-up texts

Comparing the five treatment texts ahead of the next experiment, of the two low authoritarianism texts, participants felt closer to the fictitious artist (LA1) than to the entrepreneur (LA2). The HA1 text (the teacher) and the HA2 text (the policewoman) were similarly effective. The Gen text (the nurse) was the immigrant with whom most participants felt they shared values.

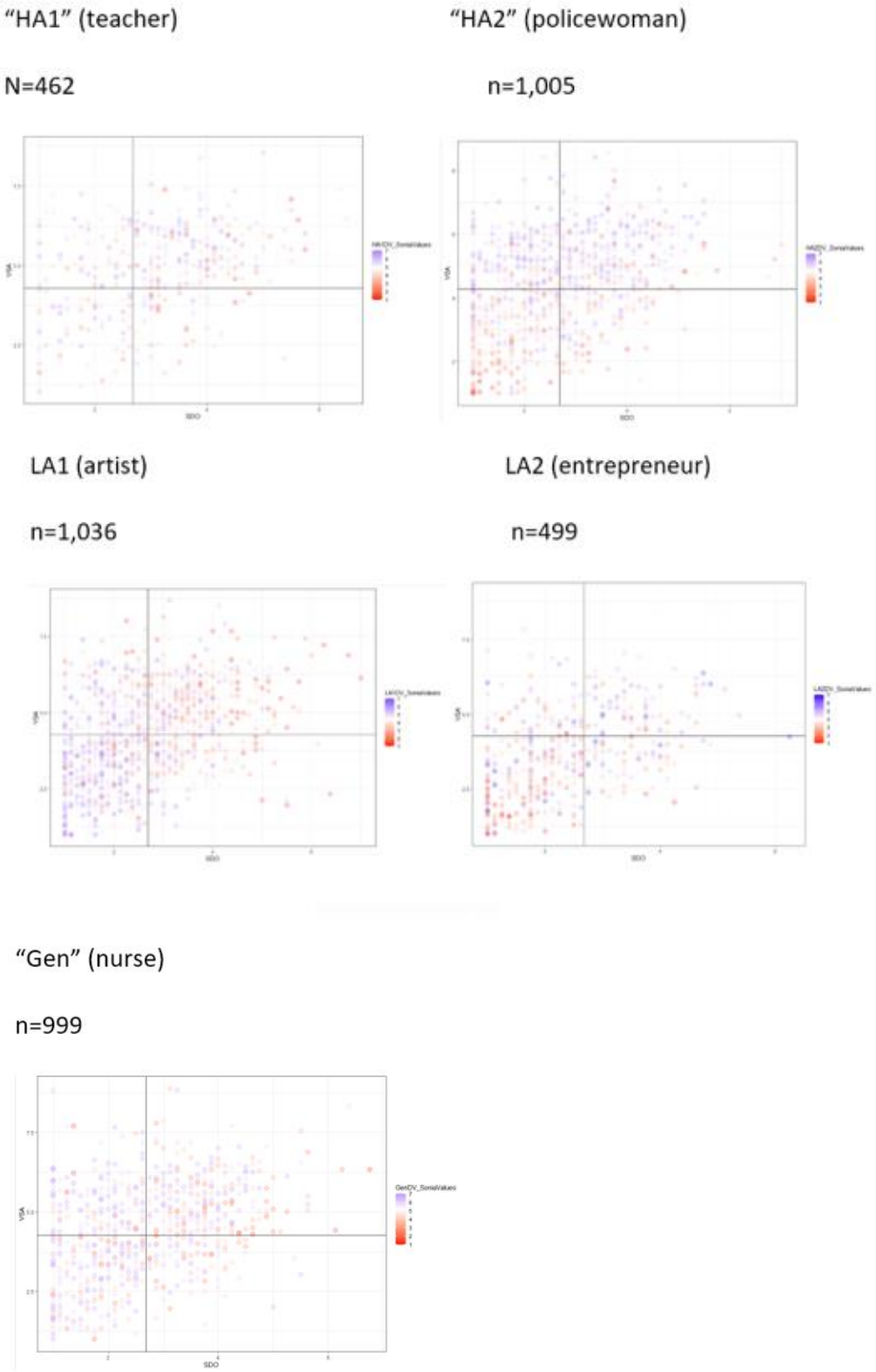
Fig.7.7: Mean responses to the "values overlap" question (7 = overlap completely)



N=5,006.

These responses can be mapped onto the 2x2 grid (Fig. 7.8) to illustrate how participants responded to the five treatment texts. The most visually distinctive result is that those high in authoritarianism felt they had a higher "values overlap" with the HA2 text (the policewoman) than LA1 text (the artist).

Fig.7.8: Responses to the texts (blue = feels close)



7.3.2 Discussion

The finding that those who are high in authoritarianism felt closer to the immigrant who reflected their values suggests that targeting framed messages to people based on their levels of authoritarianism could be effective. The effect size for those high in authoritarianism (Cohen's d=.81) is large for this type of experiment. Almost three-quarters (74%) of those who score highly for authoritarianism felt close to the fictitious immigrant policewoman, 33 percentage points more than those who felt close to the fictitious immigrant artist (41%).

However, despite drafting a text where the "values overlap" was high, attitudes towards immigration did not change. The results suggest that reference to common values alone is not enough to change attitudes towards immigration, neither is a brief mention of the National Health Service.

Given that multiple texts had proved effective at changing attitudes in the Ch.3 experiments, this led to a pause for reflection on how this experiment differed from those.

In this experiment, the "values overlap" was high. In rhetoric, *ethos* is a values argument. That element appeared to be successful at making people feel close to the immigrant.

Elements that were missing from this experiment but included in the experiment in Ch. 3 were the factual material from government sources (i.e. a *logos* argument), and an emotional appeal to the participant's judgment at the end (a *pathos* argument). The texts used in Ch. 3 were also longer – nine paragraphs as opposed to six.

Amsalem and Zoizner (2022) are among those who have found that logical arguments can be effective in political persuasion, as supporters of Rational Choice Theory (Chong 2013) would suggest. Tappin et al. (2022) found that messages can even be effective in the face of countervailing party leader cues.

Another difference was that in the Ch. 3 experiments, the observed change was for a variable testing for attitudes towards EU immigrants. In that experiment, there was no change on another variable asking about attitudes towards immigrants from outside the EU.

In the current experiment, the immigration variables did not distinguish between place of origin.

Blinder and Richards (2020) say that British people make a distinction between where immigrants come from. At the preferred end of the scale are those who are white, English-speaking, European and Christian. The immigrant described in the text might have been assumed to be all of these, and not from the least preferred end of the scale (non-whites, non-English-speaking, non-European and non-Christian), where incoming immigrants might be regarded as posing a cultural threat.

On this basis, an interim experiment was proposed. This would test whether a longer authoritarianism compatible text drawing on the materials used in the Ch. 3 experiments would be more effective, and it would add in a variable to test for attitudes towards EU immigration.

The new longer text would bear close similarities with the texts that were used in the first experiment of this thesis (Ch. 3), although the material would be updated.

The leading paragraph in the new text would be based on the new Proportionality foundation, which emerged from the Fairness foundation (Atari et al., 2022), that was found in Ch.6 to be related to authoritarianism. The text would include a reference to a YouGov opinion survey (2022) that showed majority support for some types of immigration (reflecting Social Norms) and mention of hardworking immigrants (reflecting Conscientiousness). In Ch. 3, these three elements had generated the largest effect sizes in the nationally representative samples[36] and performed well with Leave voters in the main experiment. They were also known from the literature to be associated with authoritarianism.

As factual data (*logos*), the Office of Budget Responsibility (2018) would be a source likely to be credible with those high in authoritarianism, with information about the potential importance of immigrants in paying off the national debt. Figures from Migration Advisory Committee (2018) were described accurately as "figures quoted by the government" and

[36] In the main experiment in Ch.3, as compared to the 'No text' control, the effect sizes of being exposed to the following texts in the nationally representative/Leave samples were: Fairness (d=.23/d=.31), Social norms (d=.25/d=.22), Conscientiousness (d=.23/d=.21)..

used to underscore the particular contribution made by EU immigrants to the Exchequer. Information about the number of immigrant doctors and nurses employed by the NHS was a further argument (ONS, 2019).

The element of *pathos* would be supplied by describing the immigrant as being worried about how many of her EU nursing colleagues were leaving the National Health Service, and unsure of her continued welcome in the UK.

Comparing the effectiveness of the other texts, more people felt close to the immigrant described in the LA1 text (the artist) than the immigrant described in LA2 (the entrepreneur), so the former was chosen to go forward to the final experiment as the low authoritarianism text. Of the high authoritarianism texts, HA1 (the teacher) and HA2 (the policewoman) were less effective than the Gen text (the nurse) so the latter was chosen as the basis for the longer authoritarian compatible text in the next experiment.

7.4 Part 2: Testing a longer authoritarian compatible text

7.4.1 Methodology

7.4.1.1 Participants

Data was gathered from Prolific Academic between 22 January and 9 February 2023. A fresh sample of 1,006 participants was selected to be exposed to the new longer text. Of the 501 Remain voters, one was excluded for not filling in the dependent variables after being timed out. Of the 505 Leave voters, four were excluded for not filling in the dependent variables. The sample was split evenly between men and women. As in the previous experiment, they were paid 75p for a 5-minute survey.

The results for the new longer text were to be compared to the results for the control text used in Part 1. However, these results only covered three of the dependent variables ("Sonia values", "immigstock" and "immigflow"). Since a new variable was to be introduced, these participants (N=1,005) were approached again with the new EU immigration question. A required response rate for these participants of 80% was pre-registered, as was a cut-off date of four days after the launch of the data-gathering. 444 Leave voters responded, and 447 Remain voters. The sample was split 50:50 among men and women. Participants were paid 35p for a 2-minute survey.

7.4.1.2 Procedure

As in the previous experiment, each participant was asked to agree consent.

Those in the treatment condition were asked to respond to two political questions, the VSA scale and the SDO scale before being exposed to the new text. They were then asked to respond to the three dependent variables from the previous experiment and the new EU immigration item before being debriefed.

Those in the control condition were asked to respond to a different authoritarianism scale (Funke, 2005) since they had already responded to the questions asked in the previous survey. They were then asked the new control question about EU immigration and exposed to the debrief.

7.4.1.3 Stimuli

Fig. 7.9: Longer authoritarian compatible text

When you think about what matters most to you, do you think it's appropriate for people who make a positive contribution to be treated fairly and get the thanks and recognition they deserve?

Think about those who have come here from overseas. There has been a change in how they are perceived in the UK. The latest polls show that most British people think it's a good thing if skilled immigrants come and fill gaps in the labour market.

The Office for Budgetary Responsibility says that having more young, healthy, tax-paying immigrants would allow the government to reduce the national debt and save money on interest payments. Most of us can think of many ways in which government cash could be put to better use. According to figures quoted by the government, immigrants from the European Union make a particularly positive contribution in terms of the tax they pay in.

We've all seen the chaos that happens when essential jobs go unfilled. We need people to make fuel deliveries, work in care homes and staff our National Health Service. Currently, according to figures from the NHS, over a quarter of our hospital doctors come from overseas and about one in five of our nurses.

Take Sonia, who is from Poland. She came to Britain five years ago to work as an NHS nurse. She took on extended shifts to care for her patients. She thinks chatting with them about their lives is one of the greatest perks of the job.

She loved the Queen's Jubilee last year, and the way in which the nation recognised the extraordinary contribution made by the people staffing our hospitals, schools and essential services. For her, it's important to notice when people go above and beyond the call of duty.

She chose to come here because she speaks excellent English and because she wanted to live in a safe, fair-minded country where hard work is rewarded. She is also a fan of British wildlife documentaries like "The Blue Planet".

Sonia would like to stay in the UK and has applied for British citizenship. But she is very worried when she sees so many of her EU nursing colleagues leaving to go back to their home countries. She feels there is a question mark over her future. Will she continue to be welcome in the UK, and if so, for how long? What do you think?

Sources: YouGov (Oct 2022), OBR (2018), Office for National Statistics (2019), Migration Advisory Committee (2018).

7.4.1.4 Dependent variables

These same three dependent variables were used in this experiment, and the results compared to those from the control group used in Part 1, who were exposed to the text.

In addition, this group and the new control group were asked to respond to the EU immigration question used in the first experiment of this thesis. On a scale of 1-5, and including a “Don’t Know” option, participants were asked: “Do you think immigration from other EU countries is a good or bad thing for the UK?” (5= ”Very good”).

7.4.1.5 Results

A t-test of the two independent samples was carried out to test the “values overlap” question. There was a significant difference between those exposed to the control (M=4.16, SD=1.45) and those exposed to the authoritarianism compatible text (M=5.27, SD=1.35): (t=-17.9, df=1995, p<.001, conf. int = [-1.24, -1.0], d=.79). The percentage feeling close to Sonia (scores 5-7) rose from 42% among those exposed to the control to 74% among those exposed to the longer authoritarianism compatible (“AC”) text, a 32-percentage point increase.

On the EU immigration question, a t-test was carried out comparing the responses of those exposed to the control (M=3.63, SD=1.17) and those exposed to the longer authoritarianism compatible text (M=3.81, SD=1.09), which were found to be significantly different (t=3.4, df=1781, p<.001, conf. int = [.08, .28], d=.16). Some 69% of the total (excluding "Don't knows") said they thought EU immigration was "Fairly good" or "Very Good" for the UK as compared to 60% in the control, a rise of nine percentage points.

There was also a significant result on the overall immigration score. A t-test showed there was a significant difference between the responses of those exposed to the control (M=4.06, SD=1.65) and those exposed to the longer authoritarianism compatible text (M=4.25, SD=1.66): (t=-2.63, df=2004, p<.01, conf int = [-.34, -.05], d=.12). Looking into this last result more closely, opinion was significantly different on the immigration flow question

(“Cont” M=4.32 , SD = 1.73; “AC” M= 4.03, SD= 1.69; t=-3.82, df= 2003, p<.001, conf int = [-.44, -.14], d=.27), a rise of 7 percentage points in those who wanted more immigrants to come to the UK, but there was no difference on the immigration stock argument (“Cont” M= 4.43, SD=1.93; “AC” M=4.53, SD= 1.92; t= 1.11, df=2004, p=.27, conf int [-.07, .26], d=.05).

Further tests were carried out to explore whether the effect was still present when the samples were split into high and low authoritarian groups. This was done using a median score of 4.33 on the Very Short Authoritarian scale.

Looking at those high in authoritarianism, there were significant differences on the “values overlap” score between those exposed to the control text (M=4.15, SD=1.46) and those exposed to the authoritarian compatible text (M=5.17, SD=1.41): (t=-11.6, d=1054, p<.001, conf int = [-1.19, -.85], d=-.71); the EU immigration attitudes score (“Cont” M=3.2, SD=1.19; “AC” M=3.48, SD=1.17; t=-2.98, df=419, p<.01, conf int [-.46, -.09], d=-.24) and the overall immigration score (“Cont” M= 3.31, SD= 1.46; “AC” M= 3.57, SD = 1.5; t=-2.86, d=1066, p<.01, conf int [-.44, -.08] d=.18). There was a significant difference in the immigration flow score (“Cont” M=5.11, SD= 1.54; “AC” M=4.72, SD=1.52; t=4.21, df=1058, p<.001, conf int = [.21, .58), d=.26) but not for the immigration stock variable (“Cont” M=3.74, SD=1.85; “AC” M=3.86, SD=1.81; t=-1.09, df=1056, p=.28, conf int [-.34, .10], d=-.07).

T-tests showed that for those low in authoritarianism, on the “values overlap” variable, there was a significant difference between those exposed to the control (M=4.16, SD=1.44) and those exposed to the authoritarian compatible text (M=5.41, SD=1.26): (t=-14.1, df=931, p<.001, conf int [-1.42, -1.07], d=-.92); the overall immigration score (“Cont” M=4.82, SD=1.47, “AC” M=5.12, SD=1.43; t=-2.86, df=1066, p<.01, conf int [-.44, -.08], d=.20); the immigration flow score (“Cont” M=3.50, SD=1.53; “AC” M=3.15, SD=1.48; t=3.61, df=924, p<.001, conf int [.162, .54], d=.24); and the immigration stock score (“Cont” M=5.15, S=1.73; “AC” M=5.38, SD=1.71; t= -2.07, df=921, p=.04, conf int [-.45, -.01], d=-.14). However, for those low in authoritarianism, there was not a significant difference in EU immigration attitudes (“Cont” M=4.19, SD=.95; “AC” M=4.3, SD=.84; t=-1.47, df=407, p=.14, conf int [-.26, .04], d=-.13), possibly because of a ceiling effect (the top score on the Likert scale was 5).

7.4.2 Discussion

This experiment was an interim step before the final experiment. The key finding is that exposure to the longer text not only increased the sense of shared values between the participant and the fictitious immigrant, but it also led to more positive attitudes towards EU immigration and immigration overall, even with those who are high in authoritarianism, who might be expected to be more resistant to such messages. This longer text is hence more effective than the shorter text and was selected to be used in the final experiment.

In Ch.3, the samples used in the main experiment were nationally representative. The samples used in this experiment were not, so it is not a direct replication. However, as the political breakdown (Fig.7.4) shows, the samples provided by Prolific Academic were close to a fair reflection of the current political situation in the UK, which increases the generalisability of the results.

One point to note is that baseline attitudes towards immigration in 2023 are more positive than they were in 2019, when the Ch.3 experiment took place. In 2019, the mean score on the EU immigration question, for which there was a direct comparison, was M=3.38 in the "No text" control condition. In this 2023 experiment, the equivalent figure for the control is M=3.63. Given that the maximum score on this question as originally drafted was 5, the decision was taken to use a longer Likert scale (1-7) for the EU attitudes variable in the final experiment in order to avoid a ceiling effect.

7.5 Part 3: The final experiment

7.5.1 Methodology

7.5.1.1 Hypotheses

Two new sets of hypotheses were pre-registered for this experiment.

> Hypotheses 1-3: These were that those who were exposed to the authoritarian compatible text would feel closer to the immigrant, more positive about EU immigration and more positive about immigration overall than those exposed to the control.
>
> Hypotheses 4-9 were that those high (or low) in authoritarianism would respond more positively to the three variables when they were exposed to a text that more closely matched their levels of authoritarianism.

7.5.1.2 Participants

In the final experiment for this study, 3,067 participants from a nationally representative sample were sourced from YouGov. The data was gathered between 7-12 March 2023. The average age was 50 years old and the sample comprised 1,706 women and 1,361 men. YouGov supplied weights that were used to make the survey nationally and politically representative as requested. The participants were paid 50 YouGov points for taking part in the 5-minute survey. On the EU attitudes question, those who answered “Don’t know” (of whom there were 80), were excluded from the analysis for that item.

7.5.1.3 Procedure

After giving consent, participants were asked to respond to two political questions, asking how they intended to vote and how they thought Brexit was going.

As of 8 March 2023, looking at the two main parties, YouGov were reporting that 47% were planning to vote Labour and 27% Conservative. In this sample, excluding those who would not vote (13%) or said they didn't know (15%), 45% said they would vote for Labour and 26% said they would vote for the Conservatives, so the sample reflected the state of politics at the time of the survey. Similarly, 57% thought Brexit was going "fairly" or "very badly", as compared to the 59% who felt this way in the November 2022 YouGov survey quoted above.

Participants then completed the 6-item VSA scale and a shorter 4-item SDO scale (Pratto et al., 2013). The sample was split into three equal groups and then exposed to one of the three texts. They answered four dependent variables: on the "values overlap", on attitudes towards EU immigration, and on the stock and flow of immigrants.

7.5.1.4 Stimuli

A new 400-word control text was generated for this experiment using ChatGPT in an attempt to avoid unconscious researcher bias. Asked to generate a neutral and boring text, Chat GPT generated 400 words on tax payments and data entry. This text was rejected because the subject matter might appeal to those high in authoritarianism. It was then asked to generate a text on the topic of bread quality, since bread is staple food. This text was read with care to ensure it did not unconsciously reflect socio-economic differences and accepted. A brief mention of the fictitious immigrant was added. She was described as a consumer of bread.

The authoritarianism compatible text was the same as that used in the previous experiment. One of the low authoritarianism texts (LA1, the artist) from the first study was used but

lengthened. This text used the same factual material that was in the authoritarianism compatible text to avoid possible confounds.

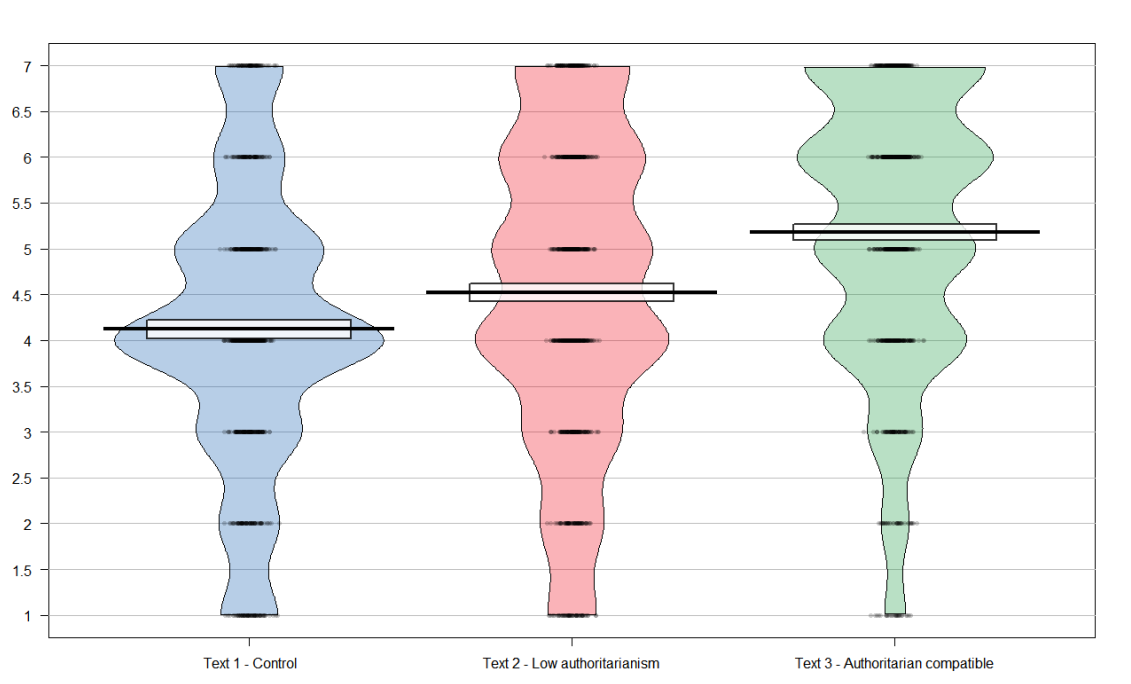
7.5.1.5 Results

For clarity, the graphs here show unweighted data[37], but the statistical results use weighted data.

Fig. 7.10: "Values overlap"

Please select the pair of circles that best describes the extent to which Sonia shares or doesn't share your values. Please answer this question quickly. If you're not sure, or if there is not enough information, it's best to go with your gut instinct.

(7=Shares completely)



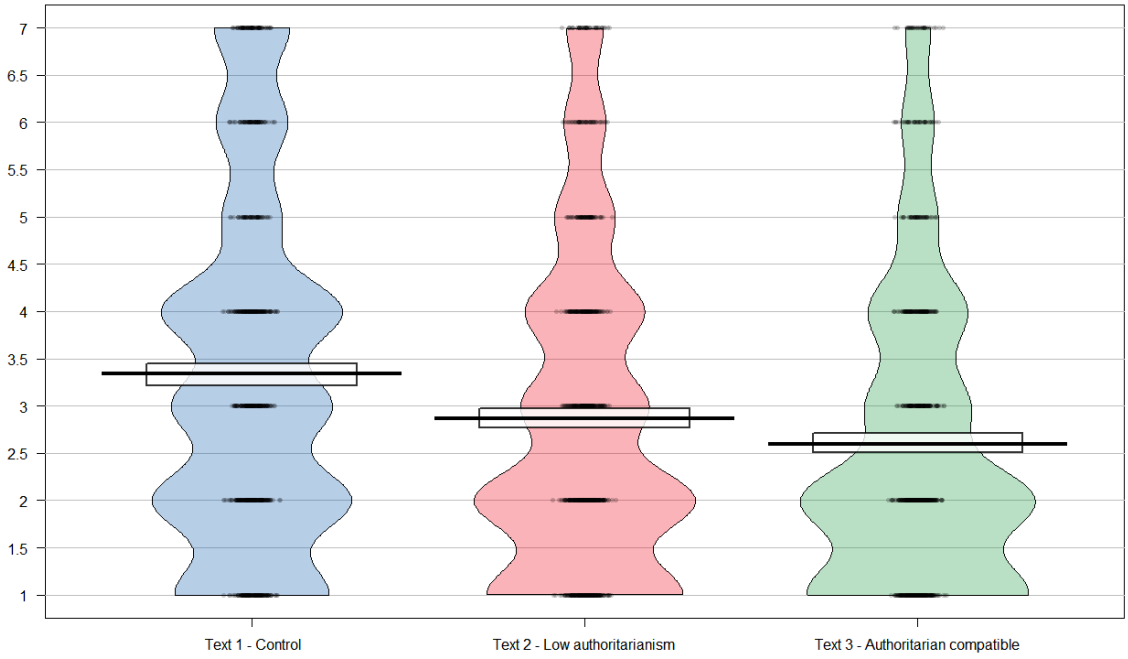
N=3,067, unweighted

[37] When graphs were produced using the weighted data, the values shown on the y axis were created by dividing the Likert score by the weight, which was often <1. The result created a bottom-heavy graph that was unreadable.

Fig. 7.11: Attitudes towards EU immigration

Do you think immigration from EU countries is a good or bad thing for the UK?

