

Political Extremism and Conspiracy Theory Beliefs

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TABLE OF CONTENTS

LIST OF FIGURES	v
LIST OF TABLES	vi
ABSTRACT.....	vii
DECLARATION.....	viii
ACKNOWLEDGEMENTS.....	ix
CHAPTER 1: INTRODUCTION.....	1
1.1 A Deadly Association.....	1
1.2 Political Extremism.....	1
1.3 Conspiracy Theory.....	3
1.4 Existing Literature	4
1.5 Limitations of Previous Studies.....	7
1.5.1 Left-Right Political Measure.....	7
1.5.2 Libertarian-Authoritarian Political Measure.....	8
1.5.3 Lack of Psychopathological Measures.....	8
1.6 The Present Study	9
1.6.1 Addressing the Limitations of Previous Studies	9
1.6.2 Pre-validated Measures	9
1.6.3 Crowdsourcing Participants.....	10
1.7 Hypotheses.....	11
CHAPTER 2: METHODOLOGY	12
2.1 Analysis of Statistical Power	12
2.2 Participants.....	12

2.3 Sampling	13
2.4 Procedure	14
2.4.1 Control Features.....	15
2.4.2 Pilot Study.....	15
2.5 Psychometric Measures	15
2.5.1 Demographics	15
2.5.2 Left-Right Self-Placement Item (LRSPI)	16
2.5.3 Left-Right Scale (LRS) and Libertarian-Authoritarian Scale (LAS).....	16
2.5.4 Belief in Conspiracy Theory Inventory (BCTI).....	17
2.5.5 The Generic Conspiracist Beliefs Scale (GCBS).....	17
2.5.6 Schizotypy Personality Questionnaire-Brief Revised (SPQ-BR)	18
2.5.7 Peters Delusions Inventory (PDI)	18
CHAPTER 3: RESULTS	20
3.1 Data Screening and Preliminary Analysis.....	20
3.2 Pearson Correlation Analysis	21
3.3 Hierarchical Regression Analysis	22
3.3.1 Predicting Conspiracy Theory Belief from Political Beliefs	23
3.3.2 Predicting Psychopathology from Political Beliefs	27
3.4 Refined Groups Comparisons	29
3.4.1 Comparisons of Conspiracy Theory Belief Across Political Groups.....	29
3.4.2 Comparisons of Psychopathology Across Political Groups.....	33
CHAPTER 4: DISCUSSION.....	35
4.1 Overview of Findings	35

4.2 Political Extremism and Conspiracy Theory	35
4.2.1 Discrepancies in Results	37
4.3 Political Extremism and Psychopathology	39
4.4 Methodological Strengths and Limitations.....	40
4.5 Societal Implications.....	40
4.6 Implications for Future Research.....	41
4.6.1 Causal Direction.....	41
4.6.2 Measuring Specific Conspiracies.....	42
4.7 Conclusions.....	44
REFERENCES	46
APPENDICES	51
Appendix A: Participant Information Form.....	51
Appendix B: Participant Consent Form.....	54
Appendix C: Demographic Measures.....	55
Appendix D: Left-Right Self-Placement Item (LRSPI).....	56
Appendix E: Left-Right Scale (LRS) and Libertarian-Authoritarian Scale (LAS)	56
Appendix F: Belief in Conspiracy Theory Inventory (BCTI)	57
Appendix G: Generic Conspiracist Beliefs Scale (GCBS).....	59
Appendix H: Schizotypal Personality Questionnaire - Brief Revision (SPQ-BR).....	60
Appendix I: The Peters Delusions Inventory (PDI).....	62

LIST OF FIGURES

1	Belief in conspiracy theories as linear and quadratic functions of left-right political beliefs	ii5
2	Belief in conspiracy theories as linear and quadratic functions of left-right political beliefs	26
3	Belief in conspiracy theories as linear and quadratic functions of libertarian-authoritarian political beliefs	26
4	Mean conspiracy theory belief presented as a function of left-right groups with 95% CIs	31
5	Mean conspiracy theory belief presented as a function of left-right groups with 95% CIs	32
6	Mean conspiracy theory belief presented as a function of libertarian-authoritarian groups with 95% CIs	32

LIST OF TABLES

1	Demographic characteristics of participants ($N = 300$)	12
2	Descriptive statistics for psychometric measures	20
3	Zero-order Pearson correlation matrix	22
4	Hierarchical regression: conspiracy theory belief scores as predicted by measures of political belief.....	24
5	Hierarchical regression: psychopathology scores as predicted by measures of political belief	27
6	Comparisons of conspiracy theory belief across political groups	29
7	Independent samples t-tests comparing conspiracy theory belief across political groups	31
8	Comparisons of psychopathology across political groups	33
9	Independent samples t-tests comparing psychopathology across political groups	34

ABSTRACT

INTRODUCTION: It has been proposed that political extremists are more likely to endorse conspiracy theories. Although politically extreme and conspiratorial beliefs vary greatly in their content, previous research has indicated they may be driven by similar psychological processes.

OBJECTIVES: This study examined the relationship between political extremism and conspiracy theory belief. It built upon previous work by Van Prooijen et al. (2015) and Krouwel et al. (2017) by testing whether this relationship is confounded by psychopathology.

METHODS: A total of 300 participants completed a cross-sectional survey that contained measures of political orientation, conspiracy theory belief, and psychopathology (including the Schizotypal Personality Questionnaire - Brief Revision and Peters Delusions Inventory).

RESULTS: This study found weak evidence of an association between political extremism and conspiracy theory beliefs. However, more refined political measures instead supported associations with specific types of political extremism. Although psychopathology scores were positively associated with conspiracy theory beliefs, they were not associated with political beliefs.

CONCLUSION: These findings suggest a need for future research that explores the causal direction of any potential relationships. Additionally, it may be valuable to explore how specific conspiracy theories cluster around different political persuasions.

DECLARATION

This thesis contains no material which has been accepted for the award of any other degree of diploma in any University, and, to the best of my knowledge, this thesis contains no material previously published except where due reference is made. I give permission for the digital version of this thesis to be made available on the web, via the University of Adelaide's digital thesis repository, the Library Search and through web search engines, unless permission has been granted by the School to restrict access for a period of time.

October, 2019

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To Paul Delfabbro. I do not know how you reply to my emails so quickly.

But I do know you are an insightful supervisor and now a friend.

To Lucina. Can you imagine a good girl? Who is supportive and thoughtful?

Yes, you can imagine. You really can.

To Hagrid H. Hotelle. Thank you for being a very good boy this year.

CHAPTER 1: INTRODUCTION

1.1 A Deadly Association

It is often claimed that extreme ideologies are associated with conspiratorial thinking. We see examples of this association with religious and ethnic sources of extremism. For instance, Bindner (2018) notes the use of conspiracy theories by jihadists to portray themselves as victims of Jews and the West, in turn justifying their acts of dehumanisation. Similarly, Natrass (2013) notes prominent Black nationalists, such as Louis Farrakhan, who have promulgated the claim that the AIDS virus was invented by the CIA to kill black people. However, it is political extremists who ostensibly have the greatest affinity with conspiracism. Jewish conspiracies facilitated the holocaust in Nazi Germany while conspiracies about farmers and landowners facilitated the class purges of various communist states (Midlarsky, 2011). In the modern day, conspiracy theories continue to influence the thinking of political terrorists (Bartlett & Miller, 2010). For these reasons, it is perhaps unsurprising that recent findings have indicated there is a positive association between political extremism and endorsement of conspiracy theories (Van Prooijen, Krouwel, and Pollet, 2015; Krouwel, Kutiyiski, Van Prooijen, Martinsson, and Markstedt, 2017). To discuss this association, it is first necessary to delineate the relevant terms.

1.2 Political Extremism

In popular discourse the term extremist is often used pejoratively against political opponents. In academic usage, however, political extremism refers to ideologies that are positioned furthest from the political centre. Extremists are contrasted with moderates, who are within the political mainstream of their societies. According to Mudde (1996), political extremists are distinct in their attitude towards democracy. While moderates tend to strive for

change within the legitimate channels of democracy, extremists often desire to fundamentally change the dominant system of governance. Politically extreme beliefs have been associated with dogmatic intolerance of divergent perspectives (Van Prooijen & Krouwel, 2017) and a greater likelihood of endorsing political violence (e.g. property destruction and assassination; Greenberg & Jonas, 2003). For this reason, political extremism can often be the antecedent of genocide, terrorism, and extreme or inflexible activism (Midlarsky, 2011).

It has been found that, while people on the extreme left and right of politics are antithetical in their beliefs, they share several psychological characteristics. One such characteristic is overconfidence in their beliefs. Fernbach, Rogers, Fox and Sloman (2013, p. 939) found that political extremism was facilitated by an “illusion of understanding”. When participants were asked to comprehensively explain a political issue this reduced their illusion of understanding, which in turn, resulted in participants adopting more moderate political views. Similarly, the results of Rollwage, Dolan, and Fleming (2018) have indicated those on the political extremes performed worse on measures of metacognitive ability. That is, extremists were less able to modify their incorrect views when presented with disconfirming evidence. One final characteristic is resistance to divergent perspectives. For instance, Greenberg and Jonas (2003) found that political extremists were more likely to derogate outgroup members. Consistent with this, Van Prooijen and Krouwel (2017) found that political extremists were more likely to exhibit dogmatic intolerance towards divergent perspectives. Many of these psychological traits are also shared by believers of conspiracy theories.

1.3 Conspiracy Theory

Conspiracy theories are accounts that are viewed as erroneous by greater society (Swami et al., 2017). Such accounts usually attribute negative events to secret plots devised by malevolent and self-serving actors. These are contrasted with non-conspiratorial accounts, which instead attribute events to misfortune or failings of human competency. Although conspiracy theories vary in their subject matter, they generally appear to be motivated by the same psychological processes (Lewandowski, Oberauer, & Gignac, 2013; Swami et al., 2016). Conspiracy theories are characterised by their poor evidentiary support (Sutton & Douglas, 2014) and circular reasoning, which makes them resistant to falsification (Swami et al., 2017). Conspiracy theory beliefs are also characterised by suspicion towards mainstream institutions such as corporations, governments, and the media. As a result, those who subscribe to these views often withdraw from civic participation and attempt to undermine public health initiatives (e.g. initiatives regarding vaccination or fluoride consumption).

Like political extremism, belief in conspiracy theories has been extensively researched. Some research has found associations with demographic variables, such as age and gender. In particular, education appears to be a consistent predictor of reduced conspiracy theory belief (Van Prooijen, 2017; Georgiou, Delfabbro & Balzan, 2019). This may be because higher levels of education are associated with greater crystallised intelligence and critical thinking abilities, which are both negatively associated with conspiracy theory belief (Solon, 2014). The field has also consistently found that belief in one conspiracy theory strongly predicts belief in additional conspiracy theories (Swami et al., 2011; Wood, Douglas & Sutton, 2012). This has been taken as evidence that some people are dispositionally inclined to understand world events through conspiratorial explanations (Swami et al., 2011). Conspiracy theory belief has also been linked

with psychological characteristics such as openness to novel ideas and feelings of powerlessness or being disadvantaged (Krouwel, & Van Prooijen, 2015). In particular, psychopathological traits, such as schizotypy and delusion-proneness have been consistently strong predictors of conspiracy belief (Darwin, Neave, & Holmes, 2011; Barron et al., 2014; Van Der Tempel, & Alcock, 2015; Georgiou, Delfabbro & Balzan, 2019). People who score highly on these measures are characterised by their suspicion and acceptance of associations that others do not perceive. While conspiracy theory belief and political extremism have been well studied individually, their association is far less understood.

1.4 Existing Literature

Previous research has found indications of shared characteristics between political extremism and conspiracy theories. For instance, both have been described as “crippled epistemologies” (Wood, Douglas, & Sutton, 2012; Fernbach, Rogers, Fox, & Sloman, 2013). Adherents of politically extreme and conspiratorial beliefs tend to be suspicious of information sources outside of their respective in-groups. As a result, adherents of these beliefs primarily consume information originating from like-minded individuals. This has the effect of consistently reinforcing pre-existing beliefs and censoring contradictory ideas. This behaviour has likely been further enabled by the rise of the Internet, smart phones, and social media.

Both political extremism and conspiracy theories also appear to have some psychological basis. For instance, both categories of beliefs are characterised by their tendency to engage in black-and-white thinking (Van Prooijen, & Krouwel, 2019; Swami et al., 2011). That is, they tend to dichotomously classify others as good or evil. Adherents of politically extreme or conspiratorial beliefs may see others as wilfully evil where nonadherents see the same

individuals as misguided. Similarly, Van Prooijen et al. (2015) has speculated that adherents of both categories of beliefs may be characterised by their desire to make threatening societal events understandable and predictable. Consequently, both conspiracy theories and political extremism may feed into each other creating simplicity and meaning out of complex world events. These psychological associations have provided the justification for the exploration into the association between political extremism and conspiracy theories.

Though interesting, many studies have only indirectly measured the association between political extremism and conspiracy theory beliefs. For instance, Inglehart (1987) found an association between political extremism and distrust of judicial systems. However, such findings leave open the possibility that participants may have distrusted the judicial systems for non-conspiratorial reasons. Similarly, Swami (2012) found right-wing authoritarians were more likely to endorse the Jewish world domination conspiracy. However, this effect may have been more reflective of antisemitic attitudes than greater conspiratorial thinking. In addition, Leiser, Duani, and Wagner-Egger (2017) found that rejection of classical neo-liberal economic views in favour of conspiratorial economic views (i.e. believing that destructive economic outcomes were intentionally caused by small but powerful groups) was associated with endorsement of non-economic conspiracy theories. Once again, these findings are not directly relevant as economic views only constitute one dimension of political beliefs.

Only two articles have directly assessed the association between political extremism and conspiracy theory belief. The first, completed by Van Prooijen et al. (2015), found political extremists on the left and right of politics were significantly more likely to endorse conspiracy theories. Moreover, by including measures of non-political attitudes, the authors were able to rule out general response extremism as a possible confound. The second article by similar

authors, Krouwel et al. (2017), obtained similar findings and additionally indicated that extremists tend to have negative economic evaluations compared to their politically moderate counterparts. In both cases, this relationship was supported using hierarchical regression analysis in the form of significant quadratic relationships between political orientation and conspiracy theory beliefs.

While Van Prooijen et al. (2015) and Krouwel et al. (2017) have indicated those on the political extremes are more likely to endorse conspiracy theories, it may additionally be that one extreme is more conspiratorial than the other. In testing their quadratic relationship, Krouwel et al. (2017) additionally found evidence of a linear relationship, indicating the extreme left was more conspiratorial than the extreme right. Further, the authors tested their conspiracy theory items individually to assess the consistency of this effect. All items were significantly more accepted by the extreme left than the extreme right, except for one item concerning left-wing politicians. Similarly, some previous research has also indicated that conspiracy theory belief may be stronger among extreme authoritarians (Grzesiak-Feldman & Irzycka, 2009; Grzesiak-Feldman, 2015). These differences may reflect the particularities of national politics or may instead result from shared psychological characteristics. In the case of extreme leftism, conspiracy beliefs may be higher owing to feelings of being disadvantaged or disenfranchised (Swami et al., 2016). In the case of extreme authoritarianism, this may reflect less education and critical thinking ability, which in turn is associated with greater conspiracy theory belief (Solon, 2014; Van Prooijen, 2017). However, this research program has been characterised by several limitations that need to be addressed in future studies.

1.5 Limitations of Previous Studies

1.5.1 Left-Right Political Measure

The first issue concerns the measurement of political orientation. Van Prooijen et al. (2015) and Krouwel et al. (2017) assessed political orientation through a single item, which instructed participants to place themselves along a left-right continuum (i.e. LRSPI). In the past, Evans, Heath, and Lalljee (1996) have been critical of the LRSPI. They argue it possesses weak discrimination and is unreliable because random error caused by idiosyncratic interpretation does not cancel out as occurs with measures containing several items. In addition, the LRSPI presupposes participants possess an understanding of the political spectrum, which is somewhat abstract. It is likely that some participants are not interested in politics and consequently do not understand what categorically distinguishes between the points on the political spectrum. Furthermore, the political spectrum is somewhat subjective. Participants are likely to have different understandings of what constitutes “extremely left wing”. This is in part because understandings of ideological terms depend on one’s political milieu. A participant living in a right-wing district may develop a distorted sense of average political beliefs. As a result, they may falsely perceive themselves as extremely left-wing when they are closer to the centre-left. Subjectivity also arises from political language, which is often employed to denigrate opponents. For example, it was regular for US President Obama to be labelled as extremely left wing by conservative critics and right wing by liberal critics. For these reasons, Evans, Heath, and Lalljee (1996) argue that the LRSPI begets inconsistent and unstable results. Thus, additional research would benefit from the use of a more refined left-right measure.

1.5.2 Libertarian-Authoritarian Political Measure

A second issue concerns the reliance on only a left-right political measure. Van Prooijen et al. (2015) and Krouwel et al. (2017) operationalised “political extremists” as the those on the ends of the left-right political spectrum. However, using a left-right measure alone presumes that political beliefs are a unidimensional construct. As noted by Heywood (2017), political scientists have long lamented the oversimplicity of the single left–right spectrum. They argue it insufficiently captures variation in political beliefs. For this reason, most scholars prefer the two-dimensional model. This includes the left-right dimension, which concerns attitudes regarding inequality and free trade and an additional libertarian-authoritarian dimension, which concerns attitudes regarding criminal justice and personal freedoms. This model originated with Eysenck (1976) who revealed these two dimensions were correlated but factorially distinct. Most subsequent research has replicated Eysenck’s (1976) factors, albeit with different names. For instance, the Nolan Chart names these dimensions "economic freedom" and "personal freedom". The two-dimensional model is also used by most publicly available voting advice tools (e.g. Vote Compass). Research that uses a libertarian-authoritarian scale would capture different categories of extremists. On the authoritarian end are neo-fascists (e.g. Golden Dawn, which has been associated with persistent violence; Petrou & Kandylis, 2016). On the libertarian end are anti-statists (e.g. the sovereign citizen movement, which at one point was ranked by U.S. law enforcement as the greatest terrorist risk of any group; Rivinius, 2014).

1.5.3 Lack of Psychopathological Measures

A third issue concerns the lack of psychopathological measures employed by Van Prooijen et al. (2015) and Krouwel et al. (2017). As noted, psychopathological factors, such as schizotypy and delusion-proneness, appear to be strong predictors of conspiracy theory beliefs.

First, their inclusion in research would provide support for previous studies that have implicated psychopathology in conspiracy theory belief. Second, the inclusion of these measures would reveal whether psychopathology is confounding the relationship between political extremism and conspiracy theory belief.

1.6 The Present Study

1.6.1 Addressing the Limitations of Previous Studies

Because these studies were conducted by many of the same researchers with similar methodologies, these findings must be replicated before they are extended. This study aimed to provide a high-quality replication of the untested relationship found by Van Prooijen et al. (2015) and Krouwel et al. (2017). In doing so it employed a cross sectional correlational design. Assuming the relationship was real, we expected it to replicate when using conceptually similar measures and participants from a different country. This study also aimed to address the aforementioned limitations of the previous research. In addition to the LRSPI used by Van Prooijen et al. (2015) and Krouwel et al. (2017), this study employed more refined measures of political views developed by Evans, Heath, and Lalljee (1996). These measures (i.e. LRS and LAS) reflect the left-right and libertarian-authoritarian dimensions noted above. This study also included psychopathological measures (i.e. schizotypy and delusion proneness) to test whether they were confounding the relationship.

1.6.2 Pre-validated Measures

In addition to addressing the limitations of previous findings, this study also sought to employ measures suitably rigorous for confirmatory research. Van Prooijen et al. (2015) and

Krouwel et al. (2017) used ad hoc measures of conspiracy theory belief. These items appeared valid and demonstrated strong internal consistency as evidenced by Cronbach's α scores above the conventional .70 cut-off. However, because this research aimed to validate their findings, we instead employed pre-validated that were previously found to possess strong psychometric properties.

1.6.3 Crowdsourcing Participants

A final note about this study concerns the sampling procedure. Convenience samples are less suited to studies investigating political extremism and conspiracy theories. Undergraduate psychology students are disproportionately young and female, which likely results in predisposition towards political leftism. Simultaneously, their enrolment in a scientific discipline and training in critical thinking likely protects against conspiracy theory beliefs. This results in inadequate coverage of the range of beliefs likely to be present in the broader community (Cooper, McCord, & Socha, 2010). For these reasons, researchers in this field prefer to enlist participants from online crowdsourcing platforms, which are more representative of the general population. To register for such platforms, participants are typically required to register through email verification and connection of bank account details. Crowdsourcing platforms are additionally beneficial in that respondents tend to be more attentive to survey questions (Buhrmester, Kwang, & Gosling, 2011). Further, they reduce self-selection bias as participants are financially motivated to complete all studies they are offered. Van Prooijen et al. (2015) enlisted participants through Amazon Mechanical Turk, the dominant platform on the market. This study instead opted for Prolific Academic, a newer service specifically designed for researchers. Recent studies have indicated that participants enlisted through Prolific Academic

are more naïve, less dishonest, and pass more attention-checks (Palan & Schitter, 2018; Peer, Brandimarte, Samat, & Acquisti, 2017).

1.7 Hypotheses

The aims of this study converged onto two key hypotheses.

(H1) Political extremism (as measured by the Left-Right Self-Placement Item; LRSPI, Left-Right Scale; LRS, and Libertarian-Authoritarian Scale; LAS) will be associated with greater conspiracy theory belief (as measured by the Belief in Conspiracy Theory Inventory; BCTI, and Generalised Conspiracy Belief Scale; GCBS).

(H2) Political extremism (as measured by the Left-Right Self-Placement Item; LRSPI, Left-Right Scale; LRS, and Libertarian-Authoritarian Scale; LAS) will be associated with higher scores on measures of psychopathology (as measured by the Peters Delusions Inventory; PDI, and Schizotypal Personality Questionnaire-Brief Revision; SPQ-BR).

CHAPTER 2: METHODOLOGY

2.1 Analysis of Statistical Power

A priori power analysis was conducted using G*Power® Version 3.1.9.3. To assess the hypotheses this study conducted Pearson's correlations, independent samples t-tests, and hierarchical regressions with five predictor variables. Previous research by Van Prooijen et al. (2015) and Krouwel et al. (2017) indicated the effect sizes for these tests would be moderate to small. Considering this and presuming the conventional power level of .80 and α value of .05, it was determined the study would be appropriately powered with 300 participants. Informed by this analysis, data collection ceased at the collection of this sample size.

2.2 Participants

During collection 10 cases were excluded because of incomplete fields. Demographic characteristics of the remaining 300 participants are presented in Table 1.

Table 1

Demographic characteristics of participants (N = 300)

Variable	Subcategory	Size of Sub-sample	Percentage of Total Sample
Gender	Men	128	42.7
	Women	172	57.3
Age	18-24	45	15.0
	25-34	80	26.7
	35-44	58	19.3
	45-54	63	21.0
	55-64	42	14.0

Variable	Subcategory	Size of Sub-sample	Percentage of Total Sample
	65+	12	4.0
Highest level of completed education	Not completed high school	8	2.7
	High school	78	26.0
	Diploma or similar qualification	52	17.3
	Bachelor's degree	119	39.7
	Master's or PhD	43	14.3

2.3 Sampling

Participants were recruited from the online crowdsourcing platform, Prolific Academic. They were reimbursed for their participation according to the Prolific Academic compensation rate (£5.01/ per hour) for 20 minutes of participation. The study was available for two days during the 14th and 15th of July 2019. There were no widely reported extremist attacks leading up to or during data collection that may have primed participant's beliefs.

Through Prolific Academic, participants were pre-screened by their country of origin to control for differences in national politics. The UK was chosen because the large participant pool of UK citizens allowed for further pre-screening based on political beliefs. This pre-screening was done to ensure adequate coverage of the political spectrum. Use of the UK sample had additional benefits. First, UK citizens had not been studied in this field before. Therefore, it was possible to examine whether findings obtained in Europe and the US could be generalised to another country. Second, our measures of political beliefs (i.e. LRS, LAS) were originally normed and validated with UK samples which meant they were devised using the political spectrum relevant to the respondents.