(1=Very good)

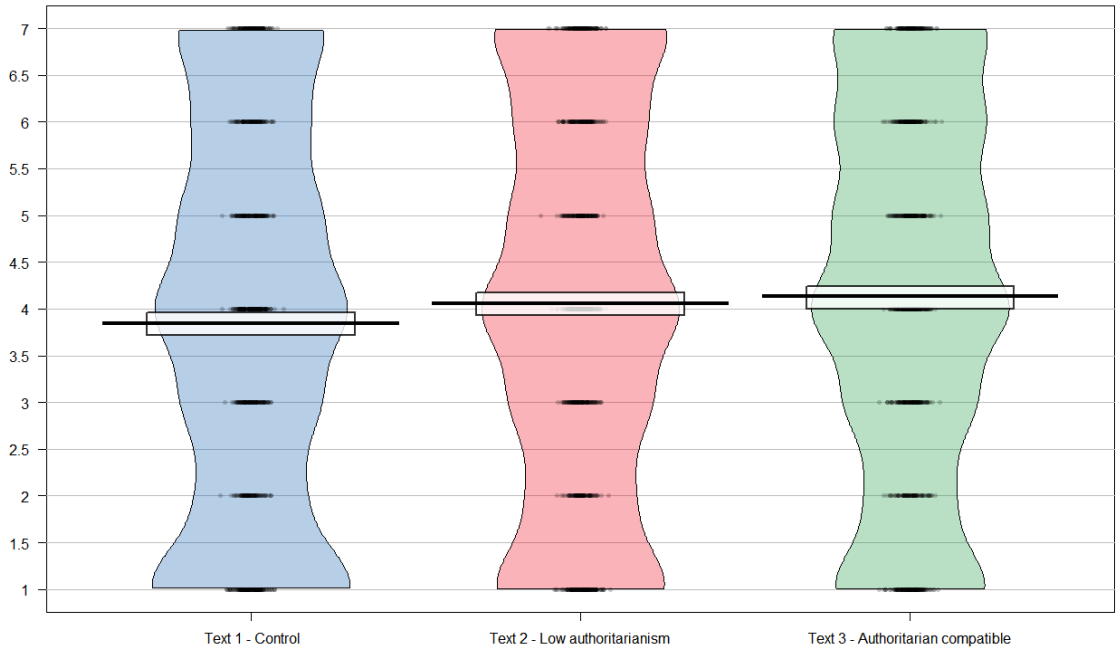


N=2,987, unweighted

Fig. 7.12: Attitudes towards stock of immigrants

To what extent do you agree or disagree with the following statement: "There are too many immigrants in the UK right now"

(1=Strongly agree)

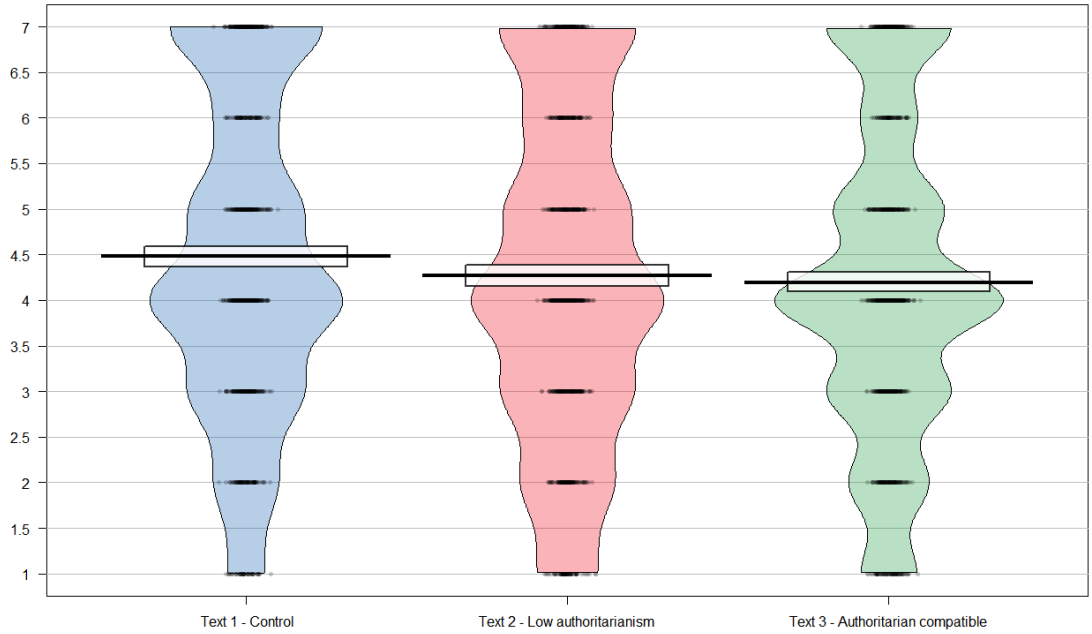


N=3,067, unweighted

Fig. 7.13: Attitudes towards flow of immigrants

Some people think that the UK should allow many more immigrants to come to the UK to live, and others think that the UK should allow fewer immigrants. Where would you place yourself on this scale?

(1=Many more)

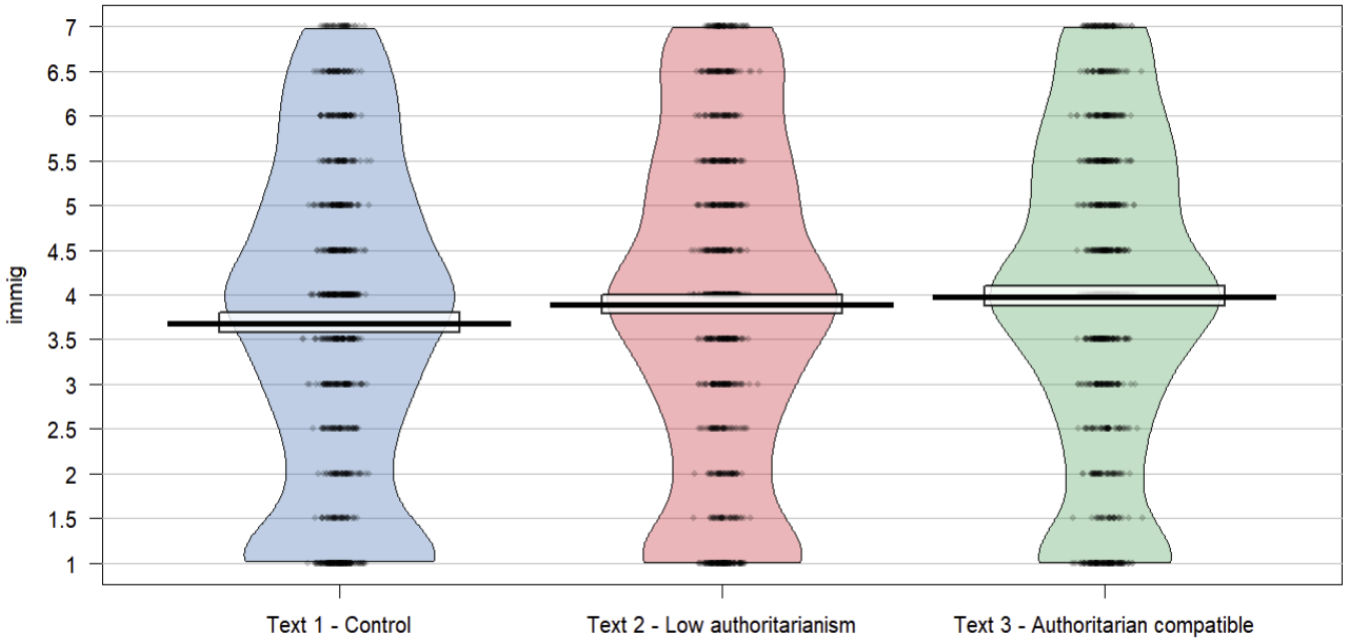


N=3,067, unweighted

Fig. 7.14: Combined immigration attitudes variable

This variable averages the score for the stock of immigrants and the reversed score for the flow of immigrants.

(7=pro-immigrant)



N=3,067, unweighted

Testing Hypotheses 1-3

The pre-registered hypotheses 1-3 were that those exposed to the authoritarian compatible text would respond more positively towards immigration across the three dependent variables than those exposed to the control.

On the "values overlap" question, there was a significant difference between those exposed to the control (M=4.09, SD=2.02) and those exposed to the authoritarianism compatible text (M=5.15, SD=2.28): (t=-10.88, df=1973, p<.001, conf. int [-1.24, -.86], d=-.49). Those exposed to the authoritarian compatible text were 31 percentage points more likely to say that they felt their values overlapped with the fictitious immigrant than those exposed to the control (36% v 67%).

On the EU immigration question, with the "Don't know" responses removed, there was a significant difference between the responses of those exposed to the two texts ("Cont" M= 3.4, SD=2.45; "AC" M= 2.91, SD=2.26; t=4.59, df=1927, p<.001, conf. int [.28, .70], d=.21). Those who were exposed to the authoritarian compatible text were 20 percentage points more likely than those exposed to the control to say that EU immigration was "Slightly", "Moderately" or "Very good" (53% v 73%).

On the composite immigration score, there was also a significant difference in the responses between those exposed to the two texts ("Cont" M=3.64, SD=1.96; "AC" M=3.97, SD=1.86; t=--3.78, df=1950, p<.001, conf. int [-.49, -.16], d=-.17).

Those exposed to the authoritarianism compatible text were significantly more positive on both immigration stock ("Cont" M=3.78, SD=2.4; "AC" M= 4.13, SD= 2.49; t=-3.16, df=1976, p=.002, conf. int [-.56, -.13], d=-.14) and immigration flow ("Cont" M=4.5, SD=2.57; "AC" M=4.19, SD=2.33; t=2.75, df=1924, p=.006, conf. int [.09, .52], d=.12).

These three hypotheses were therefore accepted.

Testing Hypotheses 4-9:

These hypotheses were that when split by the median score for authoritarianism (calculated here at 4.11 on a 1-9 scale), those high in authoritarianism would be more positive about immigration on the three variables when exposed to the authoritarianism compatible text than when exposed to the low authoritarianism text. Similarly, those low in authoritarianism would be more positive when exposed to the low authoritarianism text as opposed to the high authoritarianism text.

There were 1,022 people who had been exposed to the low authoritarianism text and 1,046 people who had been exposed to the authoritarian compatible text. The authoritarianism scores were calculated for the two groups. Two subsets were created based on a median split of 4.11 (on a Likert scale of 1-9). For the first dependent variable – the "values overlap" – a two-way ANOVA was performed to analyse the effect of being exposed to either the low authoritarianism text or the authoritarianism compatible text. The ANOVA showed there was no interaction between the effects of exposure to the two texts ($F(df1,1) = .644$, $p=.42$). Simple main effects analysis showed that exposure to the "LA" texts as opposed to the "AC" text did have a statistically significant effect on this variable ($p<.001$).

For the second dependent variable on EU immigration (with "Don't knows" removed), a two-way ANOVA was performed to analyse the effect of being exposed to either the "LA" and "AC" text.[38] The ANOVA revealed that there was no statistically significant interaction between the effects of exposure to "LA" or "AC" texts ($F(df1, 1) = .381$, $p=.54$). Simple main effects analysis showed that exposure to the "LA" text as opposed to the "AC" text did have a statistically significant effect on this variable ($p=0.001$). Simple main effects analysis also showed that being high or low in authoritarianism had a statistically significant effect on this variable ($p<.001$).

For the third dependent variable on immigration attitudes, a two-way ANOVA was performed to analyse the effect of being exposed to either the "LA" and "AC" text. The ANOVA revealed that there was no statistically significant interaction between the effects of exposure to "LA" or "AC" texts ($F(df1, 1) = .25$, $p=.62$). Simple main effects analysis showed

[38] In each group, there were two respondents who answered "Don't know" to this question

that being high or low in authoritarianism had a statistically significant effect on this variable ($p<0.001$).

7.5.2 Discussion

Across three experiments, this study has again shown that attitudes towards immigration can become more positive when respondents are exposed to a positive argument. This was the case in the first study of this thesis written up in Ch. 3. The current study established that a text of just 400 words can make attitudes towards immigration significantly more positive when it is framed to represent values that are compatible with high levels of authoritarianism, combined with a logical argument and an emotional appeal.

In the first pilot, those high in authoritarianism felt that their values overlapped more with a fictitious immigrant (a policewoman) whose values were framed to reflect high levels of authoritarianism as compared to a fictitious immigrant artist. Similarly, those low in authoritarianism preferred the artist to the policewoman. However, other than on this dependent variable, there was no significant change in attitudes.

In the second study, a longer text was used and it was found to shift attitudes not only on the values question but also on attitudes towards EU immigration, and on attitudes towards immigration overall, although this latter result was driven by changes in attitudes towards the flow of immigrants and not towards the stock of immigrants in the UK.

In the third and final study, which used nationally representative samples from YouGov, there was change in each of the dependent variables. Those exposed to a text about a fictitious nurse were 31 percentage points more likely to say that their values overlapped than those exposed to a control. They were 20 percentage points more likely to say that EU immigration was a “Fairly,” “Moderately” or “Very good thing,” and their attitudes towards the flow and stock of immigrants also became more positive.

Overall, these results suggest that targeting people based on their levels of authoritarianism is a promising avenue for future research. This was clearly shown in the first experiment of this chapter. The third and last experiment showed strong shifts in attitudes but not such a

strong targeting effect. However, in this case, the low authoritarianism text (the artist) was being compared to an authoritarian compatible text (the nurse), who was popular across the board (see Fig. 7.7), as opposed to the high authoritarianism text (the policewoman). There was also a greater overlap between the low authoritarianism text and the authoritarian compatible text in terms of the amount of common text used.

Nonetheless, the results do bear further reflection, and there are limitations.

It was striking and surprising that common ground alone was not enough to change opinion in the first experiment other than on the "values overlap".

The logical argument and the emotional appeal seem to have made a difference. Factual arguments cannot be assumed to be irrelevant. Stenner (2012) says that authoritarians exhibit authoritarian behaviour when riled by threat. In the absence of threat, they behave in the same way as everyone else. The text described logical benefits to immigration, with the arguments chosen to strike a chord with those high in authoritarianism.

Then, in the final experiment in Ch.3, the 'Perspective-taking' text had an effect size of d=.34 among Remain voters but also d=.14 among Leave voters suggesting that an empathetic appeal might be worth making.

This text was drafted to be unalarming. It described a non-threatening female who had integrated into the UK, spoke English and was not competing for resources. Kaufmann (2019) showed that immigrants who integrate are more popular with white Leave supporters. Allport (1954) says that people who are high in prejudice tend to stereotype and assume that differences they see are meaningful, but they are also happy to make an exception to the rule. It is not hard to admit to sharing values with a conscientious and hard-working nurse, but that doesn't mean that an individual is prepared to accept a mass of immigrants about whom they might hold stereotypes.

For future research, it might be instructive to manipulate these characteristics, discussing non-female immigrants who come from further away and do not speak the language. The introduction of visual cues to signal joint values might be an avenue to explore. The types of logical argument that shift attitudes is another empirical question that could be addressed.

As a further limitation, while the sample was large and drawn from the general public, this was an experiment and not a real life debate. Amsalem and Zoizner (2022) say that while

framing arguments is an effective technique, it works less well in the face of competing arguments. They also note that it is easier to change attitudes than behaviour.

Even so, given that the Remain campaign shied away from making arguments on immigration in the EU referendum campaign, it is interesting that this amount of change is possible from a short intervention. For policymakers, the knowledge that immigration attitudes can be made more positive opens up new policy options that don't rest on the assumption that the British are inevitably hostile to immigration. To the extent to which there is the political will to use them, this study suggests that there may be counter-arguments that can shift the debate on immigration from negative to neutral, and allow people to debate an important political issue on the basis of the logical arguments.

Chapter 8: Can the methodology developed for this thesis be applied to other areas?

Abstract: This chapter contains a published article based on research carried out in advance of the 2021 UN Climate Change conference (COP26) held in Glasgow in 2021. The framing experiment, funded by the Economic & Social Research Council Impact Acceleration Account, involved over 14,000 respondents in seven countries and took place to assess support for government action to protect the environment and for policies that were likely to be discussed at the conference. Included at the end of this chapter are additional reflections about methodological issues, working with partners to influence policy, and the potential for bodies such as the United Nations to develop message-testing capabilities.

8.1 Introduction

The idea for the study described in this chapter came from a colleague who combined teaching at UCL with a senior position at the Foreign, Commonwealth and Development Office (FCDO). Seeing the results of the main experiment described in Ch. 3, she wondered whether the same methodology might be applied to test messaging ahead of the UN Conference on Climate Change (COP26) that was eventually held in Glasgow in 2021.[39]

One of the aims of the Political Psychology lab at Cambridge University is to expand understanding of non-WEIRD countries, and, as a key political issue, climate change messaging is an area of interest.[40] To scope out the project, I organised a hackathon between Cambridge University's Political Psychology lab and volunteers from the Cambridge Social Decision-Making Lab, led by Dr Sander van der Linden, to consider potential directions for the research.

Working with partners, six countries were selected for their importance to the climate change debate: India, China, Indonesia, Brazil, Poland, and the USA. The UK was added as the seventh country given that it was the host. Our partners on the project translated and sense-checked the texts. [41]

I produced the first draft of a grant proposal which was submitted by my supervisor, Dr Lee de-Wit, to the ESRC Impact Acceleration Account. YouGov were selected as the polling agency, given that they had provided the least expensive quote out of three polling companies consulted, and had the capability to deliver in these countries. The ESRC provided a grant of £19,240 for the research.

There were two aims to the research. The first was to test the extent of support in these countries for action on climate change, and for policies likely to be adopted at COP26 and at the preceding UN meeting on biodiversity. These results could then be communicated to

[39] The conference was originally scheduled for 2020 but was postponed for a year due to Covid, and eventually held in Oct-Nov 2021.
[40] WEIRD is an acronym for Western, Industrialised, Educated, Rich and Democratic (Henrich, Heine, Norenzayan, 2010).
[41] Sense-checking was useful to avoid local sensitivities. An early draft of the control message mentioned dogs, which can evoke disgust reactions in some audiences.

leaders attending these meetings. The second was to test messages to see which were likely to be most effective at changing opinion.

The following chapter was published in Climatic Change, 2022 (vol. 170, issue 3, No 6, 8 pages). On author contributions, it specified: "TB conceived and initiated this project. TB drafted the message-framing texts, which were revised and edited with LdW and SvdL. JA and SL analysed the results. LdW drafted the manuscript which was revised and edited by TB, SvdL and JA."

The article was produced to a strict word count, so, below the article are some further reflections on the project and the potential for future work.

8.2 Clear consensus among international public for government action at COP26: patriotic and public health frames produce marginal gains in support

Tessa Buchanan, James Ackland, Sam Lloyd, Sander van der Linden, Lee de-Wit

Abstract: This work surveys over 14,000 respondents in seven countries to assess support for government action to protect the environment, and for different policies at the 2021 UN Climate Change Conference (COP26) in Glasgow. Baseline results reveal overwhelming support for action. At least nine out of ten respondents in six countries, and 79% in the USA, agree that all governments should do more. In each country, at least 50% of respondents express support for four policies: protecting wildlife; planting trees; spending more on clean technologies; and reducing the production of greenhouse gases over thirty years. A survey-experiment tests whether support changes when respondents are exposed to short texts framed in different ways. On average, exposure to a patriotism or public health text significantly raises support for action, albeit by only 1.6 and 1.3 percentage points respectively. On policies, exposure to either a public health text or a text based on current UN messaging increases support for tree planting by 2.3 and 2.9 percentage points

respectively. These results suggest that international public opinion is overwhelmingly in favour of government action at COP26. They highlight policies that are likely to attract majority support, and suggest that message-framing can have a very small impact.

The UN Climate Change Conference (COP26) in Glasgow (November 2021) offers the first major opportunity for the world to agree more ambitious goals to tackle climate change since the Paris Agreement in 2015. There is clear scientific evidence on the need for urgent action (IPCC, 2021), but world leaders are also likely to consider the potential reaction of their domestic audiences (Schafer et al., 2021). International surveys show that increasing numbers of people are concerned about climate change (Fagan, Huang 2020). A weighted, online, convenience poll of 1.2 million people across 50 countries conducted by the UN Development Programme and Oxford University found that 64% regarded climate change as a global emergency (The Peoples' Climate Vote | United Nations Development Programme (2021)). It found strong support for policies such as the conservation of forests and land (54%); the use of solar, wind, and renewable power (53%); climate-friendly farming techniques (52%); and investing more in green businesses and jobs (50%). As to who should take action, a 2019 YouGov survey found that in 28 out of 29 countries surveyed, people were more likely to say that their countries (as compared to themselves) should be doing more to tackle climate change (Smith, 2019).

Polling data can sometimes give the impression that public opinion is fixed, but there is a rich literature highlighting that support for climate action can be influenced by message framing (Li & Su, 2018). In the context of climate change, a message frame can present information that remains true to the underlying science while being tailored to make the issue more understandable or feel more relevant (Nisbet, 2009). By highlighting particular aspects of the information or by presenting them in a particular way, a message frame makes specific considerations more cognitively accessible and can thereby shift opinion and increase, or decrease, support for policy action (Bolsen et al., 2019).

Frames used by senior officials at the United Nations, which runs COP26, frequently reference the urgent necessity of tackling the climate emergency based on the underlying science. UN Secretary General Antonio Guterres recently described the 2021 report from

the Intergovernmental Panel on Climate Change as a “code red for humanity”. However, research suggests that “catastrophizing” messages might not be the most effective in attracting support, particularly among conservative US citizens (Feinberg, Willer, 2011). Similarly, while fear-based imagery attracts attention, it may be less effective than non-threatening material which connects to people’s everyday emotions and concerns (O’Neill, Nicholson-Cole, 2009).

One salient concern that might prove promising involves concerns about health (Maibach et al., 2010; Myers et al., 2012). Research in the USA found that conservatives were likely to respond to messages framed in terms of pollution, mentioning contaminated water or forests strewn with garbage (Feinberg, Willer, 2013). This research draws on Moral Foundation Theory (Graham et al., 2009), which argues that there are a range of different moral lenses through which people look at issues and that understanding these moral lenses is critical to persuading them. Pollution and contamination are thought to tap into a moral concern around purity, which is hypothesised to be rooted in an evolved sense of disgust sensitivity. The importance of purity-focused messages in motivating pro-environmental behaviour has been demonstrated in India (Sachdeva et al., 2019).

US conservatives are also more likely than liberals to adhere to the Moral Foundation of Loyalty, which includes an element of patriotism (Graham et al., 2009); and they are more receptive to messages framed in terms of benefits to their country (Wolsko et al., 2016). This parallels other work highlighting that people are more motivated to address climate change when the issue is linked to their local area (Scannell, Gifford, 2013). There are conflicting results as to whether conservatives respond better to environmental messages framed in terms of the past. Baldwin and Lammers (2016) found this to be the case, but this finding failed to replicate in two larger studies (Kim et al., 2021).

Frames based on social norms have also been successful in this context. Van der Linden et al. (2015a, 2015b) suggest that leveraging relevant group norms has shown promise in climate communications, while Goldberg et al. (2019) found that discussing climate change with family and friends can make a difference. A particularly important scientific norm involves the perception that most climate scientists have concluded that human-caused climate change is happening, which acts as a “gateway” to attitude change and support for public action (van der Linden et al., 2019; van der Linden et al., 2015a, b; Zhang et al., 2018).

In the context of COP26, a limitation to the framing literature is that studies are often conducted in a single country, mainly the USA, and some results are based on relatively small samples with varied recruitment strategies. Studies rarely directly compare a range of different framings. Given the potential cultural limitations to particular framings, it is therefore theoretically and practically important to understand how different message framings might impact support for climate action around the world.

This current study combines a large-scale international opinion survey with a message framing experiment to both assess levels of support for action and for policies at COP26 and to test whether that support is influenced by how the topic is framed. Opinion is surveyed in seven countries: the UK as COP26 host, and six countries that have faced political or practical obstacles to climate action (e.g. a reliance on fossil fuels) such as Brazil, China, India, Indonesia, Poland, and the USA. Four popular message framings are evaluated (current UN messaging, public health, patriotism, and social norms) against a fifth control condition.

8.2.1 Methods & Results

Sample polling took place in December 2020. Samples of approximately 2,000 participants per country were sourced by the polling agency, YouGov (total N=14,627, see Appendix F). YouGov's samples were nationally and politically representative in the UK, USA, and Poland. In Indonesia and Brazil, they were nationally representative. In China, the sample was online only, and in India, the sample was urban only, but both were weighted to be representative of the population.

8.2.2 Design and procedure

In each country, the sample was split randomly into five groups. Each group was presented with one of five texts and then answered two questions. Firstly respondents were asked: "Do you agree or disagree that all national governments should do more to protect the

environment?" There were seven response options (very strongly agree, strongly agree, agree, neither agree nor disagree, disagree, strongly disagree, very strongly disagree). This question was worded to reflect the dynamics facing leaders at COP26, when governments will be taking decisions collectively. It was also designed to allow participants to express support for environmental action without implicitly criticising their own government.

They were then asked: "At an international meeting in November next year, governments will be asked to make commitments to protect the environment. Which of the following commitments, if any, do you think they should support?":

- To protect and preserve wildlife, marine life, and plants
- To plant more trees to absorb the gases that cause climate change
- To spend more on developing clean technologies
- To reduce the production over 30 years of the gases that cause climate change
- To make businesses pay for the damage they do when their activities contribute to climate change
- To give businesses a fair timetable to stop activities that contribute to climate change
- None of these, governments are already doing all they should.

The policy options were framed in simple, non-scientific language and reflected policies that governments were likely to be asked to adopt at COP26 or that could be significant in compelling businesses to accept the need for change (for complete texts, see Appendix A).

8.2.3 Stimuli

The between-subject design presented participants with one of five different texts (for full texts, see Appendix C). The texts were of roughly equal length (230–250 words) and were based around a common framework (see Appendix B). This began with an expression that was easy to agree with; it asked people to recall a personal experience; mentioned fires,

floods, storms, animals, birds, and trees; referred to scientists; suggested climate change is a solvable problem; and ended with a call to action.

The neutral text was used to establish baseline levels of support. In format and length, it was similar to the other texts and made reference to the first four elements above (e.g. "Consider the thinking that goes into the creation of an artwork showing dramatic scenes of fire, floods, or storms"), but it made no reference to climate change, nor did it include the call to action.

The "Current UN Messaging" text can be considered as an "active control" in that it draws on the language and themes of recent speeches by the UN Secretary General Antonio Guterres, reflecting the UN's current climate change messaging. This text emphasised the science around climate change ("greenhouse gas concentrations are at the highest levels in 3 million years") and stressed that: "We have no time to lose if we are to avert climate catastrophe. This is a pivotal year for how we address the climate emergency".

The "Public Health" text focused on the need to tackle climate change to reduce pollution—a highly salient issue in many of these countries. It stressed that "health is wealth" and emphasised the contaminating and violating potential of climate change. It noted that, with air pollution, "some particles are so small that they can pass through the lungs into the bloodstream" and that floods can swamp homes with "filthy, disease-ridden sewage".

The "Social Norms" text included a reference to international social norms from Ipsos MORI ("in a recent international survey, a large majority (65%) think governments should prioritise environmental measures in the years ahead"). It mentioned the "Gateway belief" on the scientific consensus that human-caused climate change is underway then gave a local norm for those who agreed in that country. The inclusion of genuine polling figures (which ranged from 69 to 88%), taken from a 2020 YouGov poll, meant the texts were not 100% comparable, but they demonstrated that large majorities in each country believed in human-caused climate change.

The "Patriotism" text was also tailored for each country. In each text, there were three mentions of the country or nationality, including a reference to a local species identified by the World Wildlife Fund as being at risk from climate change (e.g. "China's giant pandas"). It primed a longer-term perspective ("Our country was built by generation upon generation

who worked hard to ensure their children had a better life than they did"). It mentioned the forces of law and order ("Our soldiers, firemen and national services have fought bravely against wildfires and floods") and told participants that: "We have a duty to protect and preserve this land. When the time comes, we will want to tell our children that we played our part in conserving their natural heritage".

8.2.4 Survey results

In the neutral condition, in six countries, at least 90% of respondents either agreed, strongly agreed, or very strongly agreed that all governments should do more to protect the environment. In the UK, this figure was 90.0% [95% CI: 89.5–90.5]; in Brazil, it was 97.5% [95% CI: 97.3–97.8]; China, 91.6% [95% CI: 91.1–92.0]; India, 92.3% [95% CI: 91.9–92.8]; Indonesia, 98.9% [95% CI: 98.7–99.0]; and Poland, 90.5% [95% CI: 90.0–90.9]. In the USA, the figure was 79.1% [95% CI: 78.4–79.7] (for graphs see Appendix I).

There was strong support in the seven countries for policy action. In the neutral condition, at least 50% of participants in each of the seven countries agreed on four policies: protecting wildlife (across countries, this ranged from 66.0 to 84.2%), planting trees (62.8–81.4%), spending more on clean technologies (54.1–78.2%), and reducing the production of greenhouse gases over 30 years (50.0–68.4%). In all countries except China, where support was 47.6%, making businesses pay for climatic damage (47.6–70.3%) was a more popular option than giving them a fair timetable to end anti-environmental activity (40.6–55.0%).