To be eligible for the study, participants were required to be over the age of 18 and fluent in English. Further, they could not have already participated in the study or have been diagnosed with a psychological disorder. The sampling procedure was also restrictive in that it required participants to be familiar with the Internet. However, Internet based studies are well placed to capture political extremism and conspiracy theories, both of which are commonly propagated online. Furthermore, endorsement of politically extreme or conspiratorial ideas is often not tolerated in public discourse. For these reasons, participants tend to be weary of expressing certain views, especially in person. Internet based studies are suited to minimize social desirability bias (Joinson, 1999). This is likely enhanced by the fact that Prolific Academic users are aware that researchers are unable to access identifying information about them.

2.4 Procedure

This study employed a cross-sectional survey and was approved by the Human Research Ethics Subcommittee in the University of Adelaide's School of Psychology. Eligible participants were invited to complete the study through the Prolific online portal. Once they accepted this invitation, they were redirected to the survey, which was hosted on the website, SurveyMonkey©. The first page of the study contained participant information and consent forms (see Appendix A and B). Before commencing the study, participants were asked to acknowledge their eligibility as well as their understanding of the study information. On the same page participants were also asked to give their unique Prolific Academic ID to ensure anonymous tracking of their data. Following this, participants completed the survey battery, which was composed of demographic questions, two measures of political belief, two measures of conspiracy theory belief, and two measures of psychopathology (see Appendices C to I).

Measures were presented on individual pages. Participants moved forward through the study by selecting “next” after completing each measure in turn. Once completed, participants were directed back to the Prolific portal.

2.4.1 Control Features

Measures of conspiracy theory and political belief may prime participants to answer subsequent questions a certain way. To minimize response bias resulting from such order effects, the survey website randomized the order of measures and questions within measures for each participant. Further, to reduce incomplete datasets, the survey website required participants to complete every question before moving onto the next page.

2.4.2 Pilot Study

Prior to the main study a pilot was conducted with 20 participants so that any potential issues could be resolved. Pilot participants successfully completed the study in an average of 20 minutes. Participant feedback returned at the completion of the pilot indicated all instructions were understood and no technical problems were experienced.

2.5 Psychometric Measures

2.5.1 Demographics

Previous research has indicated that demographic factors may be related to political orientation and conspiracy theory beliefs (Van Prooijen et al., 2015; Krouwel et al., 2017). In particular, several studies have indicated education is a consistent predictor of conspiracy theory belief (Van Prooijen, 2017; Georgiou, Delfabbro & Balzan, 2019). Consequently, participants

were asked to complete demographic items (i.e. age, gender, and highest level of completed education), which would later be controlled for in hierarchical regression analysis.

2.5.2 Left-Right Self-Placement Item (LRSPI)

As mentioned, Van Prooijen et al. (2015) and Krouwel et al. (2017) used a single item measure of political beliefs. This item asks participants to place themselves on seven-point Likert-scale from 1 (extremely left-wing) to 7 (extremely right-wing). We included this item to validate against our additional political measure described below.

2.5.3 Left-Right Scale (LRS) and Libertarian-Authoritarian Scale (LAS)

Political beliefs were measured using a 15-item scale developed by Evans, Heath, and Lalljee (1996). Unlike the LRSPI used by Van Prooijen et al. (2015) and Krouwel et al. (2017), this scale captures political beliefs by asking respondents to indicate their agreement with statements about specific issues on a Likert-scale from 1 (total agreement) to 7 (total disagreement). The scale's two dimensions are useful in examining whether conspiracy theory belief is associated with specific types of political extremism. The left-right scale (LRS) asks questions such as "Government should redistribute income from the better off to those who are less well off". The libertarian-authoritarian scale (LAS) asks questions such as "People who break the law should be given stiffer sentences". From these questions average ideological positions are derived; an approach which is similar to that used by publicly available voting advice tools (e.g. Vote Compass). LRS scores have a theoretical range of 5 to 35, with higher scores reflecting greater affinity with the political right. LAS scores have a theoretical range of 10 to 70, with higher scores reflecting greater affinity with authoritarianism.

In development, these scales demonstrated strong psychometric properties. Internal consistency was evidenced by Cronbach's α values of .84 and .79 respectively. Test retest

reliability was evidenced by high concurrence in scores over a one-year period. Construct validity was evidenced by valid prediction of other measures of political beliefs as well as support for political parties. These psychometric properties remained strong regardless of how interested participants were in politics.

2.5.4 Belief in Conspiracy Theory Inventory (BCTI)

Conspiracy theory belief was assessed using the BCTI, a 15-item self-report measure developed by Swami et al. (2010). The scale asks respondents to indicate their agreement with statements about well-known conspiracy theories on a Likert-scale from 1 (completely false) to 9 (completely true). For example, “The Apollo moon landings never happened and were staged in a Hollywood film studio”. BCTI scores have a theoretical range of 15 to 135, with higher scores reflecting greater conspiracy theory belief.

In development, the scale demonstrated strong construct validity, factorial validity, and internal consistency. Subsequent research has found the BCTI possessed the strongest psychometric properties of the existing conspiracy theory belief measures (Swami et al., 2017).

2.5.5 The Generic Conspiracist Beliefs Scale (GCBS)

Conspiracy theory belief was also assessed using the GCBS, a 15-item self-report measure developed by Brotherton (2013). Unlike the BCTI, this scale does not refer to any specific conspiracies. Rather, respondents indicate their agreement with statements about general conspiracy theory on a Likert-scale from 1 (Definitely not true) to 5 (Definitely true). For example, “Certain significant events have been the result of the activity of a small group who secretly manipulate world events”. GCBS scores have a theoretical range of 15 to 75, with higher scores reflecting greater conspiracy theory belief.

In development, the scale demonstrated strong test-retest reliability and content validity. Subsequent research found the GCBS possessed stronger psychometric properties than similar generic conspiracy theory belief measures (Swami et al., 2017). For example, the similar Conspiracist Mentality Questionnaire was originally praised but has since been subject to concerns regarding construct validity.

2.5.6 Schizotypy Personality Questionnaire-Brief Revised (SPQ-BR)

Psychopathology was assessed using the SPQ-BR, a 31-item self-report measure developed by Cohen (2010). The scale is used in research and clinical practice to measure the diagnostic criteria of Schizotypal Personality Disorder. Respondents indicate their agreement with statements about their beliefs and experiences on a Likert-scale from 1 (Strongly Disagree) to 5 (Strongly Agree). For example, “Have you ever felt that you are communicating with another person telepathically by mind-reading?” SPQ-BR scores have a theoretical range of 32 to 160, with higher scores reflecting greater schizotypy.

The 31-item SPQ-BR is an abbreviation of an earlier 74-item SPQ measure. The original SPQ demonstrated strong internal consistency, construct validity, and convergent validity. The SPQ-BR demonstrated similar psychometric properties with fewer questions. Thus, it remains a reliable and valid instrument to assess schizotypy.

2.5.7 Peters Delusions Inventory (PDI)

Psychopathology was also assessed using the PDI, a 21-item self-report measure developed by Peters, Joseph, and Garety (2004). The scale is used to assess delusion proneness in both research and clinical practice. Participants indicate whether they endorse statements about their beliefs and experiences by responding yes or no. For example, “Do you ever feel as if things in magazines or on TV were written especially for you?” If a belief is endorsed

participants will then be asked three subsequent questions regarding the distress, preoccupation, and strength of that belief. These additional questions were not used in this study because they primarily serve to distinguish between clinical populations (Peters et al., 2004). Accordingly, our PDI scores have a theoretical range of 21 to 42, with higher scores reflecting greater delusion proneness.

This 21-item PDI is an abbreviation of an earlier 40-item PDI measure. The original 40-item PDI demonstrated strong internal consistency, construct validity, and convergent validity. The subsequent 21-item PDI demonstrated similar psychometric properties with fewer questions. For this reason, it remains a reliable and valid instrument to assess delusion proneness.

CHAPTER 3: RESULTS

3.1 Data Screening and Preliminary Analysis

All screening and analysis of data was conducted using SPSS Statistics® Version 25. As mentioned, 10 cases were excluded during collection because of incomplete fields. The remaining data were screened to determine suitability for the various analyses. There were no invalid values or aberrant responses. Inspection of box plots revealed that one case was an outlier on both the SPQ-BR and PDI; however, its exclusion would result in a negligible impact on the results. Inspection of normal P-P plots indicated independence of error terms. Inspection of scatterplots displaying predicted values against residuals indicated homoscedasticity. Correlation coefficients and variance inflation factors indicated sufficiently independent variables and thus an absence of multicollinearity. Given that these assumptions were met we proceeded with analysis.

Descriptive statistics of the measures are presented in Table 2. Slight floor effects were observed among LRS and PDI scores. For PDI scores, this is to be expected having employed a non-clinical sample. All other measures adequately covered the upper and lower end of the sample's distribution. Cronbach's α scores for all measure were above the conventional .70 cut-off indicating acceptable internal consistency reliability.

Table 2

Descriptive statistics for psychometric measures

Measure	Number of Items	Theoretic Minimum Score	Theoretic Maximum Score	Actual Minimum Score	Actual Maximum Score	Mean	Standard Deviation	Cronbach's α
LRSPI	1	1	7	1	7	3.80	1.58	n/a
LRS	5	5	35	5	29	13.64	5.61	.77

Measure	Number of Items	Theoretic Minimum Score	Theoretic Maximum Score	Actual Minimum Score	Actual Maximum Score	Mean	Standard Deviation	Cronbach's α
LAS	10	10	70	10	66	37.01	11.00	.85
BCTI	15	15	135	16	123	60.55	23.20	.91
GCBS	15	15	75	15	75	42.13	12.74	.93
SPQ-BR	32	32	160	37	151	87.63	20.64	.92
PDI	21	21	42	21	42	25.35	3.73	.81

Note. LRSPI = Left-Right Self-Placement Item, LRS = Left-Right Scale, LAS = Libertarian-Authoritarian Scale, BCTI = Belief in Conspiracy Theory Inventory, GCBS = General Conspiracy Belief Scale, SPQ-BR = Schizotypy Personality Questionnaire Brief-Revised, PDI = Peters Delusions Inventory.

3.2 Pearson Correlation Analysis

To gain a preliminary understanding of the relationships, a zero-order Pearson correlation matrix was derived from the data. As is indicated in Table 3, conceptually similar measures were associated with strong positive correlations. This includes the specific (i.e. BCTI) and general (i.e. GCBS) measures of conspiracy theory belief as well as the two measures of psychopathology (i.e. SPQ-BR and PDI). Furthermore, the LRS and LAS were more strongly correlated with the LRSPI than with each other, consistent with the two-factor structure of our chosen political measures.

The two conspiracy theory belief measures were positively correlated with the two psychopathology measures. That is, schizotypy and delusion proneness were associated with an increased endorsement of conspiracy theories. The LRSPI was not significantly correlated with measures of conspiracy belief or psychopathology. This indicates that the left-right position of participants was not related to belief in conspiracy theories or psychopathology. In contrast, the LRS was negatively correlated with measures of conspiracy belief and, to a lesser extent, psychopathology. This, contradictorily, indicates that leftists were more likely to endorse

conspiracies and possess psychopathological traits. The LAS was negatively correlated with measures of conspiracy belief but not measures of psychopathology. This indicates that participants who were more authoritarian were more likely to endorse conspiracy theories.

Table 3

Zero-order Pearson correlation matrix

	LRSPI	LRS	LAS	BCTI	GCBS	SPQ-BR
LRS	.44***					
LAS	.62***	.32***				
BCTI	.07	-.20***	.17**			
GCBS	.11	-.22***	.22***	.85***		
SPQ-BR	-.01	-.18**	.03	.29***	.36***	
PDI	.04	-.13*	.07	.38***	.43***	.62***

Note. LRSPI = Left-Right Self-Placement Item, LRS = Left-Right Scale, LAS = Libertarian-Authoritarian Scale, BCTI = Belief in Conspiracy Theory Inventory, GCBS = General Conspiracy Belief Scale, SPQ-BR = Schizotypy Personality Questionnaire Brief-Revised, PDI = Peters Delusions Inventory.

* $p < .05$; ** $p < .01$; *** $p < .001$.