8.2.5 Message framing results

Full results and the analytical strategy are reported in Appendices D–H. All tests reported here refer to models supplied with the full dataset, except for the Wilcoxon rank-sum tests, which each refer to 40% of the sample (20% from the neutral condition and 20% from each of the four persuasive text conditions relevant for each comparison).

8.2.6 Support for government action

Compared to the neutral condition, exposure to one of the persuasive texts led to a small rise in support for government-led action (Kruskal–Wallis X2 (4,14,622)=13.66, p=0.008, η2=0.001 [95% CI: 0.000–0.002]). Follow-up comparison Wilcoxon rank sum tests (with a Holm-Bonferroni correction) showed that, compared to the neutral condition, there was a very small increase in support for participants exposed to the "Public Health" (W=4,135,367, p=0.009, d=0.07 [95% CI: 0.02–0.13]), "Patriotism" (W=4,180,116, p=0.009, d=0.07 [95% CI: 0.02–0.12]), and "Current UN Messaging" (W=4,274,599, p=0.024, d=0.05 [95% CI: 0.00–0.10]) texts. There was no discernible increase in support for participants in the "Social Norms" condition (W=4,240,307, p=0.181, d= −0.00 [95% CI:−0.05–0.05]). Models fitted with interaction terms of framing by country did not provide evidence that message effectiveness varied by country. (F(24,14,592)=1.49, p=0.059, η2=0.002).

8.2.7 Support for policies

Using a Holm-Bonferroni-corrected logistic regression model across message and country (see Appendix H), the "Current UN messaging" text resulted in a 2.9 percentage point increase in support for tree planting (logit B=0.16, p=0.034, OR=1.18 [95% CI: 1.05, 1.32]), and the "Public Health" text resulted in a 2.3 percentage point increase in support for tree planting (logit B=0.16, p=0.034, OR=1.17 [95% CI: 1.04, 1.32]). No other message effects were robustly significant when correcting for multiple comparisons.

The utility of including interaction terms was measured by means of a likelihood ratio test. For none of the six dependent variables was there a significant increase in model fit when adding interaction terms (LRT(24)=15.82–24.76, p=0.42–0.89).

8.2.8 Discussion

This sample showed an overwhelming consensus in favour of further government-led action. The baseline figures are consistent with other large-scale polling ahead of COP26, which has shown a steady rise in concern about environmental issues. While support in the USA was lower than elsewhere, it was still the case that over three-quarters of the population supported further government action. A political breakdown of the results from the USA showed 95.0% [95% CI: 94.6–95.4] of those who voted for Joe Biden as US President in 2020 were in favour, but even a majority 54.9% [95% CI: 54.0–55.7] of respondents who voted for Donald Trump agreed. The striking alignment of opinion along partisan lines is consistent with wider research highlighting that partisan cues are sufficient to motivate different attitudes to climate issues (van Boven et al., 2018).

With baseline levels of support already at such high levels, this left a very narrow window in which any message framing might demonstrate its effectiveness. There were, however, very small increases in support for government-led action among those exposed to the "Public Health", "Patriotism", and "Current UN Messaging" conditions. These effects equated to one or two percentage points or a Cohen's d of between 0.05 and 0.07.

This was a very short intervention, and it is plausible that more might be achieved if such frames were used as part of a more sustained, or multimedia, campaign (Goldberg et al., 2019, 2021). It is also unclear whether framing only impacts people's immediate response or whether it shifts their opinion in the longer term. Future research could fruitfully explore whether "boosters" of the same message framing can result in more sustained attitudinal change.

In terms of baseline support for policies that might be adopted at COP26, there was majority support for at least four. Support for tree planting rose when respondents were exposed to the "Current UN messaging" or "Public Health" texts. While it is unclear why these texts in particular were successful, it is notable that tree planting was already the second most popular policy in the baseline condition (exceeded only by "protecting wildlife"). For businesses, the strong public support for making them pay for environmental damage may be an argument that tilts the balance in favour of agreeing a fair timetable to

adapt. While the interaction between country and frame was not significant for either outcome, the overall effects of the intervention were so small that it is not possible to be confident whether the different frames would work equally well in all countries (see Appendix I). A longer intervention, larger samples per condition, or a less skewed distribution (in Q1) might show up stronger effects that could bring to light differences across countries. It would be instructive to test how effective these frames would be in a competitive environment including frames that aimed to reduce support for environmental action (Bolsen, Shapiro, 2017).

In summary, this study shows that international public opinion is overwhelmingly in favour of all governments doing more to protect the environment. For those publics that remain unconvinced, this study suggests that marginal gains in support could be obtained by exploring different message frames. There is also room for leadership at COP26 in translating overwhelming support for government action into support for particular policy outcomes.

8.3 Further discussion

Given the requirement for brevity in the article above, there were additional reflections that could not be included. The first category relates to the experiment; the second to project management and working with partners; and the third to the potential for bodies like the United Nations to build up message-testing capacity.

8.3.1 The experiment

Various methodological issues were raised by this research. The first dependent variable was a question about whether participants supported action on climate change. The initial intention had been to ask if participants supported their own governments taking action on climate change. There is a debate in the literature about whether political wariness in China

affects survey results (Xuchuan Lei, Jie Lu, 2017). At YouGov's advice, this variable became a less contentious question asking whether "all national governments" should take action.

The first reflection is that, as a question, this was very easy to agree to. It was uncosted, not specific to any individual country and not presented in competition with any other message. If the aim had been solely political – to persuade leaders that there was a powerful social norm in favour of action in their countries – then this goal would have been achieved. The survey showed overwhelming support for this proposition at levels of 90% or above in six countries.

However, this meant that the scientific aim of using this dependent variable as a baseline for the framing experiment was hampered by a ceiling effect and there was only a narrow window in which to demonstrate any effect from the framed messages. In Indonesia, for example, support in the control condition was already 99%. The trade-off was that this wording allowed China, an important non-WEIRD country, to be included in the experiment. It is possible that more variation might have shown up if the strength of agreement was considered (respondents could agree, strongly agree or very strongly agree), and it may be that there was only a small effect anyway given that there was limited movement on the second dependent variable on policies.

The second reflection, based on Ch. 7, is that the texts may have been too short. They were each between 230-250 words, whereas it took 400 words to change immigration attitudes in Ch.7. While this was not considered in advance, three of the themes tested – on social norms, patriotism and health – would be likely to appeal to those high in authoritarianism (Allport, 1954). If a further experiment were carried out, it might be interesting to test a combined authoritarian compatible text.

Another option for future research would be to explore if there was the potential to create an anchoring effect (Furnham, Boo, 2011). Businesses or government representatives might first be presented with the information about public support in each country (except China) for making businesses pay for the ecological damage they do (a well-established principle in international law). It would be interesting to see if that affected their willingness to accept a fair timetable to adapt, which might be seen as the cheaper option.

8.3.2 Working with partners

The second set of reflections relates to the willingness of partners to work with Cambridge University on potentially impactful projects. A key element of this project was that the university retained its independence and applied for its own funding. Partners working on COP26 then had access to rigorous and timely evidence that could be used to support the goals of the conference without having to pay for it.

However, it was also clear, one year before COP26 was due to take place, how little consensus there was in advance about potential outcomes. Looking at the policy options, we correctly anticipated that the COP26 meeting and the online UN Biodiversity Summit which preceded it would discuss biodiversity, trees, emissions reductions, and new technology to combat climate change (UN.org, 2021). Our research showed strong support for these options.

However, from my experience in the civil service, this lack of clarity would suggest that where high quality research can be produced in good time, it could help to shape the debate. When we spoke to collaborators and stakeholders our constant refrain was: what do you have to achieve by when? Even asking the question in good time is a useful device to encourage partners to focus on the issues while there is still time to act.

8.3.3. Building up message-testing capability at major institutions

A final reflection is that civil servants are required to work with the best available evidence.

The United Nations has a global platform from which to communicate, but whether it tests its messages and tailors them for its audiences is an unknown. There may be potential to build up databases of effective messaging.

This study shows that it is possible, albeit not easy, to compare messaging across different countries, including non-WEIRD nations. Point 8.2.1 discusses the representativeness of the

samples. YouGov was one of the few international polling agencies that could provide samples in each country. Ideally, these would have been nationally and politically representative across each population, however it was considered better to have non-WEIRD countries included with the appropriate caveats about representativeness than to exclude them.

Future directions for research might include testing the extent to which climate change terminology is understood and whether frightening, scientific-sounding messages do better than others. For those high in authoritarianism, it might be expected that these types of messages would fail to resonate with them.

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Chapter 9. Conclusion

"The tyrant is a stirrer-up of war, with the deliberate purpose of keeping the people busy and also of making them constantly in need of a leader." Aristotle, Politics Pol. 5.1313b (350 BCE)

I write this conclusion as the conflict in Ukraine enters its second year. Aristotle's thought about why tyrants stir up war seems more relevant than ever. Before being a government speechwriter, I was a journalist. In 1995, I worked in Kenya for the BBC, where we monitored the Rwandan radio stations that were used to whip up hatred ahead of the 1994 genocide. I then moved to Croatia to cover the aftermath of the war in the former Yugoslavia. I have seen kind, decent and highly educated people riled up with wartime fury then returned to rationality in peacetime, oblivious that their attitudes had changed at all. Like Adorno et al. (1950), I don't assume that anyone is immune from these powerful forces. Understanding group behaviour is a fundamental challenge for humanity, and, like Halpern (2015), I believe that scientists should apply themselves to resolving conflict.

The spark for this thesis was the 2016 EU referendum, a landmark event in British political history. It generated anger, acrimony and bitter exchanges and likely contributed to the tragic murder of Jo Cox, a parliamentarian who sought to bring people together by emphasising what they had in common.

Central to the EU referendum debate was the question of whether immigrants – an outgroup – were welcome in Britain. It was surprising that those who sought to keep the UK in the EU felt unable to make arguments in support of this proposition.

This thesis aimed to discover whether politicians had been right to assume that when it came to immigration, there were no arguments that would change British minds.

In 2018, the political psychology literature was fractured and silo-ed. With a few notable exceptions (e.g. Zmigrod, 2018), it was usual for researchers to take a narrow theoretical approach. When they announced their results, it was rare for them to consider the relative efficacy of potential alternative methods (Kaufmann, 2019; Aaroe et al., 2017).

Among those frustrated by this approach was Paluck, whose own doctoral thesis (Paluck, 2009) had been a large-scale field experiment aimed at reducing prejudice in Rwanda. Her initial 2009 meta-analysis conducted with Green decried the lack of comparison between techniques and the paucity of ecologically valid, empirical, evidence-based studies. In a 2021 update, Paluck et al. said that while the field had developed, there were still not enough actionable, evidence-based recommendations for reducing prejudice. She called for more transparency in research and urged scholars to investigate older, more complex and powerful psychological forces based around social norms, group dynamics, authority and hierarchy.

The initial literature review (Ch. 2) for this thesis covered a wide range of theory from the golden age of rhetoric through to the development of political psychology in modern times. A table was created to organise some of the multiple theories and techniques that had been shown to influence political attitudes, and these were then summarised.

The first study described in Ch. 3 involved 18,000 British citizens and three experiments, each of which was pre-registered. After a filtering process in the pilot stage, an intervention tournament was conducted using samples provided by the YouGov polling agency in which nine short texts framed to reflect individual theories or techniques were tested against each other. Attitudes towards immigration became more positive by over seven percentage points on average, with an average effect size of d=.19. However, the experiment did not resolve the question of what drove this change. There were significant results for all the texts, including the common textual framework on which the treatment conditions had been built. Effect sizes suggested that some conditions (e.g. Social Norms, d=.25), had been more effective than others, but when corrected for multiple comparisons and judged by

statistical significance, the evidence was not there that would justify focusing the rest of the doctorate on a single approach.

The second study was a reaction to this. In two datasets (N=5,880, n>30,000) correlational and regression analysis was used to investigate the underlying drivers of attitudes towards immigration in the UK. This showed that rather than demographic measures, the Big Five personality traits or items testing for the Moral Foundations, up to half the variance in attitudes towards immigration was explained by a construct called authoritarianism. Social Dominance Orientation (SDO) was also important, albeit to a lesser degree. These two constructs are the component parts of Duckitt & Sibley's (2009) Dual Process Model.

This finding led to an additional literature review (Ch.5) which looked back at the origins of authoritarianism. In the 1930s, '40s and '50s, this construct captured the attention of psychologists such as Maslow (1943); Adorno, Frenkel-Brunswik, Levinson and Sanford (1950); and Allport (1954). There was a flurry of excitement around the creation of the F-scale (Adorno et al., 1950) which purported to measure an individual's tendency towards fascism. Adorno et al. suggested that this tendency was not endemic to the German population but rather universally present. They also found that those who were high in authoritarianism had more in common than those who were low in authoritarianism, and they identified nine traits for this construct. Allport built on this work with his book on prejudice (1954). He said that authoritarianism is associated with disgust, black-and-white thinking styles, respect for social norms and a range of other characteristics. He suggested that stereotyping is a common heuristic and that one of the drivers of authoritarianism may be that it is less effortful to spend time with one's own group than with those who are different.

The work on authoritarianism then fell into abeyance when the F-scale was discredited as being unreliable and prone to acquiescence bias. It was not until Altemeyer produced the reliable but uni-dimensional Right-Wing Authoritarianism scale in 1981 that interest in authoritarianism revived. He identified three sub-dimensions of authoritarianism: Aggression, Submission and Conventionalism.

Social Dominance Theory emerged in 1994 (Pratto et al., 1994) with the ambitious aim of integrating a range of theories about social attitudes and intergroup conflict, stereotyping

and oppression into one coherent theoretical framework. A person's Social Dominance Orientation measures an individual's support for social hierarchy and the extent to which they desire their in-group be superior to out-groups. Like authoritarianism, it proved to be a good predictor of prejudice. It has two sub-dimensions, Dominance and Anti-Egalitarianism.

Shortly afterwards, there was a major step forward in authoritarianism research when Feldman and Stenner (1997) published a paper describing authoritarianism as a predisposition that could be activated by normative threat. This was threat, whether real or perceived, to an individual's culture or social norms. What motivated people high in authoritarianism was a desire for conformity as opposed to a desire for change. They maintained that it could be measured by testing people's attitudes towards child-rearing. Stenner (2012) found that people high in this predisposition usually acted in the same way as everyone else, but when they experienced normative threat, they were much more likely to seek out strong leaders, and to want to enforce social norms (much as my friends in Croatia had been riled up by the war, and as Aristotle had foreseen). This was consistent with Gelfand et al.'s (2011) work on the role of threat in creating tight or loose societies.

In 2009, the initial article introducing Moral Foundations was published. Graham, Haidt and Nosek set out five Moral Foundations to which liberals and conservatives differently adhered. Of these, Authority, Loyalty and Purity were shown to be associated with authoritarianism, and Care and Fairness negatively associated with SDO (Federico et al., 2013).

The same year, Duckitt & Sibley (2009) published their paper on the Dual Process Model, combining SDO and authoritarianism into a single model that predicted political attitudes better than the uni-dimensional left-right axis. They found in a 2010 paper that threat was at the root of these two predictors of prejudice. Authoritarians felt that the world was a dangerous place and responded to fear of crime and terrorism. SDO was related to the threat of competition, and those high in this trait responded to perceptions of scarcity.

Ch. 6 looked at how these various characteristics might fit together. A proposed model was tested using Structural Equation Modelling. The model did not meet the pre-registered fit criteria but the following insights were gained.

The first was that it was possible to say with greater confidence that authoritarianism was a key driver of attitudes towards immigration in the UK. Adding an item testing for cultural threat improved the amount of variance explained by the model, suggesting that those who were experiencing cultural threat were indeed more opposed to immigration. This was not the case for SDO and economic threat.

This was consistent with the experience of then Europe Minister David Lidington on the campaign trail ahead of the EU referendum. Interviewed on 3 June 2020 for the Brexit Witness Archive by the think tank "The UK in a Changing Europe", he said:

> *The really big item and the one that mattered politically at home, more than any other, was the issue that is called 'free movement of people'… The worry about EU migration was partly about benefits, but it was also a subset of a much greater disquiet about levels of immigration, about all the issues to do with integration that we've seen. I remember conversations where it segued very quickly from, 'These Eastern Europeans,' to, 'And the mosques and the veils.'"*
>
> *David Lidington, former Minister of State for Europe 2020.*

The second insight was that it was possible to break down the RWA scale into three factors, of which the Aggression sub-dimension was most closely linked to immigration attitudes. Consistent with Feldman and Stenner's analysis, it was also linked strongly to cultural threat.

The third insight is based on a study that was carried out to investigate in greater depth the relationship between authoritarianism, SDO and a new Moral Foundations Questionnaire (Atari et al., 2022) that split the Fairness foundation into two new foundations of Equality and Proportionality. It confirmed that there is a close relationship between the Authority foundation and authoritarianism, and that this extends to the sub-dimension level.

Ch. 7 is the final experiment related to immigration framing. Over the course of three experiments involving 9,000 people, it was established that when texts are framed to reflect the level of authoritarianism of the recipient, that person will feel that their values overlap more with a fictitious immigrant. Targeting individuals based on their level of authoritarianism appeared to be effective at changing attitudes on this issue.

In the first pilot, short treatment texts of about 250 words were drafted in which the immigrant was described in different ways – as a policewoman, an artist, a teacher, an entrepreneur or a nurse. Those who were high in authoritarianism felt closer to the policewoman than the artist (d=.81) while those low in authoritarianism felt the opposite (d=.28). However, establishing common ground alone was not enough to move immigration attitudes. It may be – as one anonymous participant said when he took the trouble to write to the author team – that while anyone would appreciate an individual immigrant like the nurse, that did not mean that they therefore supported immigration *en masse*.

The failure to shift immigration attitudes despite shifting values led to a pause for reflection in which differences were considered between this experiment and the initial experiment described in Ch. 3. Those initial texts had been longer and had included rational arguments and an emotional appeal, based on best rhetorical practices. When these elements were included in the next experiment, those exposed to a longer authoritarian compatible text (as opposed to a control) not only felt that the immigrant shared their values, but they also felt more positive towards EU immigration and about immigration flows.

The final experiment, using nationally and politically representative samples sourced from YouGov, involved 3,067 people. They were exposed to an eight-paragraph text of 400 words. One text was a neutral control text generated by ChatGPT, another was a low authoritarianism text and a third was the authoritarianism compatible text. As compared to those exposed to the control, those exposed to the authoritarianism compatible text were significantly more positive across all three variables. They felt their values were more closely matched to the immigrant, they were more positive on EU immigration and more positive about immigration overall, including both the stock and flow of immigrants. The percentage saying that EU immigration is "Slightly", "Moderately" or "Very Good" rose 20 percentage points from 53% to 73%.

The final chapter contained a paper in which the methodology used for this thesis was applied to another important area – climate change messaging. It involved countries outside the UK, including those in Asia, America and Europe, with a large sample (n>14,000) supplied by YouGov. The study found that attitudes changed when people were exposed to a short text, although there was a ceiling effect given the overwhelming support (90%+) for climate change action in six of the seven countries involved.

Reflecting on this research, what then is the contribution made to the literature by this thesis?

For political psychology, the first is that this thesis proves that British attitudes towards immigration can become more positive if people are exposed to a pro-immigration argument. More than one argument may effect this change – it is likely that there is no unique solution – but it is possible to compare which arguments work better than others. This thesis has applied a rigorous, empirical methodology, demonstrating that it is possible to build up an evidence base for such issues.

As a second point, this thesis establishes that authoritarianism is a key correlate of immigration attitudes, notably the Aggression sub-dimension. Authoritarianism predicts about half the variance in attitudes towards immigration in the UK, far more than demographics or other measures commonly used in political campaigns. Using large samples drawn from the general public, and a variety of scales, it finds that authoritarianism is very closely related to Moral Foundations Theory but also to Social Dominance Orientation, essentialism, the Big Five personality traits, threat perceptions and emotions, all of which are included in a table in Ch. 2 that lists known influences on political attitudes. As a particular contribution, this thesis has established how the sub-dimensions of authoritarianism and SDO map out onto the new Moral Foundations questionnaire (Atari et al., 2022), that has replaced the former version, and which splits the Fairness foundation into two new foundations of Equality and Proportionality.

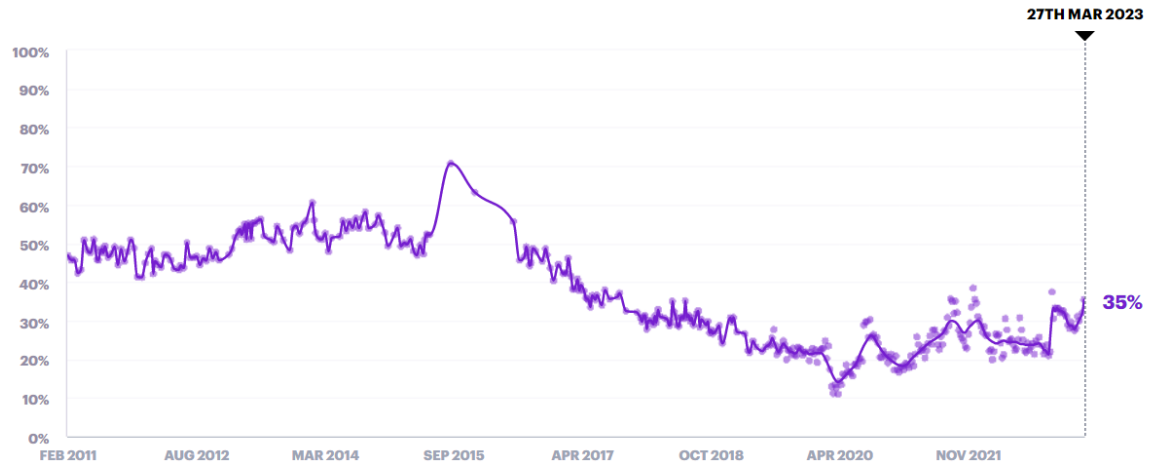
Thirdly, this thesis suggests that targeting people based on their levels of authoritarianism is a promising communications technique. Arguments framed to reflect levels of authoritarianism made people feel that an immigrant shared their values, but this common ground alone was not enough to shift immigration attitudes. When appeals to emotions and to rationality were added to a persuasive text, attitudes towards overall immigration changed. This suggests that there is still a role for reason in political debate, although it is also true the factual arguments used in this experiment were chosen to match the underlying psychological characteristics of the audience.

Taking each of these in turn, the fact that British attitudes towards immigration can become more positive is an important contribution in its own right. The Remain campaign may have

had other reasons for not dwelling on immigration. They may not have wanted to draw attention to the subject and might have felt that they could win on arguments about economics alone. As an unpopular theme, politicians might have worried for their political future if they spoke up in favour of it, while others might have felt trapped by past statements. But the evidence is now present to show that attitudes towards immigration can become more positive. This might have come as a surprise to those who worked on the 2016 EU referendum campaign. That it took a text of only 400 words to effect a change of up to 20 percentage points in attitudes towards EU immigration might have been seen as remarkable.

Reflecting on this result, it may be that such attitudes are lightly held. In June 2016, immigration was regarded as the top issue of importance to the nation by 56% of the British people (YouGov, 2022). The figure had been as high as 71% in September 2015 at the height of the Syrian refugee crisis. In the intervening years, this figure fell dramatically – to 11% in March and April 2020, when the country was dealing with the first lockdown.

Fig.9.1: The most important issues facing the country – Immigration



Source: YouGov, 2023

This thesis has shown that British attitudes towards immigration can change in response to a positive argument. The wider context suggests that the issue becomes less salient when people are not being exposed to negative arguments. The YouGov tracker poll suggests that

individuals downrank immigration as a focus for national concern when other topics occupy the headlines.

Authoritarianism research (Stenner, 2012) suggests that when those high in authoritarianism are not riled up by normative threat, they are more amenable to discussion. Politically, there are costs and benefits associated with immigration, and these are worthy of reasoned debate, but for some sections of the public, this would be harder to achieve when they are being exposed to arguments that are framed to evoke fear, anger or disgust.

A limitation to this research is that the texts are not presented alongside competing arguments, which would be expected to reduce the effects (Amsalem, Zoizner, 2022). It has not tested the level of complexity of the argument, the durability of any effects, nor has it explored alternative media or messengers.

Attitudinal research (Penner, Cohen, Stearins, 1978) suggests that persuasive messages need to be available – they must be easily understood – and accessible, which may mean describing them in vivid terms or making sure that they are repeated enough times to be remembered. Filmed or audio messages may be easier to process. These are all empirical questions that could be explored with future research.

This thesis has explored the inter-relationships between psychological characteristics. It found that there may be more than one way of framing an effective argument, but then political persuasion is not playing the piano by tapping one key. As the table in Ch.2 illustrated, there are various theories and techniques that have been shown to affect political attitudes. This research has shown that these may be inter-related, and they can be used to complement each other. Indeed, it was hard to separate them out when drafting framed texts.

In a 2009 article, Graham, Haidt and Nosek quote Lakoff (2004) as saying that: “Words do the work of politics.” As Allport and Odbert (1936) found when they developed the Lexical Hypothesis, words capture concepts that are real to the people who use them. They are not exclusive to any individual political theory. As an illustration, a “hard-working” immigrant would be expected to appeal to someone high in authoritarianism (as the person was

abiding by social norms), someone high in the Moral Foundation of Authority and to someone high in the Big Five trait of Conscientiousness.

The texts in the final experiment reflected authoritarianism, but they also included elements of constructs that were shown in this thesis to be linked to it, such as the binding Moral Foundations. The way in which these arguments were represented appeared to matter. No direction was found in the modern political psychology literature about how best to organise the relevant arguments, so the final structure drew on classical rhetoric by presenting the arguments as an appeal to values (*ethos*), reason (*logos*) and emotion (*pathos*).

The similarities between some of these theories have raised scholarly debate.

Looking at the links between authoritarianism and the Moral Foundations, these theories come from different theoretical backgrounds, but have converged on similar questions about child-rearing and respect for authority, or chastity.

Atari & Haidt (2022) say that Moral Foundations Theory rests on "four falsifiable claims about human morality." These are that it is nativist (i.e. innate), reflects cultural learning (i.e. experience), is intuitive and pluralistic. However, these claims apply to other theories too. Authoritarianism is substantially heritable, related to experience and associated with System 1 type stereotyping, while research has shown that levels vary around the world. Where the concepts differ is that Authoritarian Aggression may be marginally better at predicting immigration attitudes, arguably because it reflects the full scope of human behaviour as opposed to behaviour regarded as moral.

This research has shown that targeting people based on their psychological characteristics can work. This is consistent with Feinberg and Willer's (2015, 2019) experience with "moral reframing (2015).

However, if targeting works, that is not to say it is easy. Authoritarianism was found to be a key predictor of immigration attitudes, but texts that reflected the same levels of authoritarianism as the respondent only changed the assessment of values overlap. Allport (1954) says that when people high in authoritarianism come across evidence that challenges

their stereotypes, they are prone to assume this is an exception to the rule. In this case, it took other arguments to shift the dial.

There are implications from this thesis for other areas.

The first is that it may be possible to move beyond the initial focus taken by the Behavioural Insights Team in 2010. They encouraged researchers to establish “what works”, but a more targeted approach might involve “what works for whom.” Lewin's maxim (1943) is that “there is nothing as practical as a good theory.” If people are predictably different, as opposed to merely predictably irrational (Ariely, 2008), and if these differences can be measured, then time and money could be saved by testing those interventions that are most likely to work. Bryan, Tipton and Yaegar (2021) made similar points when they called for a heterogeneity revolution in behavioural science.

For political scientists, this thesis provides insights into the psychology of those with an authoritarian pre-disposition, who may be politically volatile under certain conditions. Stenner (2020) says that this group will stay faithful to their leaders until such as a point as their allegiances “turn on a dime”. Sunstein (2019) says momentous political change can ensue when enough people see that a perceived social norm is no longer in force. Further research might explore whether the social tipping point is related to changes in opinion among those high in authoritarianism. Insights into how to communicate effectively to this group are likely to be important.

A philosophical angle is the extent to which people are responsible for their political views. It might be interesting to explore whether being exposed to the idea that political opponents are “born this way” brings greater acceptance for heterogeneity and reduces polarisation. Lewis (2009) found that this belief increased support for gay rights in America; and when it comes to sexual orientation, more Americans than not (50% v 30%) now believe this to be true (Saad, 2018, quoting Gallup).

9.1 Conclusion

While this thesis has focused on immigration attitudes and sought to identify the characteristics of those who are most opposed to it, for me, it has promoted an appreciation of people across the political spectrum. The political system known as authoritarianism – regarded as anathema by those who value liberalism and democracy – is distinct from the people who are known as "authoritarians". A preference for sameness and intra-group harmony and consensus is not unique or rare, and as a continuous measure of individual difference, this preference will be spread across the population. There is no monopoly on virtue. Authoritarians can be expected to have a strong sense of team loyalty, a willingness to stand up for the group or their nation, and a sensitivity towards social norms and purity (surely relevant in light of the 2022 Russia-Ukraine war and the COVID-19 pandemic).

For government communicators, understanding the audiences they speak to is critical. They are bound by their professional code to seek out the most effective ways and means to communicate with *all* citizens and they require a solid evidence base on which to draw up strategies to communicate with different groups. And for policymakers, if citizens react in predictable ways when they are made to feel afraid, then reassurance might be considered as a short-term policy option; while the longer-term response may be to direct policies in such a way as to make people feel more secure, allowing them to develop resilience, self-esteem and the ability to cope with difference.

The final thought is that it is only by deepening our understanding of the political environment to which we belong that we can hope to reduce prejudice, counter polarisation and increase social trust. The arguments developed in this thesis show that there is an antidote to the counter arguments which seek to rile people up about immigration. If it is assumed that this is a subject which deserves careful and considered debate, in which the views of all interested participants should be heard and acknowledged, then what this thesis provides is the ability to take the heat out of the discussion, so that the case for and against immigration can be heard and judged on its own merits.

References

A

Aaroe, L., Petersen, M.B., Arceneaux, K., (2017) The Behavioral Immune System Shapes Political Intuitions: Why and How Individual Differences in Disgust Sensitivity Underlie Opposition to Immigration *American Political Science Review*, 111(2), 277-294.

Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., & Sanford, R. N., (1950). *The authoritarian personality.* New York: Harper.

Adorno, T. W., (1951). Freudian theory and the pattern of fascist propaganda. In G. Róheim, *Psychoanalysis and the social sciences,* Vol. 3, pp. 279–300). International Universities Press.

Alabrese, E., Becker, S.O., Fetzer, T., Novy, D., (2019) Who voted for Brexit? Individual and regional data combined, *European Journal of Political Economy,* Volume 56, 2019, Pages 132-150, ISSN 0176-2680, https://doi.org/10.1016/j.ejpoleco.2018.08.002.

Albarracin, D., Shavitt, S., (2018). Attitudes and Attitude Change. *Annual Review of Psychology* 69.1 (2018): 299-327.

Allport, G.W., Odbert, Henry S., (1936). *Trait-Names: A Psycho-Lexical Study*. Princeton, NJ: Psychological Review Company.

Allport, G. W., (1954/1979) *The Nature of Prejudice* Perseus Books Publishing LLC. pp.9, 15, 397.

Allport, G. W., Vernon, P. E., & Lindzey, G., (1960). *Study of values*.

Allport, G. W., (1961). *Pattern and growth in personality*. New York: Holt, Rinehart & Winston.

Altemeyer, B., (1981). *Right-wing authoritarianism*. Winnipeg, Manitoba, Canada: University of Manitoba Press.

Altemeyer, B., (1994). The development of a right-wing authoritarianism personality. In M. P. Zanna & J. M. Olson (Eds.), *The psychology of prejudice: The Ontario symposium* (Vol. 7, pp. 50-71). Lawrence Erlbaum Associates, Inc.

Altemeyer, B., (1996). *The authoritarian specter*. Harvard University Press.

Altemeyer, R. A., (1998). The other "authoritarian personality." In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 47–91). New York: Academic Press.

Amarasingam, A., Argentino, M (2020) *The QAnon Conspiracy Theory: A Security Threat in the Making?* July 2020, Volume 13, Issue 7.

Amsalem, E., & Zoizner, A., (2022). Real, but Limited: A Meta-Analytic Assessment of Framing Effects in the Political Domain. *British Journal of Political Science*, 52(1), 221-237. doi:10.1017/S0007123420000253.

Andrews, R., (2019) The Importance of Rhetoric and Argumentation to Schools in England, *Education and Democracy.*

Ariely, D., (2008). *Predictably irrational: the hidden forces that shape our decisions* (1st ed.). New York: Harper.

Aristotle (350 BCE) *The Art of Rhetoric* translated by Robin Waterfield (2018) Oxford University Press. Location 1605.

Aristotle, (350 BCE, 1998). Politics. In J. Barnes (Ed.), *The Complete Works of Aristotle: The Revised Oxford Translation* (Vol. 2, pp. 1984-2132). Princeton, NJ: Princeton University Press.

Aron, A., Aron, E. N., Smollan, D., (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of personality and social psychology*, 63(4), 596.

Asch, S. E., (1955). Opinions and social pressure. *Scientific American*, 193(5), 31-35.

Ashcroft, M., (2016) How the United Kingdom voted on Thursday… and why, Friday, 24 June, 2016 lordashcroftpolls.com. (Accessed 1 November 2022).

Ashton, M.C., Lee, K., (2001), A theoretical basis for the major dimensions of personality, *European Journal of Personality*, 15 (2001), pp. 327-353, 10.1002/per.417.

Atari, M., Haidt, J., Graham, J., Koleva, S., Stevens, S. T., & Dehghani, M. (2022)., Morality Beyond the WEIRD: How the Nomological Network of Morality Varies Across Cultures. https://doi.org/10.31234/osf.io/q6c9r.

Atari, M., Haidt, J., (2022) Moral Foundations Theory and its implications for the World Values Survey community *The UK in the World Values Survey* 18 November 2022 (uk-values.org) (Accessed 12 April 2023).

B

Baddeley, M., (2018). *Copycats & Contrarians: Why We Follow Others... and when We Don't*. Yale University Press.

Bakker, B. N., Lelkes, Y., & Malka, A., (2021). Reconsidering the link between self-reported personality traits and political preferences. *American Political Science Review*, *115*(4), 1482-1498.

Baldwin, M., Lammers, J., (2016) Past-focused environmental comparisons promote pro-environmental outcomes for conservatives. *Proc Natl Acad Sci* 113(52):14953–14957. https://doi.org/10.1073/pnas. 1610834113.

Banks, A., & Oakeshott, I., (2016). *The Bad Boys of Brexit: Tales of mischief, mayhem & guerrilla warfare in the EU referendum campaign.* Arron Banks; edited by Isabel Oakeshott. Biteback Publishing.

Barnard, C., Fraser Butlin, S., (2019) Myth-busting Free Movement 16 Jan 2019 www.ukandeu.ac.uk, website. (Accessed November 2019).

Baron, D., Lauderdale, B. and Sheehy-Skeffington, J., (2023), A Leader Who Sees the World as I Do: Voters Prefer Candidates Whose Statements Reveal Matching Social-Psychological Attitudes. *Political Psychology,* 44: 893-916. https://doi.org/10.1111/pops.12891

Bastian, A., (1860). *Der Mensch in der Geschichte: Zur Begrundung einer psychologischen Weltanschauung*. Otto Wigand.

Bastian, B., Haslam, N., (2008), Immigration from the perspective of hosts and immigrants: Roles of psychological essentialism and social identity. *Asian Journal of Social Psychology,* 11: 127-140. https://doi.org/10.1111/j.1467-839X.2008.00250.x.

Bauer, P.C., Barberá, P., Ackermann, K. et al., (2017) Is the Left-Right Scale a Valid Measure of Ideology?. *Polit Behav* 39, 553–583 https://doi.org/10.1007/s11109-016-9368-2.

BBC, (2010) Gordon Brown 'bigoted woman' comment caught on tape, www.news.bbc.co.uk, 28 April 2010 (Accessed February 2023).

BBC, (2015) David Cameron criticised over migrant 'swarm' language, BBC website, 30 July 2015 (Accessed February 2023).

BBC, (2016) Brexit: Europe stunned by UK Leave vote, BBC website, 24 June 2016 (Accessed February 2023).

BBC, (2021) *Four Hours at the Capitol*, documentary, BBC website, 20 October 2021 (Accessed February 2023).

BBC, (2023) What is the 'Stevenage Woman' stereotype? The voters who could be key for Labour 3 April 2023. BBC website (Accessed April 2023).

Behavioural Insights Team, (2019) The Behavioural Insights Team Annual Update Report 2017-18 www.bi.team pp 6-7. (Accessed February 2023).

Behr, R., (2016) How Remain failed: The inside story of a doomed campaign, *The Guardian* 5 July 2016.

Beller, S., & Bender, A., (2017). Theory, the Final Frontier? A Corpus-Based Analysis of the Role of Theory in Psychological Articles. *Frontiers in psychology,* 8, 951. doi:10.3389/fpsyg.2017.00951.

Bennett, O., (2016). *The Brexit Club: The inside story of the Leave campaign's shock victory*. Biteback Publishing.

Bentham, J., (1789). *Introduction to the principles of morals and legislation*. London: Oxford University Press (Reprint 1996).

Bizumic, B., Duckitt, J., (2018). Investigating right wing authoritarianism with a very short authoritarianism scale. *Journal of Social and Political Psychology*, *6*(1), 129–150. https://doi.org/10.5964/jspp.v6i1.835.

Blankenship, K. L., Craig, T. Y., (2006). Rhetorical Question Use and Resistance to Persuasion: An Attitude Strength Analysis. Journal of Language and Social Psychology, 25(2), 111–128. https://doi.org/10.1177/0261927X06286380.

Blinder, S., Richards, L, (2020) UK Public Opinion towards Immigration: Overall Attitudes and Level of Concern, Oxford University Migration Observatory website (Accessed 12 April 2023).

Bolsen, T., Shapiro, M.A., (2017). Strategic framing and persuasive messaging to influence climate change perceptions and decisions. *Oxford Research Encyclopaedia of Climate Science.* https://doi.org/10.1093/ acrefore/9780190228620.013.385.

Bolsen, T., Palm, R., Kingsland, J.T., (2019) Counteracting climate science politicization with effective frames and imagery. *Sci Commun* 41(2):147–171. htttps://doi.org/10.1177/1075547019834565.

Bonanno, G. A., & Jost, J. T., (2006). Conservative shift among high-exposure survivors of the September 11th terrorist attacks. *Basic and Applied Social Psychology*, *28*(4), 311-323.

Brader, T., Valentino, N. A., & Suhay, E., (2008). What Triggers Public Opposition to Immigration Anxiety, Group Cues, and Immigration Threat. *American Journal of Political Science*, 52(4), 959–978. https://doi.org/10.1111/j.1540-5907.2008.00353.x

Brader, T., Marcus, G. E., (2013). Emotion and political psychology. In L. Huddy, D. O. Sears, & J. S. Levy (Eds.), *The Oxford handbook of political psychology* (pp. 165–204). Oxford University Press.

Brandt, M. J., Bakker, B. N. (2022). The complicated but solvable threat–politics relationship. *Trends in Cognitive Sciences*.

British Election Study Team, (2016) What mattered most to you when deciding how to vote in the EU referendum www.britishelectionsstudy.com. 11 July 2019 (Accessed 10 November 2019).

British Election Study Team, (2016) *Brexit Britain: British Election Study Insights from the post-EU Referendum wave of the BES internet panel*, www.britishelectionstudy.com (Accessed 4 Jan 2022).

Broockman, D., Kalla J., (2016) Durably reducing transphobia: A field experiment on door-to-door canvassing *Science* 08 Apr 2016: 220-224.

Brown, R., (1965) *Social Psychology*. Collier Macmillan. ISBN 0-02-978430-1.

Bryan, C. J., Tipton, E., & Yeager, D. S. (2021). Behavioural science is unlikely to change the world without a heterogeneity revolution. *Nature Human Behaviour*, 5(8), 980-989.

Buchanan, T., Renwick, A., Ackland, J., de-Wit, L., (2019) What policy do British voters want on EU immigration? Is there a hidden consensus? *LSE Brexit blog*, September 2019.

Buchanan, T. (2019). Brexit behaviourally: lessons learned from the 2016 referendum. *Mind & Society*, *18*(1), 13–31. https://doi.org/10.1007/s11299-019-00214-3.

Buchanan, T., Ackland, J., Lloyd, S., van der Linden, S., & de-Wit, L. (2022). Clear consensus among international public for government action at COP26: patriotic and public health frames produce marginal gains in support. *Climatic Change*, *170*(3-4). https://doi.org/10.1007/s10584-021-03262-2.

Byrne, D., (1971) *The Attraction Paradigm*. New York: Academic Press.

Byrne, D., Griffitt, W., (1973). Interpersonal Attraction. *Annual Review of Psychology*, *24*(1), 317–336. https://doi.org/10.1146/annurev.ps.24.020173.001533.

C

Cameron, D., (2019) *For the Record* William Collins, pp. 670-672, p.668.

Carlson, M. M., McElroy, S. E., Aten, J. D., Davis, E. B., Van Tongeren, D., Hook, J. N., & Davis, D. E., (2019). We welcome refugees? Understanding the relationship between religious orientation, religious commitment, personality, and prejudicial attitudes toward Syrian refugees. *The International Journal for the Psychology of Religion*, 29(2), 94-107.

Carmines, E. G., & Zeller, R. A., (1979). *Reliability and validity assessment*. SAGE Publications, Inc., https://doi.org/10.4135/9781412985642.

Carney, D.R., Jost, J.T., Gosling, S.D. and Potter, J., (2008), The Secret Lives of Liberals and Conservatives: Personality Profiles, Interaction Styles, and the Things They Leave Behind. *Political Psychology*, 29: 807-840. https://doi.org/10.1111/j.1467-9221.2008.00668.x.

Cavaille, C., Marshall, J., (2019). Education and anti-immigration attitudes: Evidence from compulsory schooling reforms across Western Europe. *American Political Science Review*, *113*(1), 254-263.

Chong, D., (2013) Degrees of Rationality in Politics, Ch. 4, *The Oxford Handbook of Political Psychology* Second Edition, edited by Huddy, L., Sear, D.O., Levy, J.S., OUP. pp.96-97.

Christie, R. E., Jahoda, M. E., (1954). Studies in the scope and method of *The Authoritarian Personality*.

Cialdini, R. B., (1984) *Influence: The psychology of persuasion*. New York, NY: HarperCollins Publishers.

Cialdini, R., (2016) *Pre-Suasion: A Revolutionary Way to Influence and Persuade*. Simon & Schuster. pp. 175-191.

Cicero, M., May, J., (2017). *How to Win an Argument: An Ancient Guide to the Art of Persuasion*. Princeton: Princeton University Press. https://doi-org.ezp.lib.cam.ac.uk/10.1515/9781400883356.

Claessens, S., Fischer, K., Chaudhuri, A., Sibley, C. G., & Atkinson, Q. D., (2020). The dual evolutionary foundations of political ideology. *Nature Human Behaviour*, 4(4), 336-345.

Claessens, S., Chaudhuri, A., Sibley, C., & Atkinson, Q., (2022). The Evolutionary Basis of Political Ideology. In D. Osborne & C. Sibley (Eds.), *The Cambridge Handbook of Political Psychology* (Cambridge Handbooks in Psychology, pp. 22-36). Cambridge: Cambridge University Press. doi:10.1017/9781108779104.003.

Clarke, H.D., Goodwin, M., Whiteley, P., (2017) *Brexit: why Britain voted to leave the European Union*. Cambridge University Press, Cambridge.

Clegg, N., (2017) *How to Stop Brexit (And Make Britain Great Again)* The Bodley Head.

Cohen, G. L., Sherman, D. K., Bastardi, A., Hsu, L., McGoey, M., & Ross, L., (2007). Bridging the Partisan Divide. *Journal of Personality and Social Psychology*, 93(3), 415–430. https://doi.org/10.1037/0022-3514.93.3.415.

Conway, L., Repke, M., Houck, S. Claessens, S., Chaudhuri, A., Sibley, C., & Atkinson, Q., (2022). The Evolutionary Basis of Political Ideology. In D. Osborne & C. Sibley (Eds.), *The Cambridge Handbook of Political Psychology* (Cambridge Handbooks in Psychology, pp. 22-36). Cambridge: Cambridge University Press. doi:10.1017/9781108779104.003.

Costa, P., McCrae, R., (1992). Four ways five factors are basic. *Personality and Individual Differences*, 13(6), pp.653-665.D.

Costello, T. H., Bowes, S. M., Stevens, S. T., Waldman, I. D., Tasimi, A., & Lilienfeld, S. O., (2022). Clarifying the structure and nature of left-wing authoritarianism. *Journal of personality and social psychology*, *122*(1), 135.

Cottam, M.L., Mastors, E., Preston, T., & Dietz, B., (2015). *Introduction to Political Psychology: 3rd Edition* (3rd ed.). Routledge. https://doi.org/10.4324/9781315671932.

Cronbach, L. J., (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297–334. https://doi.org/10.1007/BF02310555.

Crowson, H.M., (2009) Are All Conservatives Alike? A Study of the Psychological Correlates of Cultural and Economic Conservatism, *The Journal of Psychology*, 143:5, 449-463, DOI: 10.3200/JRL.143.5.449-463.

Cummings, D., (2017) On the referendum #21: Branching histories of the 2016 referendum and 'the frogs before the storm'. *Dominic Cummings' blog*. (Accessed 26 October 2022).

Cummings, D., (2017) Video of conference speech delivered at Nudgestock conference, Youtube.com, (Accessed November 2018).

Curtice, J., (2016) Brexit: Behind the Referendum. *Political Insight*. 2016;7(2):4-7. doi:10.1177/2041905816666122.

Curtice, J., (2017) Why Leave Won the UK's EU Referendum. *JCMS: Journal of Common Market Studies*, 55: 19– 37. doi: 10.1111/jcms.12613.

Curtice, J., (2019) Brave New World: Understanding the 2019 General Election (sagepub.com).

D

Damasio, H., Grabowski, T., Frank, R., Galaburda, A. M., & Damasio, A. R., (1994). The return of Phineas Gage: clues about the brain from the skull of a famous patient. *Science*, 264(5162), 1102-1105.

Dekeyser, E., Freedman, M., (2018) What 500 elections in 28 European countries can tell us about the effects of anti-immigration rhetoric, *Washington Post* 30 October 2018.

Dempster, H., Hargrave, K., (2017); *'Understanding public attitudes towards refugees and migrants'*, Chatham House and the Overseas Development Institute.

Dempster, H., Leach A., Hargrave, K., (2020) Understanding public attitudes towards refugees and migrants odi.org. (Accessed 27 September 2020).

Dennison, J., (2020). A basic human values approach to migration policy communication. Data & Policy, 2, E18. doi:10.1017/dap.2020.17

De-Wit, L., (2017) *What's Your Bias*, Elliott & Thompson.

Diamond, E.P., (2020), The Influence of Identity Salience on Framing Effectiveness: An Experiment. *Political Psychology*, 41: 1133-1150. https://doi.org/10.1111/pops.12669

Digital, Culture, Media & Sport Committee, (2019) *Disinformation and 'fake news': Final Report,* House of Commons website (publications.parliament.UK) (Accessed November 2022).

Dinesen, P. T., Klemmensen, R., & Nørgaard, A. S., (2016). Attitudes toward immigration: The role of personal predispositions. *Political Psychology*, *37*(1), 55-72.

Dolan, P., Hallsworth, M., Halpern, D., King, D., Metcalfe, R., Vlaev, I., (2012) Influencing behaviour: The mindspace way, *Journal of Economic Psychology*, Volume 33, Issue 1, 2012.

Dovidio, J. F., Glick, P., Rudman, L. A., (2008). *On the nature of prejudice (1st ed.).* Williston: Wiley. https://doi.org/10.1002/9780470773963.indauth.

Duckitt, J., (2001) A dual-process cognitive–motivational theory of ideology and prejudice. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 33, pp. 41–113). San Diego, CA: Academic Press.

Duckitt, J., Wagner, C., du Plessis, I., & Birum, I., (2002). The psychological bases of ideology and prejudice: Testing a dual process model. *Journal of Personality and Social Psychology*, 83(1), 75–93. https://doi.org/10.1037/0022-3514.83.1.75.

Duckitt, J., Fisher, K., (2003), The Impact of Social Threat on Worldview and Ideological Attitudes. *Political Psychology*, 24: 199-222. https://doi.org/10.1111/0162-895X.00322.

Duckitt, J., Sibley C.G., (2009) A Dual-Process Motivational Model of Ideology, Politics, and Prejudice, *Psychological Inquiry*, 20:2-3, 98-109, DOI: 10.1080/10478400903028540.

Duckitt, J., Sibley C.G., (2010) Personality, Ideology, Prejudice, and Politics: A Dual-Process Motivational Model. *Journal of Personality* 78 (6): 1861–1894.

Duckitt, J., (2015). Authoritarian personality. *International encyclopedia of the social & behavioral sciences*, 2, 255-261.

Duckitt, J., Sibley, C.G. (2016), Personality, Ideology, Group Identity, and Politics*. Political Psychology*, 37: 109-124. https://doi.org/10.1111/pops.12222.

Duckitt, J., Sibley, C. G., (2017). The dual process motivational model of ideology and prejudice. In C. G. Sibley & F. K. Barlow, (Eds.), *The Cambridge handbook of the psychology of prejudice* (pp. 188–221). Cambridge University Press. https://doi.org/10.1017/9781316161579.009.

Duckitt, J., (2022) Authoritarianism: Conceptualisation, Research, and New Developments. In C. G. Sibley & F. K. Barlow (Eds.), *The Cambridge handbook of the psychology of prejudice* (pp. 177–190). Cambridge University Press. https://doi.org/10.1017/9781316161579.009.

Duffy, B., (2018), Kings College London Policy Unit, Ipsos Mori *Misperceptions of Brexit* www.ipsos.com (Accessed 2 October 2019).

E

Eckhardt, W., (1991). Authoritarianism. *Political Psychology*, *12*(1), 97–124. https://doi.org/10.2307/3791348.

Ekehammar, B., Akrami, N., Gylje, M., Zakrisson, I., (2004) What Matters Most to Prejudice: Big Five Personality, Social Dominance Orientation, or Right-Wing Authoritarianism? *European Journal of Personality Eur. J. Pers*. 18: 463–482 (2004) Published online 25 May 2004 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/per.526.

Ekehammar, B., Akrami, N., (2007) Personality and Prejudice: From Big Five Personality Factors to Facets *Journal of Personality.*

Ekman, P., (1992). An argument for basic emotions. *Cognition & emotion*, 6(3-4), 169-200.

Electoral Commission, (2014) *Scottish Independence Referendum: Report on the referendum held on 18 September 2014*, December 2014 www.electoralcommission.org.uk (Accessed November 2022).

Engelhardt, A., Feldman, S., & Hetherington, M.J., (2021). Advancing the Measurement of Authoritarianism. Political Behavior, 1-24.

Enos, R. D., (2014). Causal effect of intergroup contact on exclusionary attitudes. *Proceedings of the National Academy of Sciences*, *111*(10), 3699-3704.

Evans, G., Heath, A.F., & Lalljee, M., (1996). Measuring left right and libertarian-authoritarian values in the British electorate. *British Journal of Sociology, 47*, 93-112.

Evans, G., Menon, A., (2017) *Brexit and British Politics.* Polity Press, p.19.

F

Facchini, G., Margalit, Y., Nakata, H., (2016) Countering public opposition to immigration: The impact of information campaigns, *CEPR*, Discussion paper 11709.

Fagan, M., Huang, C., (2020) Many globally are as concerned about climate change as about the spread of infectious diseases. Pew Research Center. https://www.pewresearch.org/. (Accessed September 2021).

Farrell, J., & Goldsmith, P., (2017). *How to lose a referendum: the definitive story of why the UK voted for Brexit* Jason Farrell and Paul Goldsmith. Biteback Publishing.

Faulkner, S., Guy, H., & Vis, F., (2021). Right-wing populism, visual disinformation, and Brexit: From the UKIP 'Breaking Point' poster to the aftermath of the London Westminster bridge attack. In *The Routledge Companion to Media Disinformation and Populism* (pp. 198-208). Routledge.

Federico, C. M., Weber, C. R., Ergun, D., & Hunt, C., (2013). Mapping the connections between politics and morality: The multiple sociopolitical orientations involved in moral intuition. *Political Psychology*, 34(4), 589-610.

Feinberg, M., Willer, R., (2011) Apocalypse Soon?: Dire messages reduce belief in global warming by contradicting just-world beliefs. *Psychol Sci* 22(1):34–38. https://doi.org/10.1177/0956797610391911

Feinberg, M., Willer, R., (2013) The moral roots of environmental attitudes*. Psychol Sci.* 24(1):56-62. doi: 10.1177/0956797612449177. Epub 2012.

Feinberg, M., Willer, R., (2015). From Gulf to Bridge. *Personality & Social Psychology Bulletin*, 41(12), 1665–1681. https://doi.org/10.1177/0146167215607842.

Feinberg, M., Willer, R., (2019). Moral reframing: A technique for effective and persuasive communication across political divides. *Social and Personality Psychology Compass, 13*.

Feldman, S., Stenner, K., (1997). Perceived Threat and Authoritarianism. *Political Psychology*, *18*(4), 741–770. http://www.jstor.org/stable/3792208.

Feldman, S., Stenner, K., (1997). Threat, authoritarianism, and selective exposure to information. *Journal of Applied Social Psychology*, 27(21), 1899-1913. https://doi.org/10.1111/j.1559-1816.1997.tb01629.x

Feldman, S., (2003) Enforcing social conformity: A theory of authoritarianism. Political psychology, 24(1), 41-74.

Fieldhouse, E., Green, J., Evans, G., Mellon, J., Prosser, C., Bailey, J., de Geus, R., Schmitt, H., van der Eijk, C., (2021) *British Election Study Internet Panel Waves 1-21.* DOI 10.5255/UKDA-SN-8810-1.

Fieldhouse, E., Green, J., Evans, G., Schmitt, H., van der Eijk, C., Mellon, J., Prosser, C., (2019) *British Election Study Internet Panel Wave 15.* DOI: 10.5255/UKDA-SN-8810-1.

Fisher, S., Renwick, A., (2018) The UK's referendum on EU membership of June 2016: how expectations of Brexit's impact affected the outcome. *Acta Polit* 2018(53):590–611. https://doi.org/10.1057/s41269-018-0111-3.

Frenkel-Brunswik, E., (1948). Tolerance toward ambiguity as a personality variable [Abstract]. *American Psychologist*, 3, 268.

Fromm, E., (1941). *Escape from freedom*. New York: Avon.

Fukuyama, F., (2022). *Liberalism and its Discontents*. Profile Books.