3.3 Hierarchical Regression Analysis

To address our hypotheses, we ran 12 hierarchical regression analyses. H1 predicted that there would be a positive relationship between political extremism and greater endorsement of conspiracy theories. To test this, we used the conspiracy theory belief measures (i.e. BCTI, GCBS) as the outcome variables, as indicated in Table 4. H2 predicted that there would be a positive relationship between political extremism and psychopathology. To test this, we used the psychopathology measures (i.e. SPQ-BR, PDI) as the outcome variables, as indicated in Table 5. Each of the regressions had 3 steps. In step 1 we entered demographic variables (i.e. age, gender, and education) to control for their variance. In step 2 we added the respective political measure (i.e. LRSPI, LRS, LAS) as a linear effect. A significant linear term indicates a monotonic

relationship between political ideology and conspiracy theory belief. In step 3 we added the respective political measure (i.e. LRSPI, LRS, LAS) as a quadratic effect. A significant quadratic term indicates whether greater conspiracy theory endorsement was evident at the political extremes. AIC values were calculated to provide further insight into the comparative strength of the models while accounting for the increased number of parameters.

3.3.1 Predicting Conspiracy Theory Belief from Political Beliefs

The first set of three regressions were run with BCTI scores as the outcome variable. In step 1, entry of demographic variables revealed a significant effect for education ($\beta = -.24$, $p < .01$), but no significant effect for age ($\beta = -.07$, $p = .27$) or gender ($\beta < .01$, $p = .99$). Step 2 revealed significant linear effects for the LRS ($\beta = -.25$, $p < .01$) and LAS ($\beta = .23$, $p = .01$) regressions and a non-significant linear effect for the LRSPI ($\beta = .06$, $p = .27$) regression. Step 3 revealed the non-significant quadratic effects for the LRSPI ($\beta = .06$, $p = .13$), LRS ($\beta = .03$, $p = .50$), and LAS ($\beta = .04$, $p = .48$) regressions.

The second set of three regressions were run with GCBS scores as the outcome variable. In step 1, entry of demographic variables revealed a significant effect for education ($\beta = -.15$, $p < .01$), but no significant effect for age ($\beta = -.03$, $p = .35$) or gender ($\beta = .02$, $p = .82$). Step 2 revealed significant linear effects for the LRS ($\beta = -.15$, $p < .01$) and LAS ($\beta = .15$, $p < .01$) regressions and a non-significant linear effect for the LRSPI ($\beta = .05$, $p = .09$) regression. Step 3 revealed a significant quadratic effect for the LRSPI ($\beta = .05$, $p = .03$) regression and non-significant quadratic effects for the LRS ($\beta = .03$, $p = .34$) and LAS ($\beta = -.02$, $p = .57$) regressions.

Table 4

Hierarchical regression: conspiracy theory belief scores as predicted by measures of political belief

Criterion Variable	Predictor Variable	Model	ΔF (df)	Sig. F Change	ΔR^2	AIC	Rel. LL
BCTI	LRSPI	Control Variables	3.26 (3, 296)*	.02	.03	258.86	1
		Linear	1.22 (1, 295)	.27	<.01	259.62	.68
		Quadratic	2.35 (1, 294)	.13	.01	259.24	.83
BCTI	LRS	Control Variables	3.26 (3, 296)*	.02	.03	258.86	.02
		Linear	9.94 (1, 295)**	<.01	.03	250.92	1
		Quadratic	.25 (1, 294)	.62	<.01	252.67	.42
BCTI	LAS	Control Variables	3.26 (3, 296)*	.02	.03	258.86	.06
		Linear	7.75 (1, 295)**	<.01	.03	253.08	1
		Quadratic	.50 (1, 294)	.48	<.01	254.57	.47
GCBS	LRSPI	Control Variables	4.18 (3, 296)**	.01	.04	-103.54	.15
		Linear	2.84 (1, 295)	.09	.01	-104.41	.23
		Quadratic	4.86 (1, 294)*	.03	.02	-107.33	1
GCBS	LRS	Control Variables	4.18 (3, 296)**	.01	.04	-103.54	.01
		Linear	11.63 (1, 295)**	<.01	.04	-113.14	1
		Quadratic	.90 (1, 294)	.34	<.01	-112.06	.58
GCBS	LAS	Control Variables	4.18 (3, 296)**	.01	.04	-103.54	.01
		Linear	11.92 (1, 295)**	<.01	.04	-113.42	1
		Quadratic	.32 (1, 294)	.57	<.01	-111.75	.43

Note. LRSPI = Left-Right Self-Placement Item, LRS = Left-Right Scale, LAS = Libertarian-Authoritarian Scale, BCTI = Belief in Conspiracy Theory Inventory, GCBS = General Conspiracy Belief Scale, SPQ-BR = Schizotypy Personality Questionnaire Brief-Revised, PDI = Peters Delusions Inventory.

AIC = Akaike information criterion; Rel. LL = relative likelihood of model, $\exp([AIC_{\min} - AIC_i]/2)$.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Consistent with our expectations, the results obtained for the BCTI and GCBS regressions were similar. In four out of the six regressions, significant linear effects were obtained. These remained after making Bonferroni adjustments for multiple testing. On the other hand, only one significant quadratic term was detected, and this became non-significant when a

Bonferroni adjustment was applied. In each case, the standardized beta coefficients were generally small despite significant changes in AIC values. Of the control variables, education was consistently associated with the largest coefficients supporting the negative association between conspiracy theory belief and higher levels of completed education. In Figure 1, we see a pattern of association similar to that found by Van Prooijen et al. (2015) and Krouwel et al. (2017) using the LRSPI. However, in Figures 2 and 3 we see a different pattern of association with the results of the LRS and LAS. In fact, the estimated quadratic relationship with the LAS is the inverse of what we would expect.

Contrary to the predictions of H1, there was weak evidence of a difference in conspiracy theory belief between political extremists and moderates. However, the significant linear effect of the LRS and LAS indicated that conspiracy theory belief may instead be associated with increased political leftism and authoritarianism.

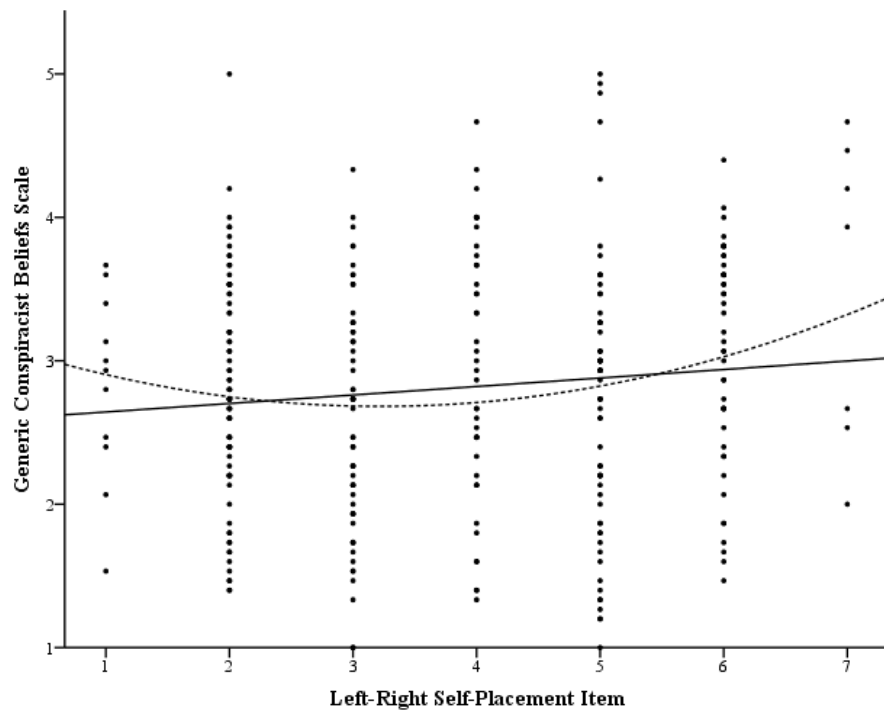


Figure 1. Belief in conspiracy theories as linear and quadratic functions of left-right political beliefs.

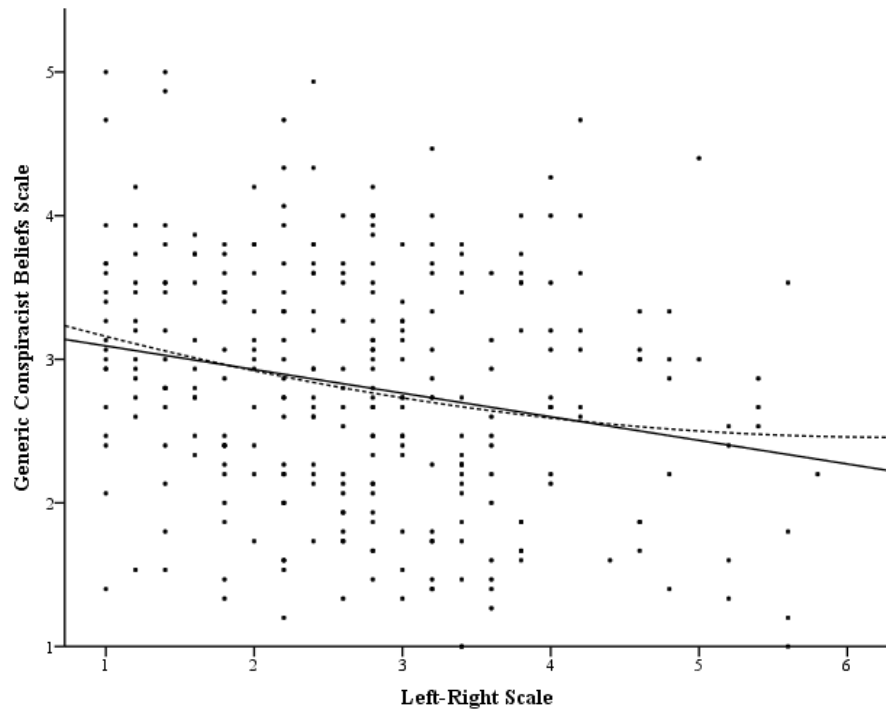


Figure 2. Belief in conspiracy theories as linear and quadratic functions of left-right political beliefs.

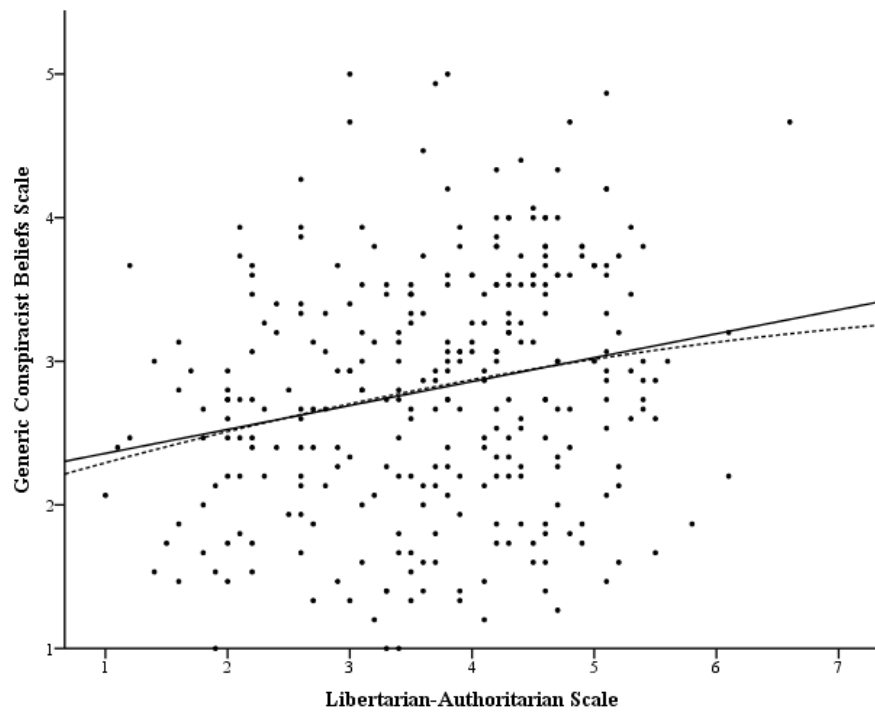


Figure 3. Belief in conspiracy theories as linear and quadratic functions of libertarian-authoritarian political beliefs.