Funk, C. L., Smith, K. B., Alford, J. R., Hibbing, M. V., Eaton, N. R., Krueger, R. F., ... & Hibbing, J. R., (2013). Genetic and environmental transmission of political orientations. *Political Psychology*, *34*(6), 805-819.

Funke, F., (2005). The Dimensionality of Right-Wing Authoritarianism: Lessons from the Dilemma between Theory and Measurement. *Political Psychology*, 26(2), 195–218. https://doi.org/10.1111/j.1467-9221.2005.00415.x.

Furnham, A., Boo, H., (2011). A Literature Review of the Anchoring Effect. *The Journal of Socio-Economics.* 40. 35-42. 10.1016/j.socec.2010.10.008.

G

Gallego, A., Pardos-Prado, S., (2013) The Big Five Personality Traits and Attitudes towards Immigrants *Journal of Ethnic and Migration Studies* Volume 40, 2014 – Issue 1.

Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., … Yamaguchi, S., (2011). Differences Between Tight and Loose Cultures: A 33-Nation Study. *Science (American Association for the Advancement of Science)*, *332*(6033), 1100–1104. https://doi.org/10.1126/science.1197754.

Gelfand, M., (2019) Tight and Loose Cultures: A Conversation with Michele Gelfand *Behavioral Scientist* website (Accessed Feb 2023).

Gerber, A. S., & Rogers, T., (2009). Descriptive Social Norms and Motivation to Vote: Everybody's Voting and so Should You. *The Journal of Politics*, *71*(1), 178–191. https://doi.org/10.1017/S0022381608090117.

Gerber, A., Huber, G., Doherty, D., Dowling, C., & Ha, S., (2010). Personality and Political Attitudes: Relationships across Issue Domains and Political Contexts. *American Political Science Review* 104(1), 111-133. http://www.jstor.org/stable/27798542.

Gibbon, G., (2017). *Breaking Point*. London: Haus Publishing.

Gibney, E., (2018) The scant science behind Cambridge Analytica's controversial marketing techniques: nature peers into the evidence for 'psychographic targeting'. *Nature*. News explainer. www.nature.com.

Glendinning, L., (2018) Exposing Cambridge Analytica: 'It's been exhausting, exhilarating, and slightly terrifying'. Interview with Observer reporter Carole Cadwalladr, published in *The Guardian* on 29 Sept 2018.

Goldberg, M.H., van der Linden, S., Maibach, E., Leiserowitz, A., (2019) Discussing global warming leads to greater acceptance of climate science. *Proc Natl Acad Sci* 116(30):14804–14805. https://doi.org/10. 1073/pnas.1906589116.

Goldberg, M.H., Gustafson, A., Rosenthal, S.A., Leiserowitz, A., (2021) Shifting Republican views on climate change through targeted advertising. *Nature Climate Change* 1-5.

Gordon, P. E., (2019) Introduction to *The Authoritarian Personality,* Adorno et al. (1950), Verso. First published by Harper & Row, Inc.

Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr., (2003). A Very Brief Measure of the Big Five Personality Domains. *Journal of Research in Personality*, 37, 504-528.

Graham, J., Haidt, J., Nosek B., (2008) *The Moral Foundations Questionnaire* (MFQ-30, July 2008), www.moralfoundations.org. (Accessed September 2018).

Graham, J., Haidt, J., Nosek, B.A., (2009) Liberals and conservatives rely on different sets of moral foundations. *J Pers Soc Psychol* 96(5):1029–1046. https://doi.org/10.1037/a0015141.

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H., (2011). Mapping the Moral Domain. *Journal of Personality and Social Psychology*, *101*(2), 366–385. https://doi.org/10.1037/a0021847.

Graham, J., Haidt, J., Koleva, S., Motyl, M., Iyer, R., Wojcik, S. P., & Ditto, P. H., (2013). Moral foundations theory: The pragmatic validity of moral pluralism. In P. Devine & A. Plant (Eds.), *Advances in experimental social psychology* (Vol. 47, pp. 55-130). Academic Press.

Green, E. G., & Staerklé, C., (2013). *Migration and multiculturalism.*

Grigorieff, A., Roth, C., Ubfal, D., (2020) Does Information Change Attitudes Toward Immigrants? *Demography*, 57 (3) pp. 1117-1143.

Guimond, S., Dambrun, M., Michinov, N., & Duarte, S., (2003). Does Social Dominance Generate Prejudice? Integrating Individual and Contextual Determinants of Intergroup Cognitions. *Journal of Personality and Social Psychology*, *84*(4), 697–721. https://doi.org/10.1037/0022-3514.84.4.697.

H

Haidt, J., (2013 edition) *The Righteous Mind: Why Good People are Divided by Politics and Religion*, Vintage. p.277.

Halpern, D., (2009) *The Hidden Wealth of Nations* Polity.

Halpern, D., (2015) *Inside the Nudge Unit*. WH Allen. p.308, p346.

Hameiri, B., Moore-Berg, S.L., (2022) Intervention Tournaments: An Overview of Concept, Design, and Implementation. *Perspect Psychol Sci*. 2022 May 17:17456916211058090. doi: 10.1177/17456916211058090. Epub ahead of print. PMID: 35580273.

Hanretty, C., (2017) Areal interpolation and the UK's referendum on EU membership, *Journal of Elections, Public Opinion and Parties*, 27:4, 466-483, DOI: 10.1080/17457289.2017.1287081.

Harper C. A., Rhodes D., (2021). Reanalysing the factor structure of the Moral Foundations Questionnaire. *British Journal of Social Psychology.* Advance online publication. https://doi.org/10.1111/bjso.12452.

Haynes, L., Service, O., Goldacre, B., Torgerson, D., (2012) *Test, Learn, Adapt: Developing Public Policy with Randomised Controlled Trials* Cabinet Office and Behavioural Insights Team.

Henrich, J., Heine, S., Norenzayan, A., (2010) Most people are not WEIRD. *Nature* 466, 29. https://doi.org/10.1038/466029a

Higgins, E. T., (1997). Beyond pleasure and pain. *American Psychologist*, 52, 1280–1300.

Higgins, E. T., (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology*, 30, 1–45.

Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., ... & Stewart, A. L., (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO_7 scale. *Journal of personality and social psychology*, 109(6), 1003.

Hobbes, T., (1651) *Leviathan, or The Matter, Forme, and Power of a Commonwealth Ecclesiasticall and Civil*. London: Andrew Crooke, 1651. p.186.

Hodson, G., Costello, K., (2007). Interpersonal Disgust, Ideological Orientations, and Dehumanization as Predictors of Intergroup Attitudes. *Psychological Science*, 18(8), 691–698. https://doi.org/10.1111/j.1467-9280.2007.01962.x.

Holm, S., (1979) A simple sequentially rejective multiple test procedure. *Scand J Stat* 6(2):65–70.

Homans, G. C., (1961). The humanities and the social sciences. *American Behavioral Scientist*, *4*(8), 3-6.

Home Office, (2018) *European Economic Area nationals: qualified persons* 2 November 2018 www.gov.uk.

Hopkins, K., (2015) Rescue boats? I'd use gunships to stop migrants, 17 April 2015 *The Sun.*

House of Lords Science and Technology Select Committee, (2011) *Behaviour Change Report* www.parliament.uk pp. 8-12.

Hu, L.-t., & Bentler, P. M., (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1–55. https://doi.org/10.1080/10705519909540118.

Huddy, L., Sears, D.O. & Levy, Jack S., (2013). *The Oxford handbook of political psychology.* (Second edition / edited by Leonie Huddy, David O. Sears and Jack S. Levy.).

I

Inbar, Y., & Pizarro, D. A., (2016). Pathogens and politics: current research and new questions. *Social and Personality Psychology Compass*, *10*(6), 365-374.

International Organisation on Migration, (2019) *Global Migration Trends.*

Ionesco, D., (2019) (Head of the Migration, Environment and Climate Change Division at the UN International Organization for Migration). Interview entitled 'Migration and the climate crisis: the UN's search for solutions', *UN News website*, 31 July 2019 (Accessed 16 October 2019).

Iyengar, S., Sood, G., Lelkes, Y., (2012) Affect, Not Ideology: A Social Identity Perspective on Polarization, *Public Opinion Quarterly,* Volume 76, Issue 3, Fall 2012, Pages 405–431, https://doi-org.ezp.lib.cam.ac.uk/10.1093/poq/nfs038

Iyer, R., Koleva, S., Graham, J., Ditto, P., Haidt, J., (2012) Understanding Libertarian Morality: The Psychological Dispositions of Self-Identified Libertarians, *PLOS ONE.*

J

Jaensch, E. R., (1938). *Der Gegentypus*. Leipzig: J.A. Barth.

John, O. P., Srivastava, S., (1999). The Big Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (pp. 102-138). New York, NY: Guilford.

John, P., Smith, G., Stoker, G., (2009) Nudge, Think: Two Strategies for Changing Civic Behaviour. *Political Quarterly* 80(3), 361–370.

Johnson, B., (2016) The only way to take back control of immigration is to Vote Leave on 23 June. Statement on Vote Leave website*, published 2016* (Accessed November 2022).

Jones, D. N., & Figueredo, A. J., (2013). The core of darkness: Uncovering the heart of the Dark Triad. *European Journal of Personality,* 27(6), 521-531.

Jost, J., Glaser, J., Kruglanski, A, Sulloway, F., (2003). Political conservatism as motivated social cognition. *Psychological Bulletin, 129(3), 339-375.*

Jost, J. T., (2006). The end of the end of ideology. *American Psychologist*, 61(7), 651–670. https://doi-org.ezp.lib.cam.ac.uk/10.1037/0003-066X.61.7.651

Jost, J. T., (2021) *Left and Right: The Psychological Significance of a Political Distinction.* Oxford University Press.

K

Kahneman, D., Tversky, A., (1979). Prospect Theory: An Analysis of Decision under Risk *Econometrica* 47 (4): 263–291 https://doi.org/10.2307/1914185.

Kahneman, D., Klein, G., (2009). Conditions for intuitive expertise: A failure to disagree. *American Psychologist* 64(6), 515-526.

Kahneman, D., (2011). *Thinking, fast and slow*. New York: Farrar, Straus and Giroux.

Kandler, C., Bell, E., & Riemann, R., (2016). The structure and sources of right–wing authoritarianism and social dominance orientation. *European Journal of Personality*, 30(4), 406-420.

Kaufmann, E., (2016) It's NOT the economy, stupid: Brexit as a story of personal values, *British Politics and Policy blog*, LSE, 7 July 2016.

Kaufmann, E., (2019). Can Narratives of White Identity Reduce Opposition to Immigration and Support for Hard Brexit? A Survey Experiment. *Political Studies*, *67*(1), 31–46 (published online 2017).

Kim, I., Hammond, M.D., & Milfont, T.L., (2021) Do past-focused environmental messages promote pro-environmentalism to conservatives? A pre-registered replication. *J Environ Psychol*, 73. https://doi.org/10. 1016/j.jenvp.2020.101547

Koleva, S.P., Graham, J., Iyer, R., Ditto, P.H., Haidt, J., (2012) Tracing the threads: How five moral concerns (especially Purity) help explain culture war attitudes. *Journal of Research in Personality, 46*(2), 184-194. https://doi.org/10.1016/j.jrp.2012.01.006.

Kugler, M., Jost, J. T., Noorbaloochi, S., (2014). Another Look at Moral Foundations Theory: Do Authoritarianism and Social Dominance Orientation Explain Liberal-Conservative Differences in "Moral" Intuitions? *Social Justice Research*, 27(4), 413–431. https://doi.org/10.1007/s11211-014-0223-5

L

Lakoff, G., (2004). *Don't think of an elephant! Know your values and frame the debate: The essential guide for progressives.* White River Junction, VT: Chelsea Green.lao

Lakoff, G., Ferguson, S., (2006). The Framing of Immigration.

LeDuc, L., (2003) *The politics of direct democracy: referendums in global perspective.* University of Toronto Press, Toronto.

Lee, K., Ashton, M. C., Ogunfowora, B., Bourdage, J. S., & Shin, K. H., (2010). The personality bases of socio-political attitudes: The role of Honesty–Humility and Openness to Experience. *Journal of Research in Personality*, 44(1), 115-119.

Levy, S. R., Dweck, C. S., (1999). The Impact of Children's Static versus Dynamic Conceptions of People on Stereotype Formation. *Child Development*, 70(5), 1163–1180.

Levy, S. R., Plaks, J. E., Hong, Y., Chiu, C., Dweck, C. S., (2001). Static Versus Dynamic Theories and the Perception of Groups: Different Routes to Different Destinations. *Personality and Social Psychology Review*, 5(2), 156–168. https://doi.org/10.1207/S15327957PSPR0502_6.

Lewin, K., (1943). Psychology and the process of group living. *Journal of Social Psychology*, 17, 113–131. Reprinted in *The complete social scientist: A Kurt Lewin reader*, (Gold, Martin, Ed) (1999) (pp. 333–345).

Lewis, G.B., (2009), Does Believing Homosexuality Is Innate Increase Support for Gay Rights?. *Policy Studies Journal*, 37: 669-693. https://doi.org/10.1111/j.1541-0072.2009.00330.x.

Lewis, M., (2017). *The undoing project : a friendship that changed the world / Michael Lewis.*

Li, N., Su, L.Y.F., (2018) Message framing and climate change communication: A meta-analytical review. *Journal of Applied Communications* 102(3):1c–1c.

Lidington, D., (2021) Brexit Witness Archive – David Lidington. *UK in a changing Europe*. Retrieved April 12, 2023, from www.ukandeu.ac.uk (Accessed February 2023).

Lipset, S. M., (1950). Book review: The authoritarian personality. *American Sociological Review*, 15(6), 755-759. https://doi.org/10.2307/2086964.

Lodge, M., Taber, C. S., (2013). *The rationalizing voter*. Cambridge University Press.

Lowenthal, L., Guterman, N., (1949, reprinted 2021). *Prophets of deceit: A study of the techniques of the American agitator*. Verso Books.

M

Maibach, E.W., Nisbet, M., Baldwin, P., Akerlof, K., Diao, G., (2010) Reframing climate change as a public health issue: an exploratory study of public reactions. *BMC Public Health* 10(1):299. https://doi.org/10.1186/ 1471-2458-10-299.

Maitner, Smith, Mackie, (2017) *The Cambridge Handbook of the Psychology of Prejudice* (p. 8). Cambridge University Press. Kindle Edition. Pages 264-277, ISSN 0167-4870, https://doi.org/10.1016/j.joep.2011.10.009.

Mangan, L., (2021) Four Hours at the Capitol review – a chilling look at the day the far right 'fought like hell' , Television, *The Guardian*, 20 October 2021.

Maslow, A. H., (1943). The Authoritarian Character Structure. *The Journal of Social Psychology*, *18*(2), 401–411. https://doi.org/10.1080/00224545.1943.9918794.

Matz. S.C., Kosinski, M., Nave, G., Stillwell, D.J., (2017) Psychological targeting in digital mass persuasion *Proceedings of the National Academy of Sciences* Nov 2017, 114 (48) 12714-12719; DOI: 10.1073/pnas.1710966114.

McCourt, K., Bouchard Jr, T. J., Lykken, D. T., Tellegen, A., Keyes, M., (1999). Authoritarianism revisited: Genetic and environmental influences examined in twins reared apart and together. *Personality and Individual Differences*, *27*(5), 985-1014.

McCrae, R. R., Costa, P. T., Jr., (1996). Toward a new generation of personality theories: Theoretical contexts for the five-factor model. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives* (pp. 51-87). New York, NY, US: Guilford Press.

McFarland, S., Ageyev, V. S., Abalakina-Paap, M. A. (2020). Authoritarianism in cross-cultural perspective: A Russian validation. *Personality and Individual Differences*, 157, 109822. https://doi.org/10.1016/j.paid.2020.109822.

Menon, A., Salter, J.P., (2016) Brexit: initial reflections, *International Affairs*, Volume 92, Issue 6, November 2016, Pages 1297–1318, https://doi.org/10.1111/1468-2346.12745.

Migration Advisory Committee, (2018), *EEA migration in the UK: Final report* 18 September 2018 www.gov.uk (Accessed January 2018).

Migration Observatory, (2016) A Decade of Immigration in the British Press, https://migrationobservatory.ox.ac.uk/ (Accessed January 2018).

Milgram, S., (1975). *Obedience to authority : an experimental view*. New York ; London: Harper & Row.

Mill, J.S., (1844) On The Definition of Political Economy; And On The Method Of Investigation Proper To It. Essay V. In *Essays On Some Unsettled Questions Of Political Economy*. Kindle Edition.

Mill, J.S., (1859) *On Liberty* full text from the Project Gutenberg EBook (Accessed 23 October 2018).

Mill, J.S., (1861, reprint 2010). The criterion of a good form of government. In *Considerations on Representative Government* (Cambridge Library Collection – British and

Irish History, 19th Century, pp. 17-44). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511783128.003.

Millen, C., McElroy, M., Aten, S.E., Davis, J.D., Van Tongeren, E.B., Hook, D., Davis, J.N., (2019) We Welcome Refugees? Understanding the Relationship between Religious Orientation, Religious Commitment, Personality, and Prejudicial Attitudes toward Syrian Refugees, *The International Journal for the Psychology of Religion*, 29:2, 94-107, DOI: 10.1080/10508619.2019.1586067.

Miller, D. T., (2021). Characterizing QAnon: Analysis of YouTube comments presents new conclusions about a popular conservative conspiracy. *First Monday*, *26*(2). https://doi.org/10.5210/fm.v26i2.10168

Mondak, J. J., Halperin, K. D., (2008). A framework for the study of personality and political behaviour. *British Journal of Political Science*, 38(02), 335-362.

Mondak, J. J., (2010). *Personality and the Foundations of Political Behavior*. New York: Cambridge University Press. https://doi.org/10.1017/CBO9780511761515.

Moore, M., Ramsay, G., (2017) UK media coverage of the 2016 EU Referendum campaign Website of the Centre for the Study of Media, *Communication and Power*, Kings College London, May 2017. (pp. 8-9).

Mutz, D., Sniderman, P., Brody. R., (1996) *Political Persuasion and Attitude Change* University of Michigan Press. p.1-2.

Myers, T.A., Nisbet, M.C., Maibach. E.W., Leiserowitz, A.A. (2012) A public health frame arouses hopeful emotions about climate change. *Clim Change* 113(3):1105–1112. https://doi.org/10.1007/ s10584-012-0513-6

N

Napier, J. L., Huang, J., Vonasch, A. J., & Bargh, J. A., (2018). Superheroes for change: Physical safety promotes socially (but not economically) progressive attitudes among conservatives. *European Journal of Social Psychology*, *48*(2), 187-195.

Nisbet, M.C., (2009) Communicating climate change: why frames matter for public engagement. *Environment: Science and Policy for Sustainable Development* 51(2):12–23. https://doi.org/10.3200/ENVT. 51.2.12-23.

Nix, A., (2016) The Power of Big Data and Psychographics, presentation at the 2016 Concordia Annual Summit. @ConcordiaSummit YouTube (Accessed November 2022).

O

Office for Budgetary Responsibility, (2018) *Fiscal sustainability report July 2018* www.gov.uk (Accessed July 2022).

Office for Budgetary Responsibility, (2023) How are our Brexit forecasting assumptions performing? *Economic and fiscal outlook – March 2023* Box 2.4, p.46.

Office of National Statistics, (2016) *Migration Statistics Quarterly Report*: *May 2016.* www.ons.gov.uk (accessed February 2023).

Office of National Statistics, (2019) UK and non-UK people in the labour market: August 2019 www.ons.gov.uk (Accessed 13 September 2019).

Office of National Statistics, (2019) International migration and the healthcare workforce www.ons.gov.uk (Accessed 12 April 2023).

Ogilvy, Nudgestock 2017, (2017) Dominic Cummings: Why Leave won the Referendum YouTube www.youtube.com/watch?v=_Tc4bl1yZLw (Accessed November 2022).

Oliver, C., (2016) *Unleashing Demons: The Inside Story of Brexit* Hodder & Stoughton pp.324-389.

O'Neill, S., Nicholson-Cole, S., (2009) Fear won't do it: promoting positive engagement with climate change through visual and iconic representations. *Sci Commun* 30(3):355–379. https://doi.org/10.1177/10755 47008329201.

O'Rourke, K. H., (2019). *A short history of Brexit,* Pelican.

Osborne, D., Sibley, C. G., (Eds.). (2022). *The Cambridge Handbook of Political Psychology.* Cambridge University Press.

Oyamot, C.M., Fisher, E.L., Deason, G., Borgida, E., (2012) Attitudes toward immigrants: The interactive role of the authoritarian predisposition, social norms, and humanitarian values, *Journal of Experimental Social Psychology*, Volume 48, Issue 1, 2012, Pages 97-105, ISSN 0022-1031, https://doi.org/10.1016/j.jesp.2011.08.003.

P

Paluck, E. L., (2009). Reducing intergroup prejudice and conflict using the media: A field experiment in Rwanda. *Journal of Personality and Social Psychology*, 96(3), 574–587. https://doi.org/10.1037/a0011989.

Paluck, E.L., Green, D.P., (2009) Prejudice Reduction: What Works? A Review and Assessment of Research and Practice *Annual Review of Psychology* 2009 60:1, 339-367.

Paluck, E. L., Porat, R., Clark, C. S., Green, D. P., (2021). Prejudice reduction: Progress and challenges. *Annual review of psychology*, 72, 533-560.

Paunonen, S.V., Ashton, M., (2001) *Big five factors and facets and the prediction of behavior.*

Peacham, H., (1593). *The garden of eloquence, 1593*: A facsimile reproduction. Gainesville, Fla: Scholars' Facsimilies & Reprints 1954.

Penner, L., Cohen, S., Stearns, N.C., (1978) *Social Psychology – A Contemporary Approach* Oxford University Press.

Peresman, A., Carroll, R., & Bäck, H., (2021). Authoritarianism and Immigration Attitudes in the UK. *Political Studies*, *0*(0). https://doi.org/10.1177/00323217211032438.

Pérez, E., Hetherington, M., (2014). Authoritarianism in Black and White: Testing the Cross-Racial Validity of the Child Rearing Scale. *Political Analysis*, 22(3), 398-412. doi:10.1093/pan/mpu00.

Pettigrew, T. F., Tropp, L. R., (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90(5), 751-783.

Portolano, M., Evans, E., (2005) The Experimental Psychology of Attitude Change and the Tradition of Classical Rhetoric. *The American Journal of Psychology* 1 April 2005; 118 (1): 123–140. doi: https://doi.org/10.2307/30039047. (p.123).

Pratto, F., Sidanius, J., Stallworth, L.M., Malle, B.F., (1994). Social dominance orientation: A personality variable predicting social and political attitudes. *Journal of Personality and Social Psychology* 67, no. 4: 741-763. https://doi.org/10.1037/0022-3514.67.4.741.

Pratto, F., Sidanius, J., (2012). *Social dominance: an intergroup theory of social hierarchy and oppression.* Cambridge University Press.

Pratto, F., Çidam, A., Stewart, A. L., Zeineddine, F. B., Aranda, M., Aiello, A., Chryssochoou, X., Cichocka, A., Cohrs, J. C., Durrheim, K., Eicher, V., Foels, R., Górska, P., Lee, I.-C., Licata, L., Liu, J. H., Li, L., Meyer, I., Morselli, D., … Henkel, K. E., (2013). Social Dominance in Context and in Individuals: Contextual Moderation of Robust Effects of Social Dominance Orientation in 15 Languages and 20 Countries. Social Psychological and Personality Science, 4(5), 587–599. https://doi.org/10.1177/1948550612473663.

Putnam, R. D., (2000). *Bowling alone: The collapse and revival of American community.* Simon and Schuster.

R

Raihani, N. J., Bell, V., (2019). An evolutionary perspective on paranoia. *Nature human behaviour*, *3*(2), 114-121.

Rammstedt, B., John, O.P., (2007). Measuring personality in one minute or less: A 10-item short version of the Big Five Inventory in English and German. *Journal of Research in Personality*, 41, 203–212.

Renstrom, E.A., Back, H., Carroll, R., (2022) Protecting the Ingroup? Authoritarianism, Immigration Attitudes and Affective Polarization. *Polit. Sci.*, 14 July 2022. Sec. Political Participation https://doi.org/10.3389/fpos.2022.919236.

Renwick, A., Allan, S., Jennings, W., McKee, R., Russell, M., Smith, G., (2017), *The Report of the Citizens' Assembly on Brexit,* www.ucl.ac.uk (Accessed: 2 October 2019).

Rhodes, N., Shulman, H. C., & McClaran, N., (2020). Changing norms: A meta-analytic integration of research on social norms appeals. *Human Communication Research*, 46(2-3), 161-191.

Roccato, M., Ricolfi, L., (2005). On the Correlation Between Right-Wing Authoritarianism and Social Dominance Orientation. *Basic and Applied Social Psychology*, 27(3), 187–200. https://doi.org/10.1207/s15324834basp2703_1.

Rokeach, M., (1956). Political and religious dogmatism: An alternative to the authoritarian personality. *Psychological Monographs: General and Applied,* 70(18), 1–43. https://doi.org/10.1037/h0093727.

Rokeach, M., (1973). *The nature of human values*. New York: Free Press; 1973.

Rolfe, H., (2018) The power of negative thinking: why perceptions of immigration are resistant to facts *LSE blog* 12 October 2018 (Accessed February 2023).

Roth, A., (2018) Putin tells May to 'fulfil will of people' on Brexit, *Guardian*, 20 December 2018.

Rousseau, J. J., (1762). *The social contract or principles of political right*. (G. D. H. Cole, Trans.).

Rutter, J., Carter, C., (2018) *National Conversation on Immigration: Final report* www.nationalconversation.uk (Accessed 13 September 2019).

S

Saad, L., (2018) More Say 'Nature' Than 'Nurture' Explains Sexual Orientation Gallup website 24 May 2018 (Accessed 12 April 2023).

Sachdeva, S., Boghrati, R., Dehghani, M., (2019) Testing the influence of purity-based interventions on pro-environmental behavior. *Sustainability* 11(6):1811. https://doi.org/10.3390/su11061811.

Samuelson, W., Zeckhauser, R.J., (1988) Status quo bias in decision-making*. J Risk Uncertain* 1(1):7–59

Sanders, M., Chonaire, A.N., Carr, D., Heal, J., Anik, L., (2017) Increasing social trust with an ice-breaking exercise – an RCT carried out with NCS participants, www.bi.team (Accessed 2 October 2018).

Scannell, L., Giford, R., (2013) Personally relevant climate change: the role of place attachment and local versus global message framing in engagement. *Environ Behav* 45(1):60–85. https://doi.org/10.1177/ 0013916511421196.

Schafer, L.M., Oehl, B., Bernauer, T., (2021) Are policymakers responsive to public demand in climate politics? *J Public Policy*, 1–29. https://doi.org/10.1017/S0143814X21000088 Climatic Change (2022) 170: 24 Page 7 of 8 24 1 3.

Schumacker, R.E., & Lomax, R.G., (2010). A Beginner's Guide to Structural Equation Modeling: Fourth Edition (3rd ed.). Routledge. https://doi.org/10.4324/9780203851319.

Schwartz, S. H., (1992). Universals in the content and structure of values. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 25, pp. 1– 65). New York, NY: Academic Press.

Schwartz, S. H., (2007). Universalism values and the inclusiveness of our moral universe. *Journal of Cross-Cultural Psychology*, 38, 711–728. doi:10.1177/0022022107308992.

Schwartz, S. H., (2012). An Overview of the Schwartz Theory of Basic Values. *Online Readings in Psychology and Culture*, 2, 1. (Online) (DOI): http://dx.doi.org/10.9707/2307-0919.1116.