3.3.2 Predicting Psychopathology from Political Beliefs

The third set of three regressions were run with SPQ-BR scores as the outcome variable. In step 1 entry of demographic variables revealed a significant effect for education ($\beta = -.11$, $p < .01$) and age ($\beta = -.08$, $p < .01$), but no significant effect for gender ($\beta = .11$, $p = .15$). Step 2 revealed a significant linear effect for the LRS ($\beta = -.09$, $p < .01$) regression and non-significant linear effects for the LRSPI ($\beta = .01$, $p = .80$) and LAS ($\beta = .02$, $p = .53$) regressions. Step 3 revealed non-significant quadratic effects for the LRSPI ($\beta = .01$, $p = .41$), LRS ($\beta = .02$, $p = .40$), and LAS ($\beta = -.04$, $p = .13$) regressions.

The fourth set of three regressions were run with PDI scores as the outcome variable. In step 1 entry of demographic variables revealed a significant effect for education ($\beta = -.02$, $p = .02$) and age ($\beta = -.03$, $p < .01$), but no significant effect for gender ($\beta = -.01$, $p = .64$). Step 2 revealed non-significant linear effects for the LRSPI ($\beta = .01$, $p = .25$), LRS ($\beta = -.02$, $p = .05$), and LAS ($\beta = .01$, $p = .11$) regressions. Step 3 revealed a significant quadratic effect for the LRSPI ($\beta = .01$, $p = .02$) regression and non-significant quadratic effects for the LRS ($\beta = .01$, $p = .33$) and LAS ($\beta < .01$, $p = .58$) regressions.

Table 5

Hierarchical regression: psychopathology scores as predicted by measures of political belief

Dependent Variable	Independent Variable	Model	ΔF (df)	Sig. F Change	ΔR^2	AIC	Rel. LL
SPQ-BR	LRSPI	Control Variables	6.00 (3, 296)**	<.01	.06	-273.73	.1
		Linear	.06 (1, 295)	.80	<.01	-271.79	.38
		Quadratic	.67 (1, 294)	.41	<.01	-270.48	.20
SPQ-BR	LRS	Control Variables	6.00 (3, 296)**	<.01	.06	-273.73	.04

Dependent Variable	Independent Variable	Model	ΔF (df)	Sig. F Change	ΔR^2	AIC	Rel. LL
		Linear	8.31 (1, 295)**	<.01	.03	-280.06	1
		Quadratic	.71 (1, 294)	.40	<.01	-278.78	.53
SPQ-BR	LAS	Control Variables	6.00 (3, 296)**	<.01	.06	-273.73	1
		Linear	.39 (1, 295)	.53	<.01	-272.13	.45
		Quadratic	2.25 (1, 294)	.13	<.01	-272.42	.52
PDI	LRSPI	Control Variables	8.01 (3, 296)***	<.01	.08	-1054.02	.19
		Linear	1.31 (1, 295)	.25	<.01	-1053.35	.14
		Quadratic	5.93 (1, 294)*	.02	.02	-1057.34	1
PDI	LRS	Control Variables	8.01 (3, 296)***	<.01	.08	-1054.02	.40
		Linear	3.81 (1, 295)	.05	.01	-1055.87	1
		Quadratic	.96 (1, 294)	.33	<.01	-1054.85	.60
PDI	LAS	Control Variables	8.01 (3, 296)***	<.01	.08	-1054.02	.74
		Linear	2.58 (1, 295)	.11	<.01	-1054.63	1
		Quadratic	.31 (1, 294)	.58	<.01	-1052.95	.43

Note. LRSPI = Left-Right Self-Placement Item, LRS = Left-Right Scale, LAS = Libertarian-Authoritarian Scale, BCTI = Belief in Conspiracy Theory Inventory, GCBS = General Conspiracy Belief Scale, SPQ-BR = Schizotypy Personality Questionnaire Brief-Revised, PDI = Peters Delusions Inventory.

AIC = Akaike information criterion; Rel. LL = relative likelihood of model, $\exp([AIC_{\min} - AIC_i]/2)$.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Consistent with our expectations, the results obtained for the SPQ-BR and PDI regressions were similar. Of the six regressions, there were only two significant terms; one linear and one quadratic. The linear effect remained significant when a Bonferroni adjustment was applied whereas the quadratic effect did not. Both effects were associated with small standardised beta coefficients and significant changes in AIC values. The control variables were additionally associated with small coefficients.

Contrary to the predictions of H2, there was little evidence of a difference in psychopathology between political extremists and moderates. However, there was some indication that psychopathology may be related to increased political leftism. This was indicated by the significant linear effect with the SPQ-BR and the linear effect approaching significance with the PDI.

3.4 Refined Groups Comparisons

3.4.1 Comparisons of Conspiracy Theory Belief Across Political Groups

To further understand the relationship between political extremism and conspiracy theory belief, sub-samples were drawn from the original sample. As indicated in Table 6, three refined groups were constructed for each political measure using participants who had scored in the upper, middle, and lower 10% ranges. The sub-samples for the LRSPI contained more participants because they had received the same score.

Table 6

Comparisons of conspiracy theory belief across political groups.

Sub-samples	Sub-sample Size	BCTI Mean	BCTI	GCBS Mean	GCBS
			Standard Deviation		Standard Deviation
LRSPI Extreme Left	85	3.99	1.44	2.78	.76
LRSPI Centre	40	4.43	1.61	2.95	.91
LRSPI Extreme Right	52	4.34	1.69	3.09	.81
LRS Extreme Left	32	4.44	1.32	3.18	.77
LRS Centre	48	3.92	1.51	2.73	.79
LRS Extreme Right	34	3.75	1.58	2.62	.90

Sub-samples	Sub-sample Size	BCTI Mean	BCTI	GCBS Mean	GCBS
			Standard Deviation		Standard Deviation
LAS Extreme Libertarian	34	3.56	1.38	2.38	.69
LAS Centre	36	4.16	1.58	2.91	.86
LAS Extreme Authoritarian	35	4.43	1.67	2.99	.83

Note. LRSPI = Left-Right Self-Placement Item, LRS = Left-Right Scale, LAS = Libertarian-Authoritarian Scale, BCTI = Belief in Conspiracy Theory Inventory, GCBS = General Conspiracy Belief Scale.

Groups were constructed using participants who had scored in the upper, middle, and lower 10% range of each political measure.

Results of independent samples t-tests between the political belief groups are presented in Table 7. There were more significant effects for the GCBS than for the BCTI; however, the effect sizes were similar across the two measures. Using the LRSPI there were no significant differences between the centre and the extremes, as indicated in Figure 4. Using the LRS and LAS, there were two significant differences between the centre and an extreme. One of these was between the centre and the extreme left on the LRS, as indicated in Figure 5. This suggests that the extreme left was more conspiratorial than the centre and extreme right, which were similarly conspiratorial. The other significant difference was between the centre and extreme libertarian groups on the LAS, as indicated in Figure 6. This suggests that the centre and extreme authoritarian groups were similarly conspiratorial, but the extreme libertarian group was less conspiratorial. The remaining four significant differences were between the two ends of the extremes. These differences were generally associated with larger effect sizes. This indicates the strongest differences were not between the extremes and moderates; rather, they were between the ends of the extremes. This is consistent with results of the hierarchical analysis and further contradicts the prediction of H1.

Table 7

Independent samples t-tests comparing conspiracy theory belief across political groups

Groups	BCTI	GCBS
LRSPI Centre & Extreme Left	t(123) = 1.53, p = .13	t(123) = 1.03, p = .30
LRSPI Centre & Extreme Right	t(90) = .26, p = .80	t(90) = .83, p = .41
LRSPI Extreme Left & Extreme Right	t(135) = 1.28, p = .20	t(135) = 2.26, p = .03*
LRS Centre & Extreme Left	t(78) = 1.58, p = .12	t(78) = 2.50, p = .02*
LRS Centre & Extreme Right	t(80) = .50, p = .62	t(80) = .61, p = .55
LRS Extreme Left & Extreme Right	t(64) = 1.92, p = .06	t(64) = 2.71, p < .01**
LAS Centre & Extreme Libertarian	t(68) = 1.68, p = .10	t(68) = 2.84, p = .01**
LAS Centre & Extreme Authoritarian	t(69) = .70, p = .49	t(69) = .36, p = .72
LAS Extreme Libertarian & Extreme Authoritarian	t(67) = 2.35, p = .02*	t(67) = 3.27, p < .01**

Note. LRSPI = Left-Right Self-Placement Item, LRS = Left-Right Scale, LAS = Libertarian-Authoritarian Scale, BCTI = Belief in Conspiracy Theory Inventory, GCBS = General Conspiracy Belief Scale.

Groups were constructed using participants who had scored in the upper, middle, and lower 10% range of each political measure.

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

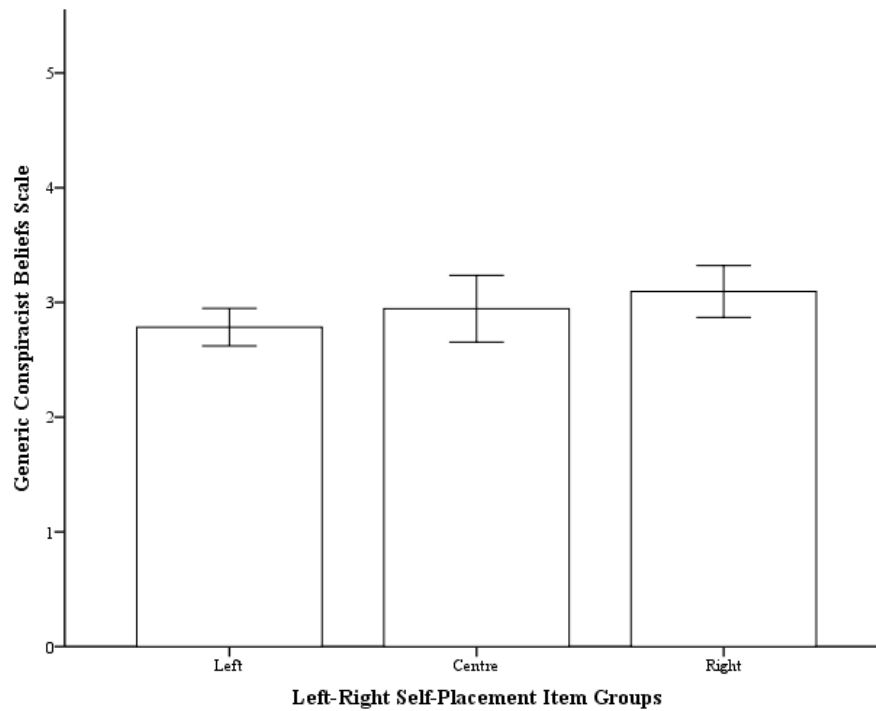


Figure 4. Mean conspiracy theory belief presented as a function of left-right groups with 95% CIs.

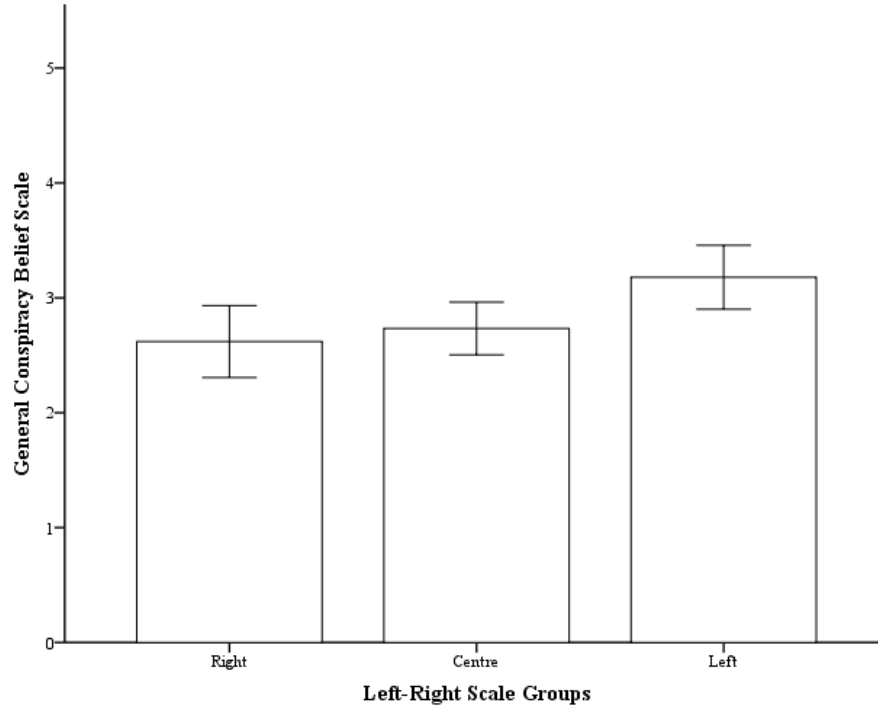


Figure 5. Mean conspiracy theory belief presented as a function of left-right groups with 95% CIs.

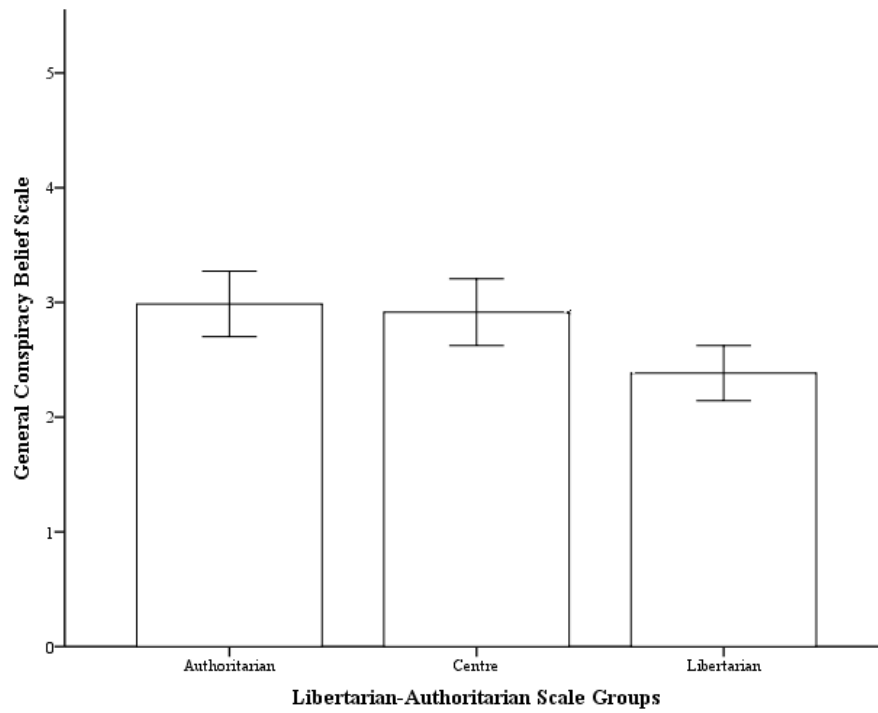


Figure 6. Mean conspiracy theory belief presented as a function of libertarian-authoritarian groups with 95% CIs.

3.4.2 Comparisons of Psychopathology Across Political Groups

To further understand the relationship between political extremism and psychopathology sub-samples were again drawn, as indicated in Table 8.

Table 8

Comparisons of psychopathology across political groups.

Sub-samples	Sub-sample Size	SPQ-BR Mean	SPQ-BR Standard Deviation	PDI Mean	PDI Standard Deviation
LRSPI Extreme Left	85	2.78	.66	1.22	.19
LRSPI Centre	40	2.77	.58	1.20	.15
LRSPI Extreme Right	52	2.83	.72	1.26	.22
LRS Extreme Left	32	2.95	.63	1.28	.17
LRS Centre	48	2.78	.59	1.23	.21
LRS Extreme Right	34	2.58	.66	1.19	.22
LAS Extreme Libertarian	34	2.70	.75	1.20	.15
LAS Centre	36	2.79	.55	1.21	.18
LAS Extreme Authoritarian	35	2.73	.75	1.23	.20

Note. LRSPI = Left-Right Self-Placement Item, LRS = Left-Right Scale, LAS = Libertarian-Authoritarian Scale, BCTI = Belief in Conspiracy Theory Inventory, GCBS = General Conspiracy Belief Scale.

Groups were constructed using participants who had scored in the upper, middle, and lower 10% range of each political measure.

Results of independent samples t-tests between the political belief groups are presented in Table 9. Effects were generally small and non-significant. Contrary to the indication of the hierarchical regression above, the significant difference between the centre and extreme left on the LRS groups was unsupported. In other words, clear relationships were not observed between political extremism and psychopathology. This is consistent with the results of the hierarchical regressions and further contradicts the prediction of H2.

Table 9

Independent samples t-tests comparing psychopathology across political groups

Groups	SPQ-BR	PDI
LRSPI Centre & Extreme Left	t(123) = .07, p = .94	t(92.83) = .49, p = .62
LRSPI Centre & Extreme Right	t(90) = .38, p = .71	t(88.86) = 1.51, p = .13
LRSPI Extreme Left & Extreme Right	t(135) = .37, p = .72	t(135) = 1.23, p = .22
LRS Centre & Extreme Left	t(78) = 1.19, p = .24	t(78) = 1.02, p = .31
LRS Centre & Extreme Right	t(80) = 1.45, p = .15	t(80) = .89, p = .38
LRS Extreme Left & Extreme Right	t(64) = 2.30, p = .02*	t(64) = 1.80, p = .08
LAS Centre & Extreme Libertarian	t(68) = .66, p = .51	t(68) = .39, p = .70
LAS Centre & Extreme Authoritarian	t(69) = .34, p = .73	t(69) = .35, p = .73
LAS Extreme Libertarian & Extreme Authoritarian	t(67) = .23, p = .82	t(67) = .73, p = .47

Note. LRSPI = Left-Right Self-Placement Item, LRS = Left-Right Scale, LAS = Libertarian-Authoritarian Scale, BCTI = Belief in Conspiracy Theory Inventory, GCBS = General Conspiracy Belief Scale.

Groups were constructed using participants who had scored in the upper, middle, and lower 10% range of each political measure.

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

CHAPTER 4: DISCUSSION

4.1 Overview of Findings

The primary aim of this study was to examine the association between political extremism and conspiracy theory beliefs previously investigated by Van Prooijen et al. (2015) and Krouwel et al. (2017). In doing so this study employed refined measures of political orientation, conspiracy theory belief, and psychopathology. In general, H1 was not supported. Consistent with Van Prooijen et al. (2015) and Krouwel et al. (2017), the original political orientation measure showed some, albeit weaker, indication of an association between political extremism and greater endorsement of conspiracy theories. However, when using more detailed measures of political orientation no association was found. Furthermore, the effects of the more detailed measures did not follow the same pattern. For the LRS only the extreme left was more conspiratorial and for the LAS the extreme libertarians were less conspiratorial.

A secondary aim of this study was to examine whether differences in conspiracy theory belief among political extremists were confounded by differences in psychopathology. H2 was not supported as political extremists did not show evidence of elevated psychopathology. The study did, however, confirm the broader findings that conspiracy theory beliefs are positively related to higher scores on measures of psychopathology (Van Der Tempel, & Alcock, 2015; Georgiou, Delfabbro, & Balzan, 2019).

4.2 Political Extremism and Conspiracy Theory

The pattern of associations between the principal measures were as expected. For example, there was a strong positive association between the two measures of conspiracy theory belief. The BCTI aims to assess belief of specific conspiracy theories whereas the GCBS aims to

assess general beliefs about categories of conspiracy theories. Our findings support the presumption that both are underpinned by the same conspiratorial mindset (Swami et al., 2011; Swami et al., 2017). Similarly, the LRSPI, LRS, and LAS were all correlated, supporting the validity of the political measures found by the developers of the scales (Heath, Evans, & Martin, 1994; Evans, Heath, & Lalljee, 1996). Our control variables also acted as expected, with education being a consistent predictor of reduced belief in conspiracy theories. This is consistent with Van Prooijen (2017) as well as Georgiou, Delfabbro, and Balzan (2019) who found that greater education appears to be a protective factor against conspiracy beliefs.

Our results using the LRSPI were similar to those by Van Prooijen et al. (2015) and Krouwel et al. (2017). While weaker, the effects followed the same quadratic pattern. This can be taken as modest support of an association between political extremism and greater endorsement of conspiracy theories. However, this finding was contradicted by the results of the more refined political measures. Neither the LRS nor LAS found significant quadratic relationships. More importantly, the effects followed linear, rather than quadratic, patterns. This indicates weak support for H1 and the findings of Van Prooijen et al. (2015) and Krouwel et al. (2017). While these results did not indicate support H1 overall, the LRS and LAS did indicate conspiracy belief may instead be associated with specific types of political extremism.

The LRS indicated participants on the extreme left were more prone to conspiracy belief. Krouwel et al. (2017) also found this positive association with extreme leftism whereas Van Prooijen et al. (2015) did not. As noted above, Krouwel et al. (2017) also tested their conspiracy theory items individually to explore whether their effect was consistent. In every case except one, they found the extreme left was more likely to endorse conspiracy theory. The exceptional item concerned a conspiracy that left-wing politicians intentionally keep the

population poor. Our findings may also be consistent with previous studies that have found both extreme leftism and conspiracy belief to be associated with feelings of being disadvantaged or disenfranchised (Swami et al., 2016). Similarly, both beliefs are also associated with suspicion of mainstream institutions (e.g. corporations and banks). This is illustrated by LRS item 2, “Big business benefits owners at the expense of workers”. In contrast, the right is primarily suspicious of economic arrangements that are not in place (e.g. socialism and communism).

It should also be noted that the LAS indicated extremely libertarian participants were less conspiratorial. Van Prooijen et al. (2015) and Krouwel et al. (2017) did not test the libertarian-authoritarian dimension of political beliefs; however, these results are consistent with some other findings. For example, Swami (2012) found that right-wing authoritarianism was associated with belief in the Jewish world domination conspiracy. Similarly, Grzesiak-Feldman and Irzycka (2009) found a positive association between general conspiracy theory belief and authoritarianism. This association may exist because libertarianism (characterised by support for free thought, association, and speech) has been correlated with measures of intelligence and education (Solon, 2014). In contrast, conspiracy theory belief has been negatively associated with these factors (Van Prooijen, 2017). Thus, one possible explanation is that scoring highly on the LAS may reflect critical thinking or intelligence, which is less likely to be associated with conspiracy theory beliefs. However, there are some discrepancies in our results of H1 that must be discussed.

4.2.1 Discrepancies in Results

It is comforting that this study found similar results to those by Van Prooijen et al. (2015) and Krouwel et al. (2017) when using their chosen measure (i.e. LRSPI). But while the LRSPI supported quadratic effects, the LRS and LAS instead supported linear effects. In other words,

there was a discrepancy between our chosen measures versus the measure employed by Van Prooijen et al. (2015) and Krouwel et al. (2017). One possible explanation for this discrepancy concerns the fact that the LRSPI asks participants to place themselves on the political spectrum, whereas the LRS and LAS place participants based on their responses to political issues. In this sense, the LRSPI measures a person's self-identified political position whereas the LRS and LAS measure a person's substantive political position. It may be that there is no clear relationship between political extremism and conspiracy theory belief. Rather, the effect observed with the LRSPI may instead reflect the fact that those who are comfortable identifying as politically extreme are also comfortable endorsing conspiracy theories. Van Prooijen et al. (2015) has indicated the relationship between political extremism and conspiracy theory belief was not confounded by response extremism. However, it may instead be confounded by social disinhibition in expressing controversial beliefs. Having acknowledged this, there is another discrepancy to note in our results.

Results from the LRS indicated that the political left was significantly more likely to endorse conspiracy theories. However, the LRSPI found the political right was slightly more likely to endorse conspiracy theories. While the difference observed using the LRSPI was insignificant, its opposing direction may be a source of insight. One likely explanation is that the measures did not assess the same political dimension. The LRS purely measures the ideological distinctions in the left-right spectrum. However, it is not clear the LRSPI does the same. It is true that the LRSPI asks participants to place themselves on a left-right scale. Yet, much of society conceptualises political beliefs as a one-dimensional construct. For this reason, participants likely interpreted this question as asking about their overall political beliefs, and as such, conflated the political right with authoritarianism. Evidence of this lies in that the LRSPI

correlated more strongly with the LAS than with the LRS. By conflating these dimensions, the effects may have cancelled each other out, resulting in the weaker findings we observed for the LRSPI. With these discrepancies noted, we may move to the results of H2.