Scott, R., (2022). Does university make you more liberal? Estimating the within-individual effects of higher education on political values. *Electoral Studies*, *77*, 102471.

Shipman, T., (2016). *All out war: the full story of how Brexit sank Britain's political class*. William Collins.

Sibley, C., Duckitt, J., (2008). Personality and Prejudice: A Meta-Analysis and Theoretical Review. *Personality and social psychology review* : an official journal of the Society for Personality and Social Psychology, Inc. 12. 248-79. 10.1177/1088868308319226.

Sibley, C. G., Duckitt, J., (2009). A Dual-Process Model of Ideology, Politics, and Prejudice: Commentary and Response to Questions. Psychological Inquiry, 20(2/3), 168–171.

Sidanius, J., & Pratto, F., (1993). *The inevitability of oppression and the dynamics of social dominance.*

Sidanius, J., Pratto, F., & Bobo, L., (1996). Racism, conservatism, affirmative action, and intellectual sophistication: A matter of principled conservatism or group dominance?. Journal of personality and social psychology, 70(3), 476.

Simon, H. A., (1957). *Models of man: social and rational; mathematical essays on rational human behavior in society setting*. New York: Wiley.

Simpson, K., Startin, N., (2023). Tabloid tales: How the British tabloid press shaped the Brexit vote. *JCMS: Journal of Common Market Studies*, 61(2), 302-322.

Sinn, J.S., Hayes, M.W., (2017) Replacing the Moral Foundations: An Evolutionary-Coalitional Theory of Liberal-Conservative Differences. *Political Psychology*, 38: 1043-1064. Doi:10.1111/pops.12361.

Slovic, P., (2007) If I look at the mass I will never act: Psychic numbing and genocide *Judgment and Decision Making*, vol. 2, no. 2, April 2007, pp.79-95.

Smith, A., Heilbroner, R. L., & Malone, L. J., (1987). *The essential Adam Smith. New York:* W.W. Norton.

Smith, M., (2019). International poll: most expect to feel impact of climate change, many think it will make us extinct. YouGov.co.uk. (Accessed September 2021).

Sorens, J., (2013) *Civil Libertarianism-Communitarianism: A State Policy Ideology Dimension*. http://dx.doi.org/10.2139/ssrn.2298767.

Soto, C. J., John, O. P., (2009). Ten facet scales for the Big Five Inventory: Convergence with NEO PI-R facets, self-peer agreement, and discriminant validity. *Journal of research in personality*, *43*(1), 84-90.

Stanley, S., Wilson, M.S., (2019) Meta-analysing the association between social dominance orientation, authoritarianism, and attitudes on the environment and climate change, *Journal of Environmental Psychology,* Volume 61, 2019, Pages 46-56, ISSN 0272-4944. https://doi.org/10.1016/j.jenvp.2018.12.002.

Stenner, K., (2005, 2012) *The Authoritarian Dynamic* Cambridge University Press.

Stenner, K., (2009). Three Kinds of "Conservatism". *Psychological Inquiry, 20*(2/3), 142-159. Retrieved March 23, 2021, from http://www.jstor.org/stable/40646411.

Stenner, K., Haidt, J., (2018) *Can it happen here? Authoritarianism in America* edited by Sunstein, C. Dey Street Books.

Stenner, K., (2020) Authoritarianism, *Hope not Hate website*, 1 Nov 2020 (Accessed 12 April 2023).

Stephan, W. G., & Stephan, C. W., (2000). An integrated threat theory of prejudice. In S. Oskamp (Ed.), *"The Claremont Symposium on Applied Social Psychology"* Reducing prejudice and discrimination (p. 23–45). Lawrence Erlbaum Associates Publishers.

Stets, J. E., & Burke, P. J., (2000). Identity Theory and Social Identity Theory. *Social Psychology Quarterly*, 63(3), 224–237. https://doi.org/10.2307/2695870

Suhler, C. L., & Churchland, P., (2011). Can innate, modular "foundations" explain morality? Challenges for Haidt's moral foundations theory. *Journal of cognitive neuroscience*, *23*(9), 2103-2116.

Sundquist, E. J., Miller M.C., (2009). King's Dream : The Legacy of Martin Luther King's I Have a Dream Speech, Yale University Press, 2009. ProQuest *Ebook Central.* pp.229-234.

Sunstein, C., (2006) Why it makes sense to tell Americans who they are, 6 August 2006, *Bloomberg View*. (Accessed September 2018).

Sunstein, C., (2018) *The Cost-Benefit Revolution* The MIT Press Ch.1.

Sunstein, C., (2019) *On Freedom*, Princeton University Press p.25.

Sunstein, C., (2019) *How Change Happens* The MIT Press.

Surridge, P., (2019) The left-right divide *Brexit and Public Opinion 2019*, The UK in a Changing Europe (with introduction by Menon, A.) p.6.

Surridge, P., (2021) Brexit, British politics and values, The UK in a Changing Europe website, published 30 Jan 2021 (Accessed February 2023).

Swales, K., (2016). *Understanding the Leave vote*. NatCen Social Research, 7.

T

Tajfel, H., Turner, J. C., (1979). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago, IL: Nelson-Hall.

Talay, L., De Coninck, D., (2020). Exploring the link between personality traits and European attitudes towards refugees. *International Journal of Intercultural Relations, 77*, 13-24.

Tappin, B. M., Berinsky, A. J., & Rand, D. G., (2023). Partisans' receptivity to persuasive messaging is undiminished by countervailing party leader cues. *Nature Human Behaviour*, 1-15.

Thaler, R., Sunstein, C., (2008) *Nudge: Improving decisions about health, wealth and happiness* Yale University Press. Republished by Penguin Books in 2009.

Thaler, R., Sunstein, C., Balz, J., Choice Architecture (December 10, 2014). *The Behavioral Foundations of Public Policy*, Ch. 25, Eldar Shafir, ed. (2012). Available at SSRN: https://ssrn.com/abstract=2536504 or http://dx.doi.org/10.2139/ssrn.2536504.

Thaler, R., (2017), Lecture accepting the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2017. www.nobelprize.org (Accessed 2 November 2019).

Thaler, R. H., & Sunstein, C. R., (2021). *Nudge: The final edition*. Yale University Press.

The Peoples' Climate Vote | United Nations Development Programme (2021) Retrieved September 6, 2021, from www.undp.org.

Thomsen, L., Green, E.G.T., Sidanius, J., (2008) We Will Hunt Them Down: How Social Dominance Orientation and Right-Wing Authoritarianism Fuel Ethnic Persecution of Immigrants in Fundamentally Different Ways. *Journal of Experimental Social Psychology* 44 (6): 1455–1464.

Titus, H. E., & Hollander, E. P., (1957). The California F scale in psychological research: 1950-1955. Psychological Bulletin, 54(1), 47–64. https://doi.org/10.1037/h0045591.

Trump, D. J. (2016) Statement Regarding British Referendum on EU membership, 24 June 2016, www.facebook.com/DonaldTrump/posts/10157213077740725 (Accessed February 2023).

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S., (1987). *Rediscovering the social group: A self-categorization theory.* Oxford: Blackwell.

Tversky, A., Kahneman, D., (1974). Judgment under Uncertainty: Heuristics and Biases. *Science (American Association for the Advancement of Science),* 185(4157), 1124–1131. https://doi.org/10.1126/science.185.4157.1124.

U

UN.org, (2021) Biodiversity commitment builds hope for 'Living in harmony with nature' news.un.org (Accessed February 2023).

UN.org, (2021) COP26 Day 13: An agreement to build on, UN.org website (Accessed February 2023).

V

van Boven, L., Ehret, P.J., Sherman. D.K., (2018) Psychological barriers to bipartisan public support for climate policy. *Perspect Psychol Sci* 13(4):492–507. https://doi.org/10.1177/1745691617748966.

van der Linden, S.L., Leiserowitz, A.A., Feinberg, G.D., Maibach, E.W., (2015a) The scientific consensus on climate change as a gateway belief: experimental evidence. *PLoS ONE* 10(2):e0118489. https://doi.org/ 10.1371/journal.pone.0118489.

van der Linden, S., Maibach, E., Leiserowitz, A., (2015b) Improving public engagement with climate change: five "best practice" insights from psychological science. *Perspectives on Psychological Science: A Journal of the Association for Psychological Science* 10(6):758–763. https://doi.org/10.1177/1745691615598516.

van der Linden, S., Leiserowitz, A., Rosenthal, S., & Maibach, E., (2017). Inoculating the Public Against Misinformation about Climate Change. *Global Challenges 1(2)*. doi: 10.1002/gch2.201600008.

van der Linden, S., Leiserowitz, A., Maibach, E., (2019) The gateway belief model: a large-scale replication. *J Environ Psychol* 62:49–58. https://doi.org/10.1016/j.jenvp.2019.01.009.

van de Vyver, J., Houston, D. M., Abrams, D., & Vasiljevic, M., (2016). Boosting belligerence: How the July 7, 2005, London bombings affected liberals' moral foundations and prejudice. *Psychological science*, *27*(2), 169-177.

van Hiel, A., Onraet, E., Bostyn, D. H., Stadeus, J., Haesevoets, T., Van Assche, J., Roets, A., (2020). A meta-analytic integration of research on the relationship between right-wing ideological attitudes and aggressive tendencies. *European Review of Social Psychology*, *31*(1), 183-221.

Verhulst, B., Eaves, L.J,. Hatemi, P.K., (2012) Correlation not causation: the relationship between personality traits and political ideologies. *Am J Pol Sci.* 2012;56(1):34-51. doi: 10.1111/j.1540-5907.2011.00568.x. PMID: 22400142; PMCID: PMC3809096.

W

Wedell, E., Bravo, A.J., (2022) Synergistic and additive effects of social dominance orientation and right-wing authoritarianism on attitudes toward socially stigmatized groups. *Curr Psychol* 41, 8499–8511. https://doi.org/10.1007/s12144-020-01245-7.

Wilson, M. S., (2003). Social dominance and ethical ideology: The end justifies the means?. *The Journal of Social Psychology,* 143(5), 549-558.

Wilson, M. S., Sibley, C. G., (2013). Social Dominance Orientation and Right-Wing Authoritarianism: Additive and Interactive Effects on Political Conservatism. *Political Psychology*, *34*(2), 277–284. http://www.jstor.org/stable/23481746.

Wolsko, C., Ariceaga, H., Seiden, J., (2016) Red, white, and blue enough to be green: effects of moral framing on climate change attitudes and conservation behaviors. *J Exp Soc Psychol* 65:7–19. https://doi.org/10. 1016/j.jesp.2016.02.005.

Wu, S.J., Paluck, E.L., (2020) Participatory practices at work change attitudes and behavior toward societal authority and justice. *Nat Commun* **11**, 2633 https://doi.org/10.1038/s41467-020-16383-6.

X

Xuchuan Lei, Jie Lu, (2017) Revisiting Political Wariness in China's Public Opinion Surveys: Experimental Evidence on Responses to Politically Sensitive Questions*, Journal of Contemporary China,* 26:104, 213-232, DOI: 10.1080/10670564.2016.1223104.

Y

YouGov, (2016) (the 'EU attitudes' question) Fieldwork 9 September 2016 via www.whatukthinks.org (Accessed 2 October 2019).

YouGov, (2016) (the 'non-EU attitudes' question) Fieldwork 31 August-9 September 2016 via www.whatukthinks.org (Accessed 2 October 2019).

YouGov, (2018) (the 'policy' question) Fieldwork 31 July to 7 August www.yougov.co.uk (Accessed 2 October 2019).

YouGov Trackers – Top Issues, (Accessed 10 October 2019).

YouGov, (2022) What are the main positive effects of immigration? (yougov.co.uk) (Accessed January 2023).

YouGov, (2023) Top Issues tracker www.YouGov.co.uk (Accessed 12 April 2023).

YouGov, (2023) Should women have the right to an abortion? (yougov.co.uk) (Accessed January 2023).

YouGov, (2023) More Americans support a national right to abortion than a national ban after 15 weeks of pregnancy (Accessed January 2023).

Z

Zakrisson, I., (2005) Construction of a short version of the right-wing authoritarianism (RWA) scale. *Personality and Individual Differences*, 2005, volume 39, pages 863-872.

Zhang, B., van der Linden, S., Mildenberger, M., Marlon, J.R., Howe, P.D., Leiserowitz, A., (2018) Experimental effects of climate messages vary geographically. *Nat Clim Chang* 8(5):370–374. https://doi.org/10. 1038/s41558-018-0122-0.

Zmigrod, L., Rentfrow, P., & Robbins, T., (2018). Cognitive underpinnings of nationalistic ideology in the context of Brexit.. *Proceedings of the National Academy of Sciences of the United States of America, 115* (19), E4532-4540. https://doi.org/10.1073/pnas.1708960115.

Zmigrod, L., Eisenberg, I.W., Bissett, P.G., Robbins, T.W., Poldrack, R.A., (2021) The cognitive and perceptual correlates of ideological attitudes: a data-driven approach *Phil. Trans. R. Soc.* B37620200424 http://doi.org/10.1098/rstb.2020.0424.

Appendix 1: Texts used in immigration framing pilot (Ch.3, part 2)

In the second pilot in Ch.3, a total of 20 treatment texts were tested.

Nine were taken forward to the main experiment. The remaining 11 are below.

The '*Common text'* is marked in grey.

1.1 Loyalty foundation

When you think about what matters most to you, how important do you think it is to appreciate what this county has achieved? Looking back over the years, from the Second World War onwards, one of this country's great strengths is that we can bring people together to work towards a common purpose.

Think then about those who have come to the UK from elsewhere in Europe. There are many examples of people who have worked side-by-side with their British colleagues for years. They share our memories of these decades – in some cases, they will have helped to shape them.

Take the NHS. One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. Whether it's on late night shifts, in the emergency ward, or with a waiting room full of patients, they have learned how to pull together as a team. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, they are filling gaps in care units, working in jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. As part of the UK's workforce, they have pulled their weight and have surely earned our loyalty.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has since set up her own firm. Working for well-known brands, she has developed a network of business relationships who know they can count on her when it matters.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She will always be part of that family's personal history; but she has also become a passionate supporter of the local football team.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. The family have become valued members of their village community.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. We shouldn't leave them feeling abandoned and betrayed by the people they have lived and worked with so closely. Surely this country is better than that.

What do you think?

1.2 Authority foundation

When you think about what matters most to you, do you find it frustrating when nobody appears to know what's going on and everyone is running around like headless chickens? Do you think that some semblance of order is what the Government ought to provide?

Think then about people who have come to the UK from elsewhere in Europe. There are many people who have spent years here in the UK, working legally and living by the rules, who are now stuck in limbo.

Take the NHS. One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. They are embedded in the NHS system at every level, doing their duty day-by-day, keeping things running smoothly despite continual crises over resources and staff. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, they are needed to meet the high standards you'd expect in this area, doing jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. They are now looking for guidance on what they are expected to do next; with their entire lives facing disruption.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has since set up her own firm. She ploughed through all the paperwork to do this, and has taken meticulous care to make sure that she sticks to the rulebook.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She helps to keep things on track, looking after medications and providing a daily routine.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They fitted straight in to life in their traditional village.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. They are ready to respect whatever decision gets taken, but the lack of certainty over the legal position is taking a huge toll on their lives.

What do you think?

1.3 Purity foundation

When you think about what matters most to you, how important do you think it is that we start paying attention to climate change, pollution and fighting disease? Do you think these are a greater long-term threat to our overall well-being than short-term political considerations?

Think then about people who have come to the UK from elsewhere in Europe. They include scientists and engineers who have come here to search for solutions to global challenges such as air pollution; plastics in our oceans; and cancer, heart disease and diabetes. These are issues that respect no borders and can affect all life on earth.

Take the NHS. One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. They are helping to find solutions to universal threats such as HIV/AIDS, measles and the growing resistance to antibiotics. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, these are the people who are making sure that our elderly live in safe and clean conditions, taking jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. They help to keep our economy healthy and growing.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has since set up her own firm. A strong environmentalist, she advises a company that produces science and environment books for schools.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. Sports-mad, she encourages the family to take exercise, stay fit and eat healthily.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They love to spend their spare time exploring the unspoiled countryside around their village – they even go around picking up litter in their spare time.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. We shouldn't be treating them in this inhumane way when they can help to make this country a better place.

What do you think?

1.4 Liberty foundation

When you think about what matters most to you, how important do you think it is that people should have a say in the decisions that affect them rather than just being told what to do. When it comes down to it, who knows more about what you think – you or the politicians?

Think then about people who have come to the UK from elsewhere in Europe. Many have chosen to come here, they have started work and they don't cause anyone any trouble. Until now, they have been able to do this without too much bureaucratic interference.

Take the NHS. One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. It's important that the health system can continue to hire such people without unnecessary friction. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, you'd want to sure that these people face the bare minimum of hassle before starting work. After all, these are jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. They should be allowed to just get on with their lives.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has since set up her own firm. She was attracted by the business-friendly environment, given that the burden of regulation here is comparatively light.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. When people are ready and willing to do this, why put extra barriers in their way?

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. Having moved here, they just want to be left in peace.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. Like the rest of us, they are being told to sit still and say nothing while decisions are taken over their heads by politicians who may or may not have their best interests at heart.

What do you think?

1.5 Big Five – Extraversion

When you think about what matters most to you, do you think it's important to make connections with other people? After all, humans are basically social creatures, and we gain so much from talking to others, from making friends and building relationships.

Think then about people who have come to the UK from elsewhere in Europe. They have been brave enough to come here, learn the language and meet new people.

Take the NHS. One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. They have to use all their social skills to get their patients to communicate what's really wrong with them. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, isolation is a growing problem. These people are cheering up the elderly in jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. But they have also forged strong bonds with people here.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and set up her own firm. She advises a well-known company that produces books for school, meeting many of her business contacts at networking events.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. With her bright and bubbly nature, they have all become very close.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. Her love of baking has made her very popular in her village.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. They may have to say goodbye to everyone they have met here. Is this the right way to treat people who have become our friends?

What do you think?

1.6 Big Five – Agreeableness

When you think about what matters most to you, do you think it's important that people should make the effort to get on? And do you find the current divisions in the country uncomfortable?

Think then about people who have come to the UK from elsewhere in Europe. They have been put in the most awkward situation, facing hostility from some people and acute embarrassment from others who can't provide a straight answer about their future.

Take the NHS. One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. Every day, they treat their patients with compassion and respect but the message they get once they head out the door is that they're not welcome here. This is despite official figures showing that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, the empathy and companionship they offer to elderly people is invaluable. They are taking up jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. And they are an agreeable lot.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and set up her own firm. She now cooperates with a well-known company that produces books for schools.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She is always ready to lend a hand and help out.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. Her family go out of their way to be thoughtful towards their village neighbours.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. They are wondering whether their affection for this country has been misplaced.

What do you think?

1.7 Big Five – Neuroticism

When you think about what matters most to you – perhaps it's your family, your job or your future – can you imagine how would you feel if this suddenly came under threat? Would you sit down calmly and work out what to do next, or would you be thrown into a panic?

Think then about people who have come to the UK from elsewhere in Europe. They are facing huge levels of uncertainty over their status here in this country. Right now, their jobs, their homes and their entire livelihoods are at risk.

Take the NHS. One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. The NHS is already over-stretched, and lives could be put in danger if these people upped and left. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, elderly people worry about who is going to look after them when they become frail and incapacitated. These people take up jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. What will happen to government spending if this money is no longer available?

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She advises a well-known company that produces books for school, but doesn't know if she will be allowed to work here in future.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She worries about what will happen to the child she looks after if she has to leave suddenly.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. She is concerned about whether she has made the right decision for her family coming here or whether they will be made to move in the middle of a school year.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. It's deeply upsetting to face an ongoing threat that could undermine your entire life. Should we be putting them through this?

What do you think?

1.8 New information

When you think about what matters most to you, how important do you think it is that people should have the right information before they take a decision? Do you think that you're the kind of person who bases their decisions on the evidence, even if that evidence may be new to them?

Think then about people who have come to the UK from elsewhere in Europe. They are here under the EU's freedom of movement rules, but did you know that free movement is only free for three months? Home Office guidance confirms that, after that, people are only entitled to stay if they have a job, a place to study or enough money to live off. Those who can prove they're job-seekers with a genuine chance of employment get an extra 90 days, but that's it.

Take the NHS. One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. They are entitled to work here as their qualifications are recognised everywhere in Europe. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. They meet the conditions now, but most would fall below any salary threshold the government might set in future. As Britain rapidly ages, they are working in jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. Those who aren't working and who can't support themselves don't have the right to stay indefinitely under existing EU rules.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has since set up her own firm. She advises a well-known company that produces books for schools and counts as a qualified person.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She is not sure whether those doing low-skilled, low-paid jobs will be allowed to stay in future.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. She is interested in how any new rules will apply to families.

At the moment they all have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK or whether they will be asked to leave. They feel that people here don't understand how free movement works, and they don't get why the government doesn't just enforce the rules that apply everywhere else in Europe.

What do you think?

1.9 Anger

When you think about what matters most to you, do you ever get angry? Do you find it frustrating when the government takes action without taking your views into consideration, ignoring your valid concerns?

Think then about the people who have come to the UK from elsewhere in Europe. They are being harried and harassed into taking long-term decisions about their future, with no one listening to what they have to say.

Take the NHS, one in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. They are entitled to feel put out when they don't know if they can keep their jobs. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, these people are being pushed around despite being in jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services. You would have thought this contribution would have been appreciated.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She advises a well-known company that produces books for school and is exasperated that she doesn't know what her future status will be.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She feels angry that the government doesn't appear to value workers like her.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. Her position is perhaps the most frustrating as her whole family's future is at stake.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. They have been put in an impossible position because of decisions taken by infuriating politicians who haven't listened to what they have to say.

What do you think?

1.10 Salience

When you think about what matters most to you, what comes to mind? Some people will think immediately of their families, others will think of their health, or their jobs. The point is that whatever you spend most time thinking about is what you're likely to see as most important.

Think then about the people who have come to the UK from elsewhere in Europe. You know the expression "out of sight, out of mind"? Unless you take the trouble to focus on their contribution, the good work these people do can easily slip under the radar.

Cast your mind back to the last time you or a loved one were in hospital. Did you ask yourself where the medical staff came from? One in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

And what about your elderly relatives? Are your grandparents still alive? Or your parents? Perhaps you're worried about who's going to look after you when you're older? Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, these people take up jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

Then, few people give much thought about how this country pays its bills, but according to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more in taxes than they take out in benefits or services.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She quietly goes about her business advising a well-known company on how to get more books into schools.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. Her work is not high profile, but for that family, her contribution is essential, allowing them some much-needed respite.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. You know that home-makers are often under-rated, but Ina is a really great wife and mother.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. Think of a time when you've been at the mercy of events outside of your control. Can we really think of no better solution?

What do you think?

1.11 Common ground

When you think about what matters most to you, do you enjoy spending time with people you really click with? Do you find it satisfying when you come across someone who feels exactly the same as you about a particular piece of music, a match or a television programme?

Think for a moment about people who have come to the UK from elsewhere in Europe. Genetically, we're very similar; historically, we've experienced the same wars; culturally, our languages, myths and religions are intertwined; and just about everybody's footballers play in the Premier League.

Take the NHS, one in ten doctors, one in five surgeons and one in four GPs were trained in other EU countries. Like us, they are deeply committed to one of the best-loved institutions in this country. Official figures show that these European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. It's one of the few careers where it helps to share a passion for Coronation Street or EastEnders. As Britain rapidly ages, these people are doing jobs the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average, they contribute £2,300 more in taxes than they take out in benefits or services. The past decade has been bumpy for everyone in economic terms, but we're pretty good at doing business together.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She advises a well-known company that produces books for schools, and has worked for many household names.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. Not only is she an avid football supporter, but she also appreciates our comedy shows and sense of humour.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. Her passion is baking and you can imagine what her favourite programme is.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. Yet these are people who share our interests and like living here for exactly the same reasons that we do.

What do you think?

Appendix 2: Texts used in Ch.3 main experiment

The following nine texts were used in the main experiment with YouGov.

2.1 Common text

When you think about what matters most to you, what is most important?

Do you have any views about people who have come to the UK from elsewhere in Europe?

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. Official figures show that European workers contribute “much more” to the National Health Service than they receive.

But it’s not only those in skilled professions who make a contribution. Just because a job doesn’t pay well doesn’t mean that the work done isn’t valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, they have been doing jobs that the government’s Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK’s public finances than the average adult resident.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm.

Then there’s Sonia, from Poland, who came to the UK to help a family look after a disabled child.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania.

At the moment, all three have question marks hanging over their heads. They don’t know if they will be allowed to stay in the UK.

What do you think?

2.2 Fear

When you think about what matters most to you, do you worry what would happen if it were all taken away? Do you know the phrase: “You don’t know what you’ve got until it’s gone”?

Think then about people who have come to the UK from elsewhere in Europe. Right now, people we have come to rely on are thinking that they stand to lose everything they have invested in this country. But if they pack up and go, where does that leave the rest of us?

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. The Royal College of Nursing says that thousands of EU nurses are going and the General Medical Council says most EU doctors are thinking of quitting, but what will this mean for people with serious illnesses like cancer, or children when they're sick? Official figures show that European workers contribute “much more” to the National Health Service than they receive.

But it’s not only those in skilled professions who make a contribution. Just because a job doesn’t pay well doesn’t mean that the work done isn’t valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, we risk staff shortages that will leave our elderly people without the care they need. These are jobs that the government’s Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. The UK economy has already been damaged by risk and uncertainty; can we really afford to lose a pool of valuable workers, employers and investors whose taxes pay for services we all use?

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She advises a well-known company that produces books for schools. It's a highly competitive environment, and her work helps this firm to beat off its rivals and keep its head above water.

Then there’s Sonia, from Poland, who came to the UK to help a family look after a disabled child. They just don’t know how they’d cope if she left.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. If they go, that means another young family will have left their village.

At the moment, all three have question marks hanging over their heads. They don’t know if they will be allowed to stay in the UK. They could end up losing everything they have invested here, but all of us risk losing out too if they leave.

What do you think?

2.3 Social norms

When you think about what matters most to you, do you think it's important to know what's going on in the heads of those around you? Sometimes it can be helpful to test what you think by finding out where you stand in relation to other people.

Think then about people who have come to the UK from elsewhere in Europe. Did you know that, according to opinion polls, the vast majority of British people (70%) would be happy for those who have a job or a place to study to remain in the UK?

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. Surveys show that over three-quarters of people in this country welcome those who come to work for the NHS. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. Some 60% of people are happy to have such workers here. As Britain rapidly ages, they have been doing jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. Last year, the results of the biggest ever public consultation on this subject were published. It found that the majority wanted a fair system that allowed those who made a contribution to stay.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She advises a company that produces highly-regarded books for schools.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She appreciates the way that people here are more accepting of disabilities.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They like the fact that, working here, he is able to make a small contribution to a sport that is loved by millions.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. This is despite the vast majority of people being happy for them to be here.

What do you think?

2.4 Moral Foundation of Care

When you think about what matters most to you, how important do you think it is that people treat each other with consideration and decency? Have you ever found yourself in a position where you have had to rely on the kindness of others?

Think then about people who have come to the UK from elsewhere in Europe. There are many examples of those whose presence here has made a big difference to the lives of people who really need help.