4.3 Political Extremism and Psychopathology

The SPQ-BR and PDI are both shortened versions of measures independently developed to assess variations in clinical traits among the population. The positive association between these measures affirms their concurrent validity (Cohen, 2010; Peters, Joseph, & Garety, 2004). Furthermore, the two psychopathological measures were positively associated with the two conspiracy theory belief measures. This is consistent with the emerging volume of research implicating psychopathology in the endorsement of conspiracy theories (Darwin, Neave, & Holmes, 2011; Barron et al., 2014; Van Der Tempel, & Alcock, 2015). Furthermore, it affirms the strength of the association found by Georgiou, Delfabbro and Balzan (2019).

The extreme ends of the political spectrum did not display an elevated degree of psychopathology. However, these results do not preclude the possibility that extremists are distinct from moderates in other psychological characteristics. As noted above, nonpathological traits, such as feelings of disenfranchisement, may be mediating the relationship between political orientation and conspiracy theory beliefs. Further, this finding does not preclude other sources of clinical comorbidity from confounding potential relationships with extremism. Georgiou, Delfabbro, & Balzan (2019) have speculated that other at-risk mental states, such as Autism Spectrum Disorder, may be related to these beliefs. Having discussed these findings, it is necessary to consider the strengths and limitations of this research.

4.4 Methodological Strengths and Limitations

This study had several methodological strengths. Where similar research has relied on ad hoc measures, this study employed pre-validated measures with strong psychometric properties. Similarly, the use of a crowdsourcing platform enabled the collection of a large and representative sample. Further, participants were likely less cautious of expressing their true beliefs, owing to the anonymous data tracking system used by Prolific Academic. Having said this, Internet based studies leave open the possibility that some individuals participated despite not meeting the eligibility requirements. For example, it may be that a participant with a pre-existing clinical diagnosis disregarded the pre-screening information and participated in the study to receive remuneration. Furthermore, while Prolific Academic likely reduced social desirability bias, we cannot rule this out completely owing to the use of self-report measures in this research.

In addition to these limitations, it should also be noted that the LRS suffered from a slight floor effect, as is evident from Figure 2. This is despite the fact that we enlisted a UK sample and the LRS had been normed and validated with UK participants. Further, we had specifically pre-screened participants based on their political beliefs to sufficiently cover the political spectrum. For these reasons, future research may benefit from an alternative left-right measure of political beliefs. Having made this recommendation, it is necessary to discuss the implications of this research.

4.5 Societal Implications

This study contributes to the broader field of research through two primary contributions. First, this study administered pre-validated measures suitably rigorous for confirmatory analysis

of the relationship found by Van Prooijen et al. (2015) and Krouwel et al. (2017). While, it is regularly claimed in popular discourse that extremism is associated with conspiratorial thinking, this study gave strong indications that this relationship may not exist. This is consequential for social media companies, who have begun banning conspiracy theorists and changing their algorithms to make conspiratorial content less visible to viewers (Cook, 2019). In making these changes, some social media companies have cited the concern of fuelling political extremism. While the actions of these companies may be justified regardless, this research should be taken as an indication that further study is needed.

This study was also the first to test for potential relationships between political persuasion and psychopathological traits, using the SPQ-BR and PDI. These findings indicated that political extremists are likely motivated by factors other than psychopathology. This finding may prove consequential for the communication practises of scientists, journalists, and educators as well as for security. By understanding the psychological correlates and antecedents of political extremism, security agencies are more effectively able to profile for indicators of violence or civil disorder. Further, research that further emphasises the influence of psychological predisposition on our beliefs will likely promote meta-cognition and self-reflection. This may in turn ameliorate our civic dialogue. This research also carries implications for future studies in this field.

4.6 Implications for Future Research

4.6.1 Causal Direction

It is important to acknowledge that this research is correlational, and so the results do not inform us of the direction of causation. Van Prooijen et al. (2015, p. 576) has speculated that the

relationship between political extremism and conspiracy belief may be “bidirectional and self-reinforcing”. On the one hand, they suspect political extremism facilitates a crippled epistemology, which in turn enables conspiracy theory belief. On the other hand, they suspect belief in conspiracy theories lends itself to perceiving injustice, which begets political extremism. However, there remain alternative explanations for why any relationship between these beliefs may exist.

One such alternative explanation would be that political extremists consciously use conspiracy theories consistent with their beliefs to promote their cause. The logic of this would lie in that conspiracy theories can enable victim narratives by emphasizing the dehumanization of others and distracting from the dehumanization they cause (Swami et al., 2017). Further, harm comes with psychological burden. Conspiracy theories may alleviate the burden of harm by making outgroups responsible for the shortcomings of life. Thus, conspiracy theories could allow extremists to justify their actions as defensive rather than openly hostile. For instance, Midlarsky (2011) has noted the use of negative sentiment directed towards victims leading into mass killings. This was generally done strategically and was likely not the product of distorted thinking. This explanation would also be consistent with our findings that psychopathology was unrelated to political orientation. For this reason, future research would also benefit from exploring the antecedents and directionality of any potential associations between political extremism and conspiracy theory belief.

4.6.2 Measuring Specific Conspiracies

The findings of this study were weaker than those by Van Prooijen et al. (2015) and Krouwel et al. (2017). However, it should be noted that the original effects were still modest in size. One potential explanation for this may be that political extremism causes people to be

suspicious of particular institutions which, in turn, facilitates greater acceptance of only specific conspiracy theories. This would be consistent with some mainstream political accounts. For example, elements of the right, which are characteristically suspicious of government interference, have claimed that mass shootings were staged by governments to create precedent for stricter gun laws. Elements of the left, which are characteristically suspicious of corporations, have claimed that pharmaceutical companies refuse to release cures for diseases in the interest of profit.

This line of reasoning also presumes that the extreme left and right of politics would endorse different kinds of conspiracy theories. While no one has directly assessed this question, there are some tentative indications. As mentioned, Swami (2012) found right-wing authoritarians were more likely to endorse the Jewish world domination conspiracy. Similarly, Van Prooijen et al. (2015) found that the political right was more likely to endorse the climate change hoax conspiracy.

One means of testing this would involve asking participants to imagine a scenario in which the public was deceived by a secret plan to do something illegal or harmful. Holding all else constant, we would expect left-wing participants to be more inclined to think corporations were responsible. By contrast, we would expect right-wing participants to be more inclined to think the government was responsible. Alternatively, this could be assessed using measures similar to the ones employed in this study. For instance, those on the left may be more willing to endorse item 13 of the BCTI, which concerns Coca Cola deceiving the public for financial gain. Those on the right may be more willing to endorse item 1 of the BCTI, which concerns the plan to establish autonomous world government. In contrast, item 8 of the BCTI concerns alien contact being concealed from the public. Those on the left and right may be equally willing to

endorse this conspiracy as it is irrelevant to their political beliefs. Future research could additionally assess the differences in conspiracy endorsement across the libertarian-authoritarian dimension as was done in this study.

This future direction may also be useful in informing how important conspiracies are to the thinking of particular political persuasions. It could be, hypothetically, that conspiracy beliefs heavily influence the political thinking of one ideology but are tangential to the political thinking of another. For example, the political right may be driven by conspiracy theories, such as PizzaGate (Debies-Carl, 2017), which are political in nature and inform the thinking and activism of adherents. By contrast, it may be that the political left is more likely to endorse classic conspiracies, such as those regarding aliens. However, these conspiracies may not inform their political engagement whatsoever. This study primarily measured these older conspiracies. Thus, future research may find the extreme left is more conspiratorial overall, but that the conspiracism of the extreme right is more consequential.

4.7 Conclusions

This study aimed to investigate the relationship found by Van Prooijen et al. (2015) and Krouwel et al. (2017). This study found weak evidence of a relationship between political extremism and conspiracy theory belief. However, more refined political measures instead indicated that specific types of political extremism may be associated with increased or decreased endorsement of conspiracy theories. While psychopathology scores were positively associated with conspiracy theory beliefs, they were not associated with political beliefs. The findings suggest future research would benefit from testing for causal direction of any potential

relationship. Additionally, it may be valuable to explore how specific conspiracies cluster around different political persuasions.

REFERENCES

- Bartlett, J., & Miller, C. (2010). *The power of unreason: Conspiracy theories, extremism and counter-terrorism*. London, UK: Demos.
- Barron, D., Morgan, K., Towell, T., Altemeyer, B., & Swami, V. (2014). Associations between schizotypy and belief in conspiracist ideation. *Personality and Individual Differences, 70*, 156-159.
- Bindner, L. (2018). *Jihadists' Grievance Narratives Against France*. The Hague, Netherlands: International Centre for Counter-Terrorism.
- Brotherton, R., French, C. C., & Pickering, A. D. (2013). Measuring belief in conspiracy theories: the Generic Conspiracist Beliefs Scale. *Frontiers in Psychology, 4*, 279-279.
- Buhrmester, M., Kwang, T., & Gosling, S. D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6*, 3-5.
- Cook, J. (2019). YouTube's Plan To Rein In Conspiracy Theories Is Failing. Retrieved 1 September 2019, from https://www.huffingtonpost.com.au/entry/youtube-conspiracy-theories_n_5d320f69e4b004b6adafb99?ri18n=true
- Cooper, C. A., McCord, D. M., & Socha, A. (2010). Evaluating the college sophomore problem: The case of personality and politics. *The Journal of Psychology, 145*, 23-37.
- Darwin, H., Neave, N., & Holmes, J. (2011). Belief in conspiracy theories. The role of paranormal belief, paranoid ideation and schizotypy. *Personality and Individual Differences, 50*, 1289-1293.
- Debies-Carl, J. S. (2017). Pizzagate and beyond: Using social research to understand conspiracy legends. *Skeptical Inquirer, 41*.

- Evans, G., Heath, A. F., & Lalljee, M. (1996). Measuring Left-Right and Libertarian-Authoritarian Values in the British Electorate. *The British Journal of Sociology*, 47, 93-112.
- Eysenck, H. J. (1976). Structure of social attitudes. *Psychological Reports*, 39, 463-466.
- Fernbach, P. M., Rogers, T., Fox, C. R., & Sloman, S. A. (2013). Political extremism is supported by an illusion of understanding. *Psychological Science*, 24, 939-946.
- Georgiou, N., Delfabbro, P., & Balzan, R. (2019). Conspiracy beliefs in the general population: The importance of psychopathology, cognitive style and educational attainment. *Personality and Individual Differences*, 151, 109521.
- Greenberg, J., & Jonas, E. (2003). Psychological motives and political orientation - The left, the right, and the rigid: Comment on Jost et al. *Psychological Bulletin*, 129, 376-382.
- Grzesiak-Feldman, M., & Irzycka, M. (2009). Right-wing authoritarianism and conspiracy thinking in a Polish sample. *Psychological Reports*, 105, 389-393.
- Grzesiak-Feldman, M. (2015). Are the high authoritarians more prone to adopt conspiracy theories? The role of right-wing authoritarianism in conspiratorial thinking. In *The Psychology of Conspiracy* (pp. 117-139). Abingdon, UK: Routledge.
- Heath, A., Evans, G., & Martin, J. (1994). The measurement of core beliefs and values: The development of balanced socialist/laissez faire and libertarian/authoritarian scales. *British Journal of Political Science*, 24, 115-132.
- Heywood, A. (2017). *Political ideologies: An introduction*. (pp. 14-17) London, UK: Macmillan International Higher Education.

- Inglehart, R. (1987). Extremist political positions and perceptions of conspiracy: Even paranoids have real enemies. In *Changing Conceptions of Conspiracy* (pp. 231-244). New York, USA: Springer.
- Joinson, A. (1999). Social desirability, anonymity, and Internet-based questionnaires. *Behavior Research Methods, Instruments, & Computers*, 31, 433-438.
- Krouwel, A. P., & Van Prooijen, J. W. (2015). Mutual suspicion at the political extremes: How ideology predicts belief in conspiracy theories. In *The Psychology of Conspiracy* (pp. 97-116). Abingdon, UK: Routledge.
- Krouwel, A., Kutiyski, Y., Van Prooijen, J. W., Martinsson, J., & Markstedt, E. (2017). Does extreme political ideology predict conspiracy beliefs, economic evaluations and political Trust? Evidence from Sweden. *Journal of Social and Political Psychology*, 5, 435-462.
- Leiser, D., Duani, N., & Wagner-Egger, P. (2017). The conspiratorial style in lay economic thinking. *Plos One*, 12.
- Lewandowsky, S., Oberauer, K., & Gignac, G. E. (2013). NASA faked the moon landing - therefore, (climate) science is a hoax: An anatomy of the motivated rejection of science. *Psychological Science*, 24, 622-633.
- Midlarsky, M. I. (2011). *Origins of political extremism: Mass violence in the twentieth century and beyond*. Cambridge, UK: Cambridge University Press.
- Mudde, C. (1996). The war of words defining the extreme right party family. *West European Politics*, 19, 225-248.
- Nattrass, N. (2013). Understanding the origins and prevalence of AIDS conspiracy beliefs in the United States and South Africa. *Sociology of Health & Illness*, 35, 113-129.

- Palan, S., & Schitter, C. (2018). Prolific. Ac - A subject pool for online experiments. *Journal of Behavioral and Experimental Finance*, 17, 22-27.
- Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of Experimental Social Psychology*, 70, 153-163.
- Petrou, M., & Kandyliis, G. (2016). Violence and extreme-right activism: the neo-Nazi Golden Dawn in a Greek rural community. *Journal of Intercultural Studies*, 37, 589-604.
- Rivinius, J. (2014). Sovereign citizen movement perceived as top terrorist threat. *The National Consortium for the Study of Terrorism and Responses to Terrorism*.
- Rollwage, M., Dolan, R. J., & Fleming, S. M. (2018). Metacognitive failure as a feature of those holding radical beliefs. *Current Biology*, 28, 4014-4021.
- Solon, I. S. (2014). How intelligence mediates liberalism and prosociality. *Intelligence*, 47, 44-53.
- Swami, V. (2012). Social psychological origins of conspiracy theories: the case of the Jewish conspiracy theory in Malaysia. *Frontiers in Psychology*, 3, 280.
- Swami, V., Barron, D., Weis, L., Voracek, M., Stieger, S., & Furnham, A. (2017). An examination of the factorial and convergent validity of four measures of conspiracist ideation, with recommendations for researchers. *Plos One*, 12.
- Swami, V., Furnham, A., Smyth, N., Weis, L., Lay, A., & Clow, A. (2016). Putting the stress on conspiracy theories: Examining associations between psychological stress, anxiety, and belief in conspiracy theories. *Personality and Individual Differences*, 99, 72-76.

- Van Der Tempel, J., & Alcock, J. E. (2015). Relationships between conspiracy mentality, hyperactive agency detection, and schizotypy: Supernatural forces at work? *Personality and Individual Differences, 82*, 136-141.
- Van Prooijen, J. W. (2017). Why education predicts decreased belief in conspiracy theories. *Applied Cognitive Psychology, 31*, 50-58.
- Van Prooijen, J. W., & Krouwel, A. P. (2019). Psychological features of extreme political ideologies. *Current Directions in Psychological Science, 28*, 159-163.
- Van Prooijen, J. W., Krouwel, A. P., & Pollet, T. V. (2015). Political extremism predicts belief in conspiracy theories. *Social Psychological and Personality Science, 6*, 570-578.
- Wood, M. J., Douglas, K. M., & Sutton, R. M. (2012). Dead and alive: Beliefs in contradictory conspiracy theories. *Social Psychological and Personality Science, 3*, 767-773.

APPENDICES

Appendix A: Participant Information Form

PROJECT TITLE: Beliefs about the World and Personal Experiences

HUMAN RESEARCH ETHICS COMMITTEE APPROVAL NUMBER: [REDACTED]

PRINCIPAL INVESTIGATOR: Professor Paul Delfabbro

STUDENT RESEARCHER: Sheldon Patterson

STUDENT'S DEGREE: Honours Degree of Bachelor of Psychological Science

Dear Participant,

You are invited to participate in the research project described below.

What is the project about?

This study seeks to explore our beliefs about the world as well as our personal traits and experiences.

Who is undertaking the project?

This project is being conducted by Sheldon Patterson. This research will form the basis for the Honours Degree of Bachelor of Psychological Science at the University of Adelaide under the supervision of Professor Paul Delfabbro.

Why am I being invited to participate?

You are being invited provided that you are fluent in English and over the age of 18. You must not have already participated in the study or have been clinically diagnosed with a psychological illness/disorder.

What am I being invited to do?

You will be asked to complete a series of online inventories where you will be asked to provide answers reflective of your own beliefs and experiences. This should take approximately 20 minutes. Participation in the study is entirely voluntary. You have the right to withdraw at any time.

Are there any risks associated with participating in this project?

This study is unlikely to pose any risks to your health or wellbeing as a result of participating. However, you may feel some discomfort when asked to reflect upon unusual experiences or how others might view you.

What are the potential benefits of the research project?

The project may result in a more sophisticated understanding why and how our personal traits and experiences influence our beliefs.

Participants can be offered a summary of the research findings derived from the aggregated results by contacting the student researcher.

Can I withdraw from the project?

Participation in this project is completely voluntary. If you agree to participate, you can withdraw from the study at any time.

What will happen to my information?

All deidentified data collected during the experiment will be treated in the strictest confidence. Data will be saved onto a University secure drive to which only the researchers will have access. Data will be retained for 5 years as per University policy. You will also have the opportunity to receive a summary of the research findings. Results will be aggregated for reporting purposes to preserve anonymity.

In due course, this research will be reported in the open literature based upon the aggregate of deidentified responses.

Your information will only be used as described in this participant information sheet and it will only be disclosed according to the consent provided, except as required by law.

Who do I contact if I have questions about the project?

The study has been approved by the Human Research Ethics Committee at the University of Adelaide (approval number [REDACTED]). This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research 2007 (Updated 2018). If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, please contact primarily the student investigator or lead investigator:

[REDACTED]

[REDACTED]

For any questions about the ethical conduct of this research, please contact the Acting Chair of the Human Research Ethics Committee in the School of Psychology, University of Adelaide: Dr. Diana Dorstyn (diana.dorstyn@adelaide.edu.au)

Any complaint or concern will be treated in confidence and fully investigated. You will be informed of the outcome.

Yours sincerely,

Paul Delfabbro & Sheldon Patterson

Appendix B: Participant Consent Form

1. I have read the attached Information Sheet and agree to take part in the following research project:

Title: Beliefs about the World and Personal Experiences

Ethics Approval Number: H19/14

2. I have had the project, so far as it affects me, and the potential risks and burdens fully explained to my satisfaction. I have read the terms and conditions of this study and understood my rights and ethical considerations. I have had the opportunity to ask any questions I may have about the project and my participation. My consent is given freely.
3. Although I understand the purpose of the research project, it has also been explained that my involvement may not be of any benefit to me.
4. I agree to participate in the activities outlined in the participant information sheet.
5. I understand that I am free to withdraw from the project at any time.

6. I have been informed that the information gained in the project may be reported in the open literature based upon the aggregate of deidentified responses.
7. I have been informed that in the published materials I will not be identified and my personal results will not be divulged.
8. I permit the researchers of this study to use my produced data for the purposes mentioned.
9. I understand my information will only be disclosed according to the consent provided, except where disclosure is required by law.
10. I am aware that I may keep a copy of this consent form for my records.
11. I meet the eligibility requirements of the study (I am aged 18 or above and fluent in English, I have not already participated in this study and am not receiving treatment or have been clinically diagnosed for any form of psychological illness/disorder).
12. I agree not to discuss my experience of taking part in this study with other people who are likely to participate, as this may adversely affect the data.

Selecting the box below indicates that you agree to the above.

I agree

Prolific ID Number:

Appendix C: Demographic Measures

What is your gender? (Man/Woman/Other)

How old are you? (18-24/25-34/35-44/45-54/55-64/65+)

What is your highest level of completed education? (Less than high school/ High school graduate/ Diploma or similar qualification/ Bachelor's Degree/ Master's or PhD)

What is your country of residence? (225 Countries)

Appendix D: Left-Right Self-Placement Item (LRSPI)

On a scale of 1 to 7 please indicate YOUR political orientation if 1 means extremely left-wing, 4 means center, and 7 means extremely right-wing.

Appendix E: Left-Right Scale (LRS) and Libertarian-Authoritarian Scale (LAS)

On a scale of 1 to 7 please indicate YOUR agreement with the following statements if 1 means total agreement, 4 means unsure, and 7 means total disagreement.

I think that...

1. Government should redistribute income from the better off to those who are less well off.
2. Big business benefits owners at the expense of workers.
3. Ordinary working people do not get their fair share of the nation's wealth.
4. There is one law for the rich and one for the poor.
5. Management will always try to get the better of employees if it gets the chance.

I think that...

1. Young people today don't have enough respect for traditional values.
2. For some crimes, the death penalty is the most appropriate sentence.
3. Schools should teach children to obey authority.

4. The law should always be obeyed even if a particular law is wrong.
5. Censorship of films and magazines is necessary to uphold moral standards.
6. People who break the law should be given stiffer sentences.
7. The welfare state makes people nowadays less willing to look after themselves.
8. Organizing public meetings to protest against the government should be allowed*
9. Publishing leaflets to protest against the government should be allowed*
10. Organizing protest marches and demonstrations should be allowed*

*reverse coded items

Appendix F: Belief in Conspiracy Theory Inventory (BCTI)

All items are rated on a 9-point scale, ranging from 1 (Completely false) to 9 (Completely true).

Higher scores on this scale reflect greater endorsement of a range of real-world conspiracy theories.

1. A powerful and secretive group, known as the New World Order, are planning to eventually rule the world through an autonomous world government, which would replace sovereign government.
2. SARS (Severe Acute Respiratory Syndrome) was produced under laboratory conditions as a biological weapon.
3. The US government had foreknowledge about the Japanese attack on Pearl Harbour but allowed the attack to take place so as to be able to enter the Second World War.
4. US agencies intentionally created the AIDS epidemic and administered it to Black and gay men in the 1970s.

5. The assassination of Martin Luther King, Jr., was the result of an organised conspiracy by US government agencies such as the CIA and FBI.
6. The Apollo moon landings never happened and were staged in a Hollywood film studio.
7. Area 51 in Nevada, US, is a secretive military base that contains hidden alien spacecraft and/or alien bodies.
8. The US government allowed the 9/11 attacks to take place so that it would have an excuse to achieve foreign (e.g., wars in Afghanistan and Iraq) and domestic (e.g., attacks on civil liberties) goals that had been determined prior to the attacks.
9. The assassination of John F. Kennedy was not committed by the lone gunman, Lee Harvey Oswald, but was rather a detailed, organised conspiracy to kill the President.
10. In July 1947, the US military recovered the wreckage of an alien craft from Roswell, New Mexico, and covered up the fact.
11. Princess Diana's death was not an accident, but rather an organised assassination by members of the British royal family who disliked her.
12. The Oklahoma City bombers, Timothy McVeigh and Terry Nichols, did not act alone, but rather received assistance from neo-Nazi groups.
13. The Coca Cola company intentionally changed to an inferior formula with the intent of driving up demand for their classic product, later reintroducing it for their financial gain.
14. Special interest groups are suppressing, or have suppressed in the past, technologies that could provide energy at reduced cost or reduced pollution output.
15. Government agencies in the UK are involved in the distribution of illegal drugs to ethnic minorities.

Appendix G: Generic Conspiracist Beliefs Scale (GCBS)

Items were rated on a 5-point scale, ranging from 1 (Definitely not true) to 5 (Definitely true).

Higher scores on this measure reflect greater generic conspiracist ideation.

1. The government is involved in the murder of innocent citizens and/or well-known public figures, and keeps this a secret.
2. The power held by heads of state is second to that of small unknown groups who really control world politics.
3. Secret organizations communicate with extraterrestrials, but keep this fact from the public.
4. The spread of certain viruses and/or diseases is the result of the deliberate, concealed efforts of some organization.
5. Groups of scientists manipulate, fabricate, or suppress evidence in order to deceive the public.
6. The government permits or perpetrates acts of terrorism on its own soil, disguising its involvement.
7. A small, secret group of people is responsible for making all major world decisions, such as going to war.
8. Evidence of alien contact is being concealed from the public.
9. Technology with mind-control capacities is used on people without their knowledge.
10. New and advanced technology which would harm current industry is being suppressed.
11. The government uses people as patsies to hide its involvement in criminal activity.

12. Certain significant events have been the result of the activity of a small group who secretly manipulate world events.
13. Some UFO sightings and rumors are planned or staged in order to distract the public from real alien contact.
14. Experiments involving new drugs or technologies are routinely carried out on the public without their knowledge or consent