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. They have devoted themselves to a profession that's all about looking after their patients and getting them back on their feet again. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe, where looking after the elderly and treating them with dignity is seen as an essential part of life. As Britain rapidly ages, such people will be needed in jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. These taxes go towards the social welfare system that acts as a safety net for many people in this country.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She is currently working with a well-known company and has clients that have come to rely on her.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. It's a job that requires a lot of patience and gentleness, but she does it with good humour and good will. She's also a great cook and a firm favourite of the family's many pets.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. She has been helping elderly neighbours in her village to go about their chores.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. Is this the way to treat people?

What do you think?

2.5 Moral Foundation of Fairness

When you think about what matters most to you, how important do you think it is to have a level playing field? Do you think it's appropriate that those who make a positive contribution should be treated fairly and get the thanks and recognition they deserve?

Think then about people who have come to the UK from elsewhere in Europe. They have come here knowing that their qualifications and expertise will be recognised, and they will have the same opportunities as anyone else.

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. They are treated just like local staffers and they share the burden equally. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, the government's Migration Advisory Committee says that it is hard to recruit in this area. These people deserve our thanks for taking on jobs that few others will do.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. When it comes to making a contribution to society, we all have to play our part, and these people are paying their dues.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She is working with a well-known company that produces books for schools and hopes to share her success by employing others as the business grows.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. It's always full-on, but having an extra pair of hands around lightens the load for everyone.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They feel that anyone has the chance to do well in this country and how successful they are will depend on the amount of effort they put in.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK, despite what they have done for people here and through no fault of their own.

What do you think?

2.6 Big Five – Conscientiousness

When you think about what matters most to you, do you feel that it's important to be able to make a plan and stick to it? And do you feel frustrated when events leave you hanging and you can't get anything done?

Think then about people who have come to the UK from elsewhere in Europe. They have gone to the trouble of moving home, bringing their families to this country, but they don't know what is going to happen to them in the coming months.

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. As they go about their work, it's a huge distraction not to know whether they will be able to hold onto their jobs. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, we will need more hard-working people in jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. These are people who have taken a conscious decision to come here and have put in considerable effort to make everything work out.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. Through perseverance and dedication, she has become an advisor to a well-known company that produces books for schools.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. This is demanding work, but she feels it's a job with a purpose.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They have organised their life to give their daughter the best possible future.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. Irrespective of how hard they have worked, or what they have achieved to date, they have no certainty about what happens next.

What do you think?

2.7 Big Five – Openness

When you think about what matters most to you, how important do you think it is that we should value diversity? Whether it is trying different types of food, better coffee or a brand-new television series, do you think that it's good to be open to new influences?

Think then about people who have come to the UK from elsewhere in Europe. Over the years, these people have opened our eyes to new and ingenious ways of doing things: running restaurants, starting up businesses and adding to our vibrant cultural scene.

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. We all benefit from the new perspectives, techniques and ideas that they bring to the field of medicine. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, we will need to develop better and smarter ways of dealing with care for the elderly. These people are doing jobs that the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. These people enjoy being in a country as diverse and open-minded as the UK.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She now acts as an advisor, telling her clients how to apply the latest behavioural science techniques to improve their performance.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. This has sparked an interest in psychology, which she has started studying to learn how the brain works.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They want their daughter to go to university here in the future: perhaps to be a doctor, or perhaps an engineer.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. This country needs bright, entrepreneurial people who are curious and inventive, with brilliant ideas. Do we really think they should have to leave?

What do you think?

2.8 Myth-busting

When you think about what matters most to you, do you think it's important to steer people in the right direction when they are going off track? If someone is saying something that is clearly wrong, do you think that they should be put straight?

Think then about people who have come to the UK from elsewhere in Europe. Some people say that by being here, they push down wages, take all the jobs, crowd out hospitals and schools, raise the crime rate and compete for social housing. Yet according to an official report commissioned by the government, only one of these statements (on housing) is backed up by the evidence.

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. Did you know that official figures show that European workers contribute "much more" to the National Health Service than they receive?

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, they have been doing jobs that the government's Migration Advisory Committee says are otherwise hard to fill since not enough people from here are applying for this kind of work.

Not everyone knows that, according to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. Her work directly benefits the education system as she is advising a well-known company that produces books for schools.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She is studying psychology and dreams of joining the police and fighting crime.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. They rent a house privately and aren't looking for government help.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. The government wants to base its future immigration policy on what the public say they want – but is that a good idea if people have got the wrong end of the stick?

What do you think?

2.9 Perspective-taking

When you think about what matters most to you, do you ever wish that others could understand your point of view? Do you think people should try to walk a mile in someone else's shoes?

Think then about people who have come to the UK from elsewhere in Europe. Can you imagine how it feels to be in a position where they don't know if they should stay or go?

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. It must be really unsettling to have this issue hanging over them day in, day out. Official figures show that European workers contribute "much more" to the National Health Service than they receive.

But it's not only those in skilled professions who make a contribution. Just because a job doesn't pay well doesn't mean that the work done isn't valuable. Have you ever had to look after an elderly relative? You know it can be rewarding, but it's also a lot of hard work. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, they have been doing jobs the government's Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. If you were in their position, you would be feeling unappreciated and let down right now.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She's advising a well-known company that produces books for school. You know what it's like when you want to carry on doing something you love.

Then there's Sonia, from Poland, who came to the UK to help a family look after a disabled child. She feels that she has a lot to give here.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. Imagine having to think about uprooting your family.

At the moment, all three have question marks hanging over their heads. They don't know if they will be allowed to stay in the UK. Put yourself in their position and you can understand how they must feel right now.

What do you think?

2.10 Integration

When you think about what matters most to you, how important is family? Think of your parents, and your grandparents, then think of their parents. As you go further back up your family tree, it's likely you will come across people who may have moved for work or family reasons, but who eventually decided to settle down and fit in wherever they found themselves.

Think then about people who have come to the UK from elsewhere in Europe. Many have been here for years. Some have got married to locals or are raising their children here. They have learned the language and over time have adapted to our culture and way of life, blending in with everyone else.

Take the NHS. One in ten doctors and one in five surgeons were trained in other EU countries. They are now an essential part of a well-loved institution. Official figures show that European workers contribute “much more” to the National Health Service than they receive.

But it’s not only those in skilled professions who make a contribution. Just because a job doesn’t pay well doesn’t mean that the work done isn’t valuable. Until recently, the fastest-growing group of people working in the care sector came from other countries in Europe. As Britain rapidly ages, we want people like this to put down roots and stay. Not least because they have been doing jobs that the government’s Migration Advisory Committee says are otherwise hard to fill.

According to figures quoted by the government, when people from Europe come to the UK, on average they contribute £2,300 more to the UK's public finances than the average adult resident. They are an integral part of our economy.

Take Giorgia, who is from Italy. She came to the UK to study for a business degree and has set up her own firm. She has applied for citizenship and passed a difficult exam on our history and culture.

Then there’s Sonia, from Poland, who came to the UK to help a family look after a disabled child. She is a talented sportswoman who represents her university and could represent this country given half the chance.

And Ina, a stay-at-home mum with a 4-year-old, who is married to a Formula One mechanic. They are from Lithuania. She and her family want to settle here for good.

At the moment, all three have question marks hanging over their heads. They don’t know if they will be allowed to stay in the UK. They chose to come here, and they are ready and willing to fully adapt to this culture and environment if they are given the opportunity.

What do you think?

Appendix 3: Results of factor analysis of RWA scale for Ch. 6

3.1 RWA scale (Altemeyer, 1998) split into three factors

Item	MR1	MR2	MR3
The established authorities generally turn out to be right about things, while the radicals and protestors are usually just “loud mouths” showing off their ignorance.	.189	.137	-.660
Women should have to promise to obey their husbands when they get married.		-.489	
Our country desperately needs a mighty leader who will do what has to be done to destroy the radical new ways and sinfulness that are ruining us.	.719	-.155	
Gays and lesbians are just as healthy and moral as anybody else.		.690	
It is always better to trust the judgment of the proper authorities in government and religion than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people’s minds.	.274		-.615
Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.		.527	
The only way our country can get through the crisis ahead is to get back to our traditional values, put some tough leaders in power, and silence the troublemakers spreading bad ideas.	.767		-.213
There is absolutely nothing wrong with nudist camps.		.475	.104
Our country needs free thinkers who have the courage to defy traditional ways, even if this upsets many people.		.261	.525
Our country will be destroyed someday if we do not smash the perversions eating away at our moral fibre and traditional beliefs.	.784	-.125	.122

Everyone should have their own lifestyle, religious beliefs, and sexual preferences, even if it makes them different from everyone else.		.649	.102
The “old-fashioned ways” and the “old-fashioned values” still show the best way to live.	.551	-.139	-.135
You have to admire those who challenged the law and the majority’s view by protesting for women’s abortion rights, for animal rights, or to abolish school prayer.		.525	.300
What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path.	.934		.179
Some of the best people in our country are those who are challenging our government, criticising religion, and ignoring the “normal way things are supposed to be done.”		.249	.593
God’s laws about abortion, pornography and marriage must be strictly followed before it is too late, and those who break them must be strongly punished.	.262	-.620	.135
It would be best for everyone if the proper authorities censored magazines so that people could not get their hands on trashy and disgusting material.	.351	-.374	
There is nothing wrong with premarital sexual intercourse.		.838	-.140
Our country will be great if we honour the ways of our forefathers, do what the authorities tell us to do, and get rid of the “rotten apples” who are ruining everything.	.736		-.158
There is no “ONE right way” to live life; everybody has to create their own way.		.691	
Homosexuals and feminists should be praised for being brave enough to defy "traditional family values."		.651	.143

This country would work a lot better if certain groups of troublemakers would just shut up and accept their group's traditional place in society.	.649		-.236
There are many radical, immoral people in our country today, who are trying to ruin it for their own godless purposes, whom the authorities should put out of action.	.705	-.115	
People should pay less attention to the Bible and other old forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.		.549	
What our country needs most is discipline, with everyone following our leaders in unity.	.610		-2.89
It is better to have trashy magazines and radical pamphlets in our communities than to let the government have the power to censor them.	-.246	.277	.159
The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.	.783		
A lot of our rules on modesty and sexual behaviour are just customs that are not necessarily any better or holier than those which other people follow.	-.139	.453	.112
The situation in our country is getting so serious, the strongest methods would be justified if they eliminated the troublemakers and got us back to our true path.	.857		
A "woman's place" should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.		.781	
It is wonderful that young people today have greater freedom to protest against things they don't like, and to make their own "rules" to govern their behaviour.	-.140	.383	.400

Once our government leaders give us the "go ahead," it will be the duty of every patriotic citizen to help stamp out the rot that is poisoning our country from within.	.850		

Source: Altemeyer (1998)

Appendix 4: 2x2 grid used in Ch. 7

This 2x2 grid mapping authoritarianism against SDO can be used to plot different variables. The examples shown here are for the three sub-dimensions of authoritarianism (VSA, Bizumic & Duckitt 2018), and for the new Moral Foundations scale (Atari et al., 2012).

The grid illustrates the relationships between authoritarianism and the Moral Foundations discussed in Ch.6, Part 3.

As an illustration of what else can be plotted, graphs have been included showing how Conservative or Labour voters appear on the grid, and those who think Brexit is going well or badly.

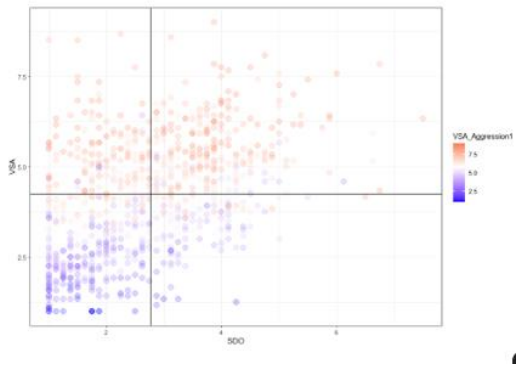
4.1 Authoritarianism sub-dimensions

These graphs were created from data gathered for Ch.7. The scales used for the axes (set to a median split) are the Very Short Authoritarianism scale (Bizumic & Duckitt, 2018) and the SDO-7 scale (Ho et al., 2015).

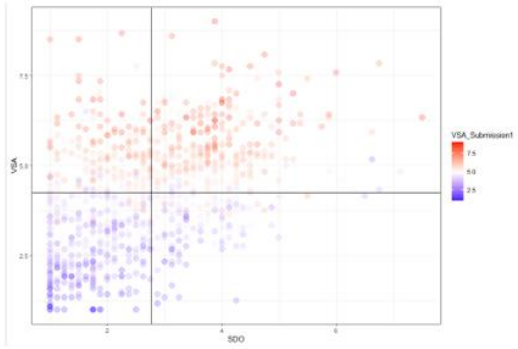
(red=high)

(N=1,005)

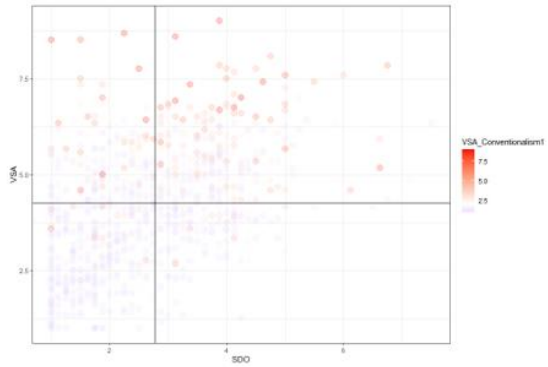
Aggression



Submission



Conventionalism



Aggression and Submission are seen as “two sides of the same medal” (Funke, 2005), they tend to have higher SDO correlations than Conventionalism.

VSA Aggression r=.57

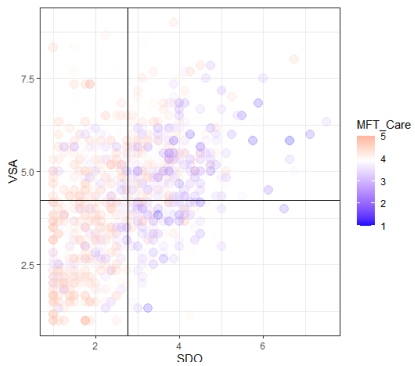
VSA Submission r=.53

VSA Conventionalism r=.42

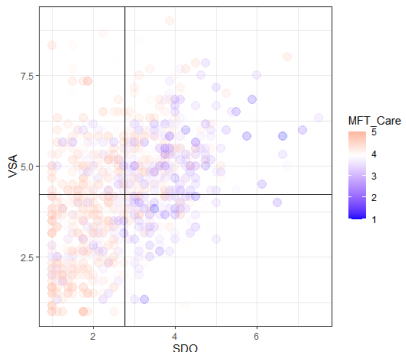
4.2 Moral Foundations Theory

These graphs use the new Moral Foundations scale developed by Atari et al. (2022), red=high.

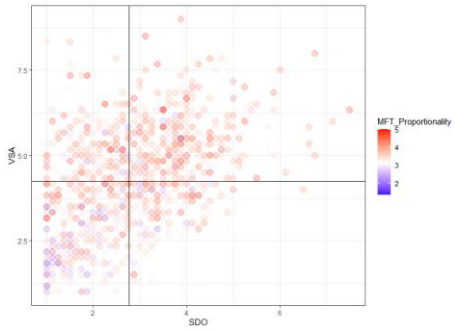
Care



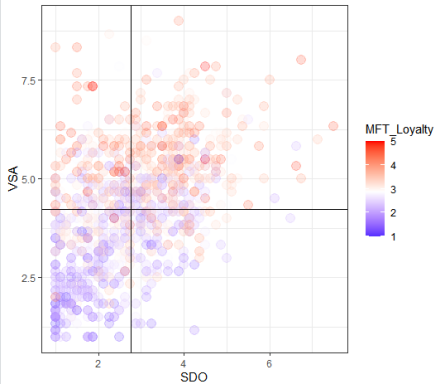
Equality



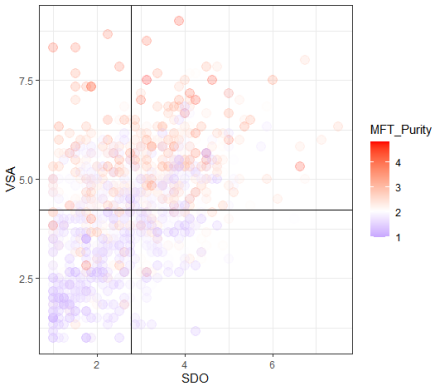
Proportionality



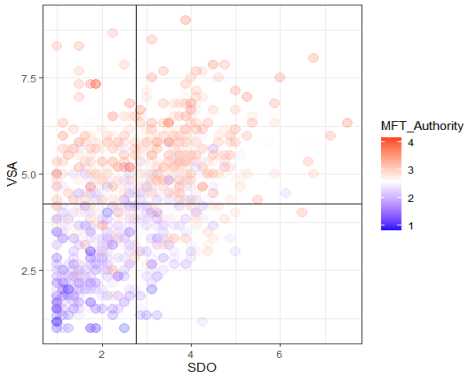
Loyalty



Purity



Authority



(N=1,005)

Correlations

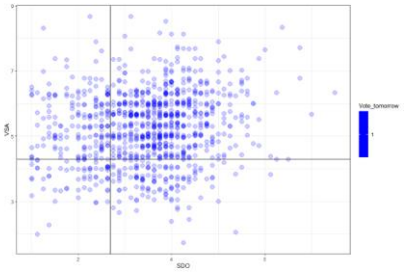
Moral Foundation	VSA	SDO
Care	-.15	-.45
Equality	-.23	-.54
Proportionality	.35	.25
Loyalty	.59	.31
Purity	.57	.25
Authority	.72	.39

4.3 Political party vote and views on Brexit

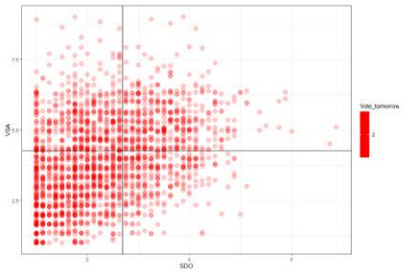
Respondents were asked how they might vote if there were a general election tomorrow (Jan 2023).

N=1,005.

Conservative



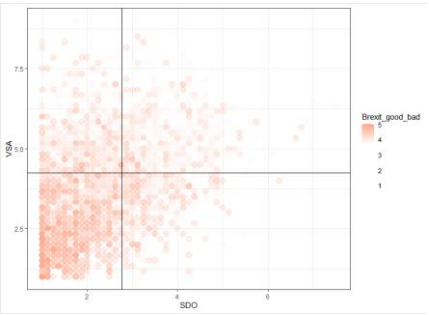
Labour



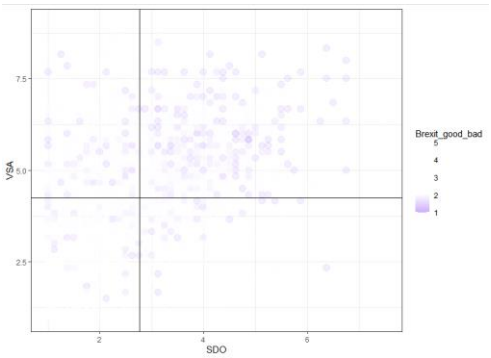
Respondents were asked if they thought Brexit was going well or badly (Jan 2023)

Brexit going badly or very badly

N=1,005



Brexit going well or very well



Appendix 5: Texts used in the first experiment in Ch.8

In the following texts, the grey highlighted material is common to all the texts and the blue highlighted material is framed for that text.

These appendices include a rationale for the material used.

5.1 Control

Attempt at balance in this text (doing things v relaxing)
Grey highlight = common elements

Thinking back over the last three years, can you bring to mind an occasion when you've wished your home or garden looked better? There are entire business sectors devoted to making the most of the environments we live in.

Researchers say that gardening is one of the best pastimes. It's not always easy choosing which plant should go where, particularly getting it right as regards light and shade, or in terms of soil type. However, it can be very rewarding when you plant something and it grows well. Equally, time spent in the house can be enjoyable if you are getting jobs done or even just catching up with what's on the television. It's good to have a reasonable work-life balance.

Take Sonia, who is Polish. For her, the long bank holiday over the Queen's Jubilee gave her some extra spare time to get on with doing what she loves.

Are you the kind of person who gets through list of chores, or are you someone who takes things as they come, and does jobs when they need doing and no sooner? Some people use their homes as a place to relax and spend time with family and friends, while for others it is a place where they can focus on hobbies and on their own personal interests.

Our house and garden sector caters both for those who want a quiet base and those who have more ambitious schemes in mind. Having an environment that meets people's needs is really what it's all about.

251 words

Word/phrase	**Neutral**
Environments we live in	Universal
Getting jobs done v watching tv	Neutral on effort level
List of chores v takes things as they come	Neutral on effort level
Relaxing v hobbies	Neutral on effort level
With family and friends v on their own	Neutral on community v individuality
Quiet base v ambitious schemes	Neutral on outcomes

5.2 Low authoritarianism text – LA1, the artist

Low on conventionality, aggression, submission; high on diversity, creativity, global, flexible thinking, agreeableness, risk-taker, hint of equality (food bank).

Thinking back over the last three years, can you bring to mind an occasion when you've been struck by someone's sensitivity towards others? As society changes, we are becoming a more accepting place where race or religion matter less and less.

Britain's creative community – our musicians, film industry and artists – have been breaking boundaries and leading the way. But it's not just artists who explore new territory. Every part of our lives, including what we eat and drink, has been influenced by people from overseas.

Take Sonia, who's from Poland. She came here five years ago to sell clothes in London's Camden Market. She enrolled at Central St Martin's College and is now producing fashion that pushes the creative boundaries, using new and unusual materials in original ways.

She loved the way that drag queens and Bollywood were included in the Queen's Jubilee. For her, it is important that national institutions are finally giving diversity a fair hearing, and that increasingly you see different types of people represented in theatre, film and on television.

Sonia has been volunteering in her spare time at a food bank. At home, she likes to watch 'Glow Up', the television competition where make-up artists compete to create extraordinary designs.

Sonia would like to stay in the UK and has applied for British citizenship. Her dream is to design an environmentally-friendly version of the Dr Martens boot, and then to sell it internationally, using London as her global base.

246 words

Word/phrase	Low in RWA
Sensitivity to others	Empathetic (i.e. hint of low SDO)
Society changes	Changing social norms
Accepting	Can cope with diversity
Race and religion don't matter	Can cope with diversity
Creative community	High openness (associated with low RWA)
Breaking boundaries	Breaking rules
Explore new territory	Outside of community
People from overseas	Outgroup
Fashion industry/university	High openness, cognitive complexity
Pushing boundaries	Breaking rules
New, unusual, original	Not rigid inflexible thinking styles.
Drag queens	Low on conventionality
Bollywood	Outgroup
Finally giving diversity a fair hearing	Diversity, and equal rights going too far
Volunteering, Food bank	Empathetic (hint of low SDO)
Glow Up	Using make-up to change how people look – i.e. non essentialist
Environmentally friendly	Those high in RWA tend to be opposed to climate action.
Internationally, Global base	Outgroup

5.3 Low authoritarianism text – LA2, the entrepreneur

Low on conventionality, aggression, submission; high on diversity, creativity, global, flexible thinking, risk-taker, hint of competition (business).

Thinking back over the last three years, can you bring to mind an occasion which clearly shows the rapid pace of change in our everyday lives? It's partly thanks to entrepreneurs who have spent time developing new ways to meet the needs of an increasingly diverse set of customers.

Businesses thinking outside the box have made British lives ever more dynamic. Originality, and the willingness to explore new and untried methods, can be very valuable. Some of that fresh thinking has come from overseas.

Take Sonia, who is from Poland. She came here five years ago to study for a Master's degree at the London Business School and now works in technology. Her firm develops complex programming to facilitate international trade in high-risk/high-reward financial derivatives.

She loved the business energy generated by the Queen's Jubilee. She embraces the revolutionary advances that have been made in the last 70 years, notably online shopping, which means she doesn't have to rely on local outlets.

Sonia's strengths include her ability to think on her feet while steering clear of the stagnant traditions and red tape that can hold businesses back. In her spare time, she likes watching 'Dragon's Den' with her feet up and a shot of tequila to hand.

Sonia would like to stay in the UK and has applied for British citizenship. Her dream is to build Britain's next successful global start-up and then sell up and retire at 50 to somewhere warm and very exotic.

251 words

Word/phrase	Low in RWA
Rapid pace of change	Changing social norms
New ways	Non-traditional
Increasing diverse	Can cope with diversity
Thinking outside the box	Non traditional, breaks convention
More dynamic	Changing social norms
Originality	Individualistic thinking style
Willingness to explore new and untried methods	Unconventional, rule-breaker
Fresh thinking	High openness, cognitive complexity
Overseas	Outgroup
Master's degree	Cognitive complexity
Technology	Complex subject
Programming… financial derivatives	Complex subject
International trade	Outgroup
High-risk	Not secure
High-reward	Hint of SDO
Revolutionary advances	Rule-breaking
Doesn't rely on local outlets	Doesn't care about community
Think on her feet	Cognitive complexity
Stagnant traditions	Anti-tradition
Red tape	Anti-rules
Dragon's Den	Disruptive businesses (hint of SDO)
Feet up	Low Conscientiousness
Tequila	Outgroup drink
Global start-up	Non-community, and disruptive business
Retire at 50	Low Conscientiousness
Very exotic	Not local community

5.4 High authoritarianism text – HA1, the teacher

High in Conventionality, Submission, community/family, Purity, social norms, integration, tradition, patriotism, history, and agreeableness; low on diversity, hint of benevolence.

Thinking back over the last three years, can you bring to mind an occasion when you saw someone putting in the effort and going the extra mile to help their communities.

We can be proud of what we achieved together in tough times. We also appreciate more those who do vital work for little pay, many of whom come from overseas. According to opinion polls, the vast majority of people in Britain (over 70%) no longer think immigration is a major concern for this country.

Take Sonia, who's from Poland. She spoke fluent English when she arrived five years ago and started work as a school assistant. She is a stickler for old-fashioned hygiene and she has been teaching children about the importance of hand-washing and how to stay clean, safe and healthy.

She loved the focus on tradition at the Queen's Jubilee and was one of millions celebrating around the country. Getting together with family and friends is important for her, and she sees birthdays, weddings and christenings as unmissable events.

Sonia moved here because Britain is a country she has always admired. Her grandfather was a Polish fighter pilot in the Battle of Britain. In her spare time, she is a passionate 'Bake Off' fan and has mastered the art of making the perfect cream tea.

Sonia would like to stay in the UK and has applied for British citizenship. She needs to pass the citizenship examination, so she is currently learning all about our rules, history and customs.

255 words

Word/phrase	High in RWA
Putting in the effort and going the extra mile	Conscientious
Communities	Community-minded
Achieved together	Communitarian
Vital work	Conscientious
Little pay	Hint of low SDO
Opinion polls	Social norm
Vast majority	Social norms
Over 70%	Social norms
Fluent English	Integrated
School assistant	Holding official position in rules-based community
Old-fashioned hygiene	Traditional and cleanliness
Teaching children	Rules-based
Hand-washing	Hygiene
Clean, safe, healthy	Low risk, hygiene
Tradition	Tradition
One of millions	Social norms
Around the country	Nationalistic
Getting together	Community-minded
Family and friends	In group
Birthdays, weddings, christenings	Tradition, community
Country she has always admired	High in national narcissism
Polish fighter pilot	Admired for well-known service – hence in-group
Battle of Britain	Nostalgic
Bake Off	Community-minded
Perfect cream tea	Traditional
Citizenship exam	Exam
Rules, history, customs	Regulations, nostalgia, social norms

5.5 High authoritarianism text – HA2, the policewoman

High in Aggression, Submission, Conventionality, Social norms, authority, integration, patriotism; low on diversity (hint of low agreeableness).

Thinking back over the last three years, can you bring to mind an occasion when someone has taken charge and made everyone stick to the rules? There are some people for whom this is a way of life.

We can be proud that we are a law-abiding nation. It's a feature of this country that is much admired overseas and a major draw for those who want to live here. Interestingly, now that we have control over who comes, opinion polls say the vast majority of people in Britain (over 70%) no longer think that immigration is a major concern.

Take Sonia, who's from Poland. When she arrived here five years ago, she joined the British police.

She loved the Queen's Jubilee – she can't stand it when people criticise the monarchy. For her, it was important that millions were able to celebrate a historic, national occasion together, and she appreciated the way the security forces made sure that events ran smoothly at Buckingham Palace.

Sonia's speciality is tracking down illegal activity on the internet. It requires resilience and strong determination. Her first role was with the police team that tackles cruelty towards pets. After an online investigation, she broke up a vicious dog-fighting ring. It is no surprise that her favourite television programme is "Line of Duty."

Sonia would like to stay in the UK and has applied for British citizenship. In future, she wants to develop her skills so that she can work in the police team that protects children from dangerous predators online.

252 words

Word/phrase	High in RWA
Take charge	High authority
Made everyone	Norm enforcer
Stick to the rules	Norm enforcer
Way of life	Not changing
Law-abiding nation	Abides by rules
Feature of this country	Nationalism
Admired overseas	National narcissism
Major draw	National narcissism
Control	Control
Opinion polls/ Vast majority/over 70%	Social norms
British police	Norm enforcers
Can't stand it	Angry frustration
Criticise the monarchy	Submissive to authority
Millions were able to celebrate	Social norms
Historic, national	Nostalgic, nationalistic
Together	Community-minded
Security forces	Submissive to authority
Events ran smoothly	Abided by rules
Buckingham Palace	Respected institution
Illegal activity	Rule-breaking
Resilience and strong determination	Conscientiousness
Cruelty towards pets	Moral Foundation – Leavers score high in terms of saying that harming animals is bad
Vicious dog-fighting ring	Frightening law-breakers
Line of Duty	Police drama
Police team	Authority and Loyalty
Protects children from dangerous predators	Purity, danger.

5.6 Authoritarian compatible text – General (Gen), the NHS nurse

Pitched at a slightly above medium level of authoritarianism, emphasising tradition, patriotism, and high on agreeableness

Thinking back over the last three years, can you bring to mind an occasion when you had to rely on the kindness of a stranger? Sometimes, it takes a crisis to fully appreciate others, like the brave and resilient staff in our National Health Service (NHS).

We can be so proud of our hard-working doctors and nurses, many of whom come from overseas. According to opinion polls, the vast majority in Britain (over 70%) no longer think immigration is a major concern for this country.

Take Sonia, who is from Poland. She came to Britain five years ago to work as an NHS nurse. She took on extended shifts to care for her patients. She thinks chatting with them about their lives is one of the greatest perks of the job.

She loved the Queen's Jubilee, and the way in which the nation recognised the extraordinary contribution made by the men and women staffing our hospitals, schools and essential services. For her, it's important to notice when people go above and beyond the call of duty.

Sonia chose to come here because she speaks excellent English and because she wanted to live in a safe, fair-minded country where hard work is rewarded. She is also a passionate fan of BBC wildlife documentaries like "Blue Planet."

Sonia would like to stay in the UK and has applied for British citizenship. Her dream is to get married, raise a family and settle down here, while continuing her work for the NHS.
249 words

Word/phrase	High in RWA
Kindness of a stranger	Outgroup member being agreeable
Crisis	Time of risk
Brave and resilient	Highly Conscientious
National Health Service	Respected institution/authority
Hard-working doctors and nurses	Conscientious authority figures
Overseas	Outgroup
Opinion polls	Social norms
Vast majority	Social norms
Over 70%	Social norms
NHS nurse	Respected authority figure
Took on extended shifts	Conscientious
Chatting with patients	Agreeable, community-minded
Nation	Nationalistic
Extraordinary contribution	Conscientious
Hospitals, schools, essential services	Institutions
People go above and beyond call of duty	Proportionality (hint of SDO)
Chose to come here	National narcissism
Excellent English	Integrated
Safe, fair-minded	Safe, rule-abiding
Hard work is rewarded	Conscientious and Proportionate
Blue Planet	Social norm (highly popular)
Married, family, settle down	Conventional, no change
Continuing her work for NHS	Working in institution

Appendix 6: Texts used in final experiment in Chapter 7

The following texts were used in the final experiment with YouGov polling agency in Ch. 7.

Highlighted in blue are elements that are relevant to the framing. In grey is text that is common to both the low authoritarianism text and the authoritarian compatible text.

6.1 Text 1: ChatGPT text used for control

Bread is a staple food that has been consumed by people for thousands of years. It is a simple food made from a few basic ingredients, but the quality of the bread can vary greatly depending on how it is made, the ingredients used, and the conditions in which it is baked.

Bread quality is an important consideration for both bakers and consumers. For bakers, the quality of their bread can determine the success of their business, while for consumers, such as Sonia from Poland, the quality of the bread can affect its taste, texture, and nutritional value.

One of the key factors that contribute to the quality of bread is the ingredients used. The type and quality of flour used can affect the texture, flavour, and nutritional content of the bread. Different types of flour have different levels of protein and gluten, which can affect the bread's texture and rise. For example, bread made with high-protein flour will have a chewier texture and a higher rise than bread made with lower-protein flour.

Other ingredients, such as yeast, salt, sugar and fats, can also affect the quality of bread. Yeast is responsible for the bread's rise, while salt enhances the flavour and helps to control the fermentation process. Sugar can be added to improve the flavour and colour of the bread, while fats such as butter or oil can make the bread softer and more tender.

The baking process is also critical to the quality of bread. The temperature and humidity in the oven can affect the texture and crust of the bread. If the oven temperature is too low, the bread may not rise properly or may have a tough crust. If the temperature is too high, the bread may burn or have a dry, tough interior.

The length of time the bread is baked can also affect its quality. If the bread is undercooked, it may be gummy or have a raw interior. If it is overcooked, it may be dry and crumbly. Finally, the handling and storage of the bread after it is baked can also affect its quality. If the bread is not allowed to cool properly, it may become soggy. If it is stored in a humid environment, it may become stale or mouldy.

In conclusion, bread quality is determined by a variety of factors, including the ingredients used, the baking process, and the handling and storage of the bread. By paying close attention to these factors, bakers can produce high-quality bread that is delicious and nutritious, while consumers can choose bread that meets their preferences for taste and texture.

Word/phrase	Authoritarianism
bread	Staple food in UK, eaten by everyone
basic ingredients	No mention of “designer” bread ingredients
bakers	No assumption of home baking (which might be seen as indicative of class).
business	Not only focused on individuals
consumers	The only information on the immigrant’s habits and values is that she eats bread
from Poland	According to ONS, Polish is number one country of origin for those not born in UK (i.e. this was a factual choice)
ingredients and baking process	Not too technical and no long words

6.2 Text 2: Low authoritarianism text

When you think about what matters most to you, how important do you think it is that we should value diversity? Whether it is trying different types of food, enjoying better coffee, or just doing things a bit differently, do you think that it's good to be open to new influences?

Think about those who have come here from overseas. Many people in Britain value the ways in which immigrants have added to our culture, and appreciate the foreign students who bring fresh, new ideas to revitalise our universities and colleges.

The Office for Budgetary Responsibility[42] says that having more young, healthy, tax-paying immigrants would allow the government to reduce the national debt and save money on interest payments. According to figures quoted by the government, immigrants from the European Union make a particularly positive contribution in terms of the tax they pay in.

Currently, according to the NHS[43], over a quarter of our hospital doctors come from overseas and about one in five of our nurses, sharing best practice from around the world. Our creative industries are also open to international talent.

Take Sonia, who's from Poland. She came here five years ago to sell clothes in London's Camden Market. She enrolled at one of London's top design colleges and is now producing fashion that pushes the creative boundaries, using new and unusual materials in original ways.

She loved the way that drag queens and Bollywood were included in the Queen's Jubilee. For her, it is important that our institutions are finally giving diversity a fair hearing, and that race and religion are becoming ever less important. She feels that fashion can dissolve boundaries and transform people. At home, her favourite television programme is 'Glow Up', where make-up artists compete to create extraordinary designs.

Sonia would like to stay in the UK and has applied for British citizenship. Her dream is to design a version of the classic Dr Martens boot that defies convention, and then to sell it internationally, using London as her global base.

But she is worried about whether the UK is still open to new businesses, new people and new ideas. She feels there is a question mark over her future. Will she continue to be welcome in the UK, and if so, for how long? What do you think?

[42] OBR (2018).
[43] Office for National Statistics (2019).

Word/phrase	Authoritarianism (RWA)
Diversity	Comfortable with diversity (high RWA is associated with conformity)
Different food/coffee	Open to diversity in food & drink
Doing things differently	RWA is associated with tradition
Open to new influences	High Openness (associated with low RWA)
Overseas	Outgroup
Immigrants	Outgroup
Added to our culture	High RWA associated with low appreciation of culture/aesthetics
Foreign students	Outgroup
Fresh new ideas/revitalise	High Openness, RWA associated with cognitive inflexibility
Universities and colleges	RWA decreases with education
Sharing best practice from around the world	Non-traditional outgroup practices
Creative industries	Creativity is associated with high Openness/low RWA
International	Globalised, not local
Fashion industry/university	High Openness, cognitive complexity
Pushing boundaries	Breaking rules
New, unusual, original	Not rigid, inflexible thinking styles.
Drag queens	Low on conventionality
Bollywood	Outgroup
Finally giving diversity a fair hearing	Pro-diversity. Feeling that equal rights have gone too far is associated with proportionality, hence authoritarianism
Race and religion less important	Appreciating outgroups
Fashion dissolves boundaries	High RWA is marked by high essentialism
Glow Up	Using make-up to change how people look – i.e. non essentialist
Defies convention	Non-tradition, rule-breaking
Internationally, Global base	Outgroup
Still open to new businesses, new people and new ideas	Non-traditional outgroups

6.3 Text 3: Authoritarian compatible text (NB this text was also used in Part 2 of Ch.8)

When you think about what matters most to you, do you think it's appropriate for people who make a positive contribution to be treated fairly and get the thanks and recognition they deserve?

Think about those who have come here from overseas. There has been a change in how they are perceived in the UK. The latest polls[44] show that most British people think it's a good thing if skilled immigrants come and fill gaps in the labour market.

The Office for Budgetary Responsibility says that having more young, healthy, tax-paying immigrants would allow the government to reduce the national debt and save money on interest payments. According to figures quoted by the government, immigrants from the European Union make a particularly positive contribution in terms of the tax they pay in.

We've all seen the chaos that happens when essential jobs go unfilled. We need people to make fuel deliveries, work in care homes and staff our National Health Service. Currently, according to the NHS[45], over a quarter of our hospital doctors come from overseas and about one in five of our nurses.

Take Sonia, who is from Poland. She came to Britain five years ago to work as an NHS nurse. She took on extended shifts to care for her patients. She thinks chatting with them about their lives is one of the greatest perks of the job.

She loved the Queen's Jubilee last year, and the way in which the nation recognised the extraordinary contribution made by the people staffing our hospitals, schools and essential services. For her, it's important to notice when people go above and beyond the call of duty.

She chose to come here because she speaks excellent English and because she wanted to live in a safe, fair-minded country where hard work is rewarded. She is also a fan of British wildlife documentaries like "The Blue Planet".

Sonia would like to stay in the UK and has applied for British citizenship. But she is very worried when she sees so many of her EU nursing colleagues leaving to go back to their home countries. She feels there is a question mark over her future. Will she continue to be welcome in the UK, and if so, for how long? What do you think?

[44] YouGov (Oct 2022).
[45] Office for National Statistics (2019).

Word/phrase	Authoritarianism (RWA)
Treated fairly	Fairness foundation associated with high RWA
Get what they deserve	Proportionality associated with high RWA
Change in how they are perceived, latest polls…	Change in social norm
Most British people	Majority in favour
Skilled immigrants	This is the category the majority of British people favour (i.e. for which there is a social norm)
Fill gaps in labour market	i.e. they will work and no be free-loaders, Conscientiousness is associated with high RWA. Also, they won't compete with locals (an SDO point)
Chaos	High RWA dislikes chaos
Fuel deliveries, care homes, hospital staff	Using availability bias to invoke recent events that put people at risk.
National Health Service	National institution
NHS nurse	Respected authority figure in national institution
Took on extended shifts	Conscientious
Chatting with patients	Agreeable, community-minded
Nation	High RWA is associated with nationalism
Extraordinary contribution	Conscientious
Hospitals, schools, essential services	Institutions
People go above and beyond call of duty	Proportionality, Conscientiousness
Chose to come here	National narcissism associated with RWA
Excellent English	Integrated
Safe, fair-minded	Safe, rule-abiding
Hard work is rewarded	Conscientious and Proportionate
British	Nationalistic
The Blue Planet	Social norm (highly popular)
EU nurses leaving	People are being put at risk

Appendix 7: Texts and graphs for Ch. 8 on climate change messaging.

Texts were produced for the UK, USA and India in English. The texts for Poland, China, Indonesia and Brazil were translated.

The UN text is based on speeches given by the UN Secretary General Antonio Guterres.

There were common elements to each text (marked in grey) and the patriotism text was tailored for each country with the country being named and local animals mentioned.

7.1. Text for USA (Example)

7.1.1 Preamble

You are being invited to take part in an international academic study that is asking people for their views on global issues. All responses will be anonymised and will contribute to an article in an academic journal. If you are content to proceed, please click here.

7.1.2 Control

Have you ever heard people talk about being “as busy as a bee”? Some people have pastimes that keep them fully absorbed.

Think for a moment about the things you enjoy doing with your hands. Some people like being creative, making art or music; while others like being practical, fixing things around the house.

Scientists say that people benefit from concentrating on a challenging activity that requires a certain level of skill to complete. It can bring about what’s called a “flow” state.

Consider the thinking that goes into the creation of an art work showing dramatic scenes of fire, floods or storms. You need to choose the colours and textures to represent the various elements, and you need to have the skill to make your vision a reality. Or what about working on a piece of quilting that depicts a story involving animals, birds and trees? You can plan it all out, although it’s also fair to say that some people just start working and see where they end up.

Practical challenges can be equally absorbing. It can be deeply satisfying to fix a tap that has been dripping, or to paint a room that has needed redecorating for some time.

People who have time on their hands can benefit from finding a handicraft or hobby that challenges them. There are many activities that can keep people's interest engaged in ways that are deeply satisfying.

7.1.3 UN-based text

Have you ever heard people say "our fate is in our hands"? Global heating is accelerating. Think back to last year. 2019 was the second hottest year on record, with the past decade the hottest in human history.

Scientists say that greenhouse gas concentrations are at the highest levels in 3 million years – when the Earth's temperature was as much as 3 degrees hotter and sea levels some 15 metres higher.

Ocean heat is at a record level, with temperatures rising at the equivalent to dropping five Hiroshima bombs a second.

We count the cost in human lives and livelihoods as droughts, wildfires, floods and extreme storms take their deadly toll. Biodiversity is in steep decline, and we risk losing some species of animals, birds and trees forever.

We have no time to lose if we are to avert climate catastrophe. This is a pivotal year for how we address the climate emergency.

All countries need to demonstrate that we can achieve emissions reductions of 45 per cent from 2010 levels this decade, and that we will reach net-zero emissions by mid-century. This is the only way to limit global heating to 1.5 degrees Celsius.

Our success will depend on countries, the private sector and civil society demonstrating that they are taking significant steps towards a sustainable future.

We must support our leaders in taking ambitious action now and commit to meaningful climate action before it is too late.

7.1.4 Health

Have you ever heard people say that “Health is wealth”? Think how much it means to step outside your front door and take a deep breath of cool, fresh air. When fewer vehicles are on the road, you notice that the air feels cleaner, and the smell of toxic exhaust fumes is gone.

Scientists say that nine out of ten people worldwide are affected by air pollution, which kills millions every year. Some particles are so small they can pass through the lungs into the bloodstream.

Pollution is even changing the climate. People have seen their homes battered by storms; been choked by smoke from wildfires; or had their communities flooded with filthy, disease-ridden sewage.

Perhaps you know someone who suffers from cancer, a heart condition or breathing problems? The World Health Organization says that people with these conditions are especially vulnerable.

Pollution-caused deaths are avoidable, as is the loss of the animals, birds and trees that are being strangled by our litter, poisoned by our plastic waste or parched by human-caused drought. There are some species we risk losing forever.

This is a problem we know how to solve. We can restore our outdoor spaces to full health by introducing well-crafted regulation.

We must support our leaders in taking ambitious action now. The sooner we can clean up pollution, the sooner we make the world a better and healthier place to live.

7.1.5 Social norms

Have you ever heard people talk about “the weight of public opinion”? Sometimes you find that everyone agrees on the course we should take.

Right now, most people think it’s time to turn our attention to climate change. According to a recent international survey, a large majority (65%) think governments should prioritise environmental measures in the years ahead.

Increasingly, people are talking about the climate with their friends and family. Think back to the last time you discussed an extreme weather event with them. The same conversation is happening on every continent.

The scientific evidence is clear. At least 97% of climate scientists say that human-caused climate change is happening and, in this country, most people (69%) agree with them. We’ve all experienced terrible storms, wildfires and floods; and we have been upset by the death of animals, birds and trees that are universally cherished. Some species we risk losing forever.

Many of us do what we can by recycling plastic, glass or tins, but increasingly, we have come to realise that individuals can only do so much. What’s needed is collective action and common solutions. There is strong support for government-led activities such as planting more trees, protecting wildlife and investing in clean technology.

The weight of public opinion is behind our governments on this. We must support our leaders in taking ambitious action now. These are practical, popular policies that everyone can rally behind.

7.1.6 Patriotism

Have you ever heard people say that they are "proud to be American"? Our country was built by generation upon generation who worked hard to ensure their children could enjoy a better life than they did. The values they passed on lie at the heart of our national character.

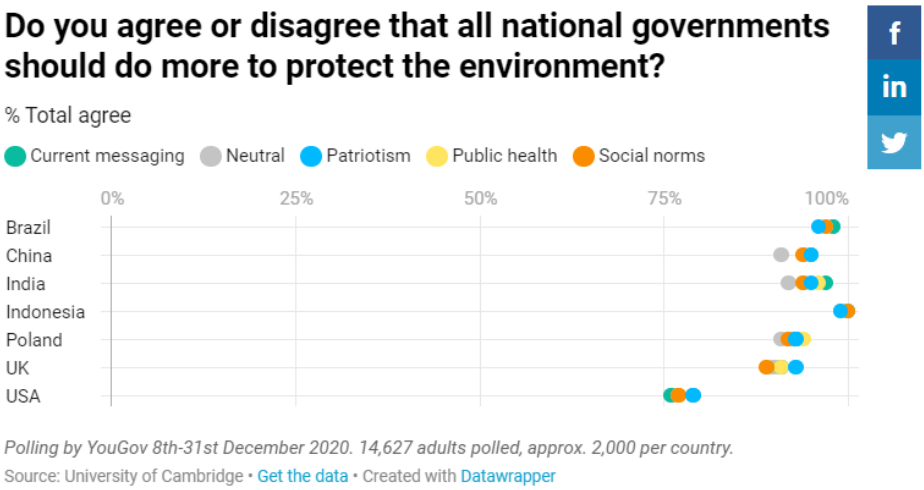
Think of examples where people in your neighbourhood rallied together and supported each other. We want our children to experience that same sense of pride in their country and community when they grow up. But they are entitled to a more tangible heritage too – our beautiful landscapes and national parks. Right now, these are under threat.

Scientists have established that human activity is changing the world's climate. Much of the damage has been done in the last 25 years. We've seen terrible storms devastate towns and villages in this country. Our soldiers, firemen and national rescue services have fought bravely against wildfires and floods, while animals, birds and trees that we cherished as children – like the polar bears in the US state of Alaska – risk being lost forever.

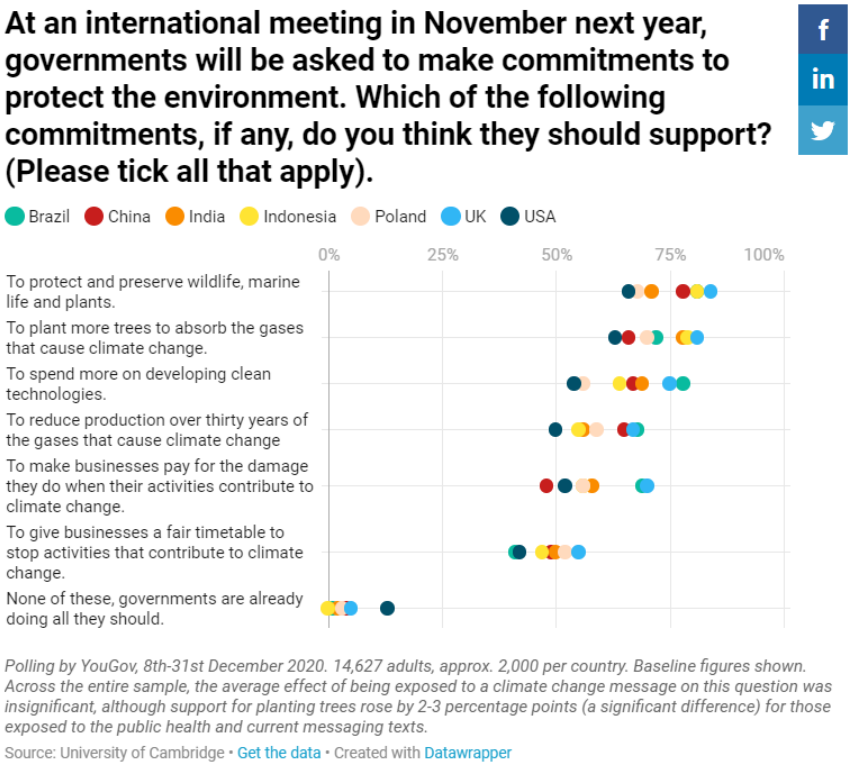
We have a duty to protect and preserve this land. When the time comes, we will want to tell our children that we played our part in conserving their natural heritage. It's not too late to turn back the clock.

We must support our leaders in taking ambitious action now to stop climate change causing further damage to the USA for the sake of generations to come.

7.2 Graph for Q1

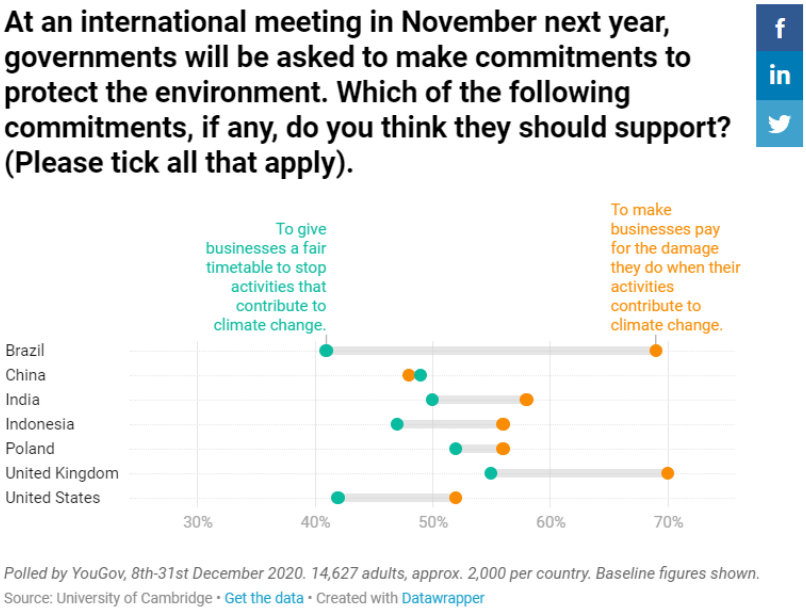


7.3 Graph for Q2



7.4 Graph showing support for ‘fair timetable’ versus ‘make businesses pay’

In each country, other than China, making businesses pay for their contributions towards China is more popular than giving them a fair timetable to adapt, a potentially less expensive option.



Link to YouGov results:

https://docs.cdn.yougov.com/wtfpr14xro/UniversityOfCambridge_7CountryClimateChangeMessageTesting_Dec2020_W.pdf3.1

Appendix 8: Pre-registrations

Pre-registrations can be found on these links:

Ch.3

First pilot

https://osf.io/bsm5n

Second pilot

https://osf.io/uwzt7

Ch.6

Part 1: SEM analysis

https://osf.io/ug2xn

Part 3: Moral Foundations and authoritarianism

https://osf.io/3jca9

Ch.7

Part 1: Prolific Academic study

https://osf.io/gnx8h

Part 3: YouGov survey

https://osf.io/uyxvk

Ch.8

Cambridge Climate Messaging https://osf.io/pvrdn/

Appendix 9: Moral Foundations Questionnaire 2

(Atari et al., 2022)

For each of the statements below, please indicate how well each statement describes you or your opinions. Response options: Does not describe me at all (1); Slightly describes me (2); Moderately describes me (3); Describes me fairly well (4); Describes me extremely well (5).

1. Caring for people who have suffered is an important virtue.
2. The world would be a better place if everyone made the same amount of money.
3. I think people who are more hard-working should end up with more money.
4. I think children should be taught to be loyal to their country.
5. I think it is important for societies to cherish their traditional values.
6. I think the human body should be treated like a temple, housing something sacred within.
7. I believe that compassion for those who are suffering is one of the most crucial virtues.
8. Our society would have fewer problems if people had the same income.
9. I think people should be rewarded in proportion to what they contribute.
10. It upsets me when people have no loyalty to their country.
11. I feel that most traditions serve a valuable function in keeping society orderly.
12. I believe chastity is an important virtue.
13. We should all care for people who are in emotional pain.
14. I believe that everyone should be given the same quantity of resources in life.
15. The effort a worker puts into a job ought to be reflected in the size of a raise they receive.
16. Everyone should love their own community.
17. I think obedience to parents is an important virtue.
18. It upsets me when people use foul language like it is nothing.
19. I am empathetic toward those people who have suffered in their lives.
20. I believe it would be ideal if everyone in society wound up with roughly the same amount of money.

21. It makes me happy when people are recognized on their merits.
22. Everyone should defend their country, if called upon.
23. We all need to learn from our elders.
24. If I found out that an acquaintance had an unusual but harmless sexual fetish I would feel uneasy about them.
25. Everyone should try to comfort people who are going through something hard.
26. When people work together toward a common goal, they should share the rewards equally, even if some worked harder on it.
27. In a fair society, those who work hard should live with higher standards of living.
28. Everyone should feel proud when a person in their community wins in an international competition.
29. I believe that one of the most important values to teach children is to have respect for authority.
30. People should try to use natural medicines rather than chemically identical human-made ones.
31. It pains me when I see someone ignoring the needs of another human being.
32. I get upset when some people have a lot more money than others in my country.
33. I feel good when I see cheaters get caught and punished.
34. I believe the strength of a sports team comes from the loyalty of its members to each other.
35. I think having a strong leader is good for society.
36. I admire people who keep their virginity until marriage.

Scoring: Average each of the following items to get six scores corresponding with the six foundations.

Care = 1, 7, 13, 19, 25, 31

Equality = 2, 8, 14, 20, 26, 32

Proportionality = 3, 9, 15, 21, 27, 33

Loyalty = 4, 10, 16, 22, 28, 34

Authority = 5, 11, 17, 23, 29, 35

Purity = 6, 12, 18, 24, 30, 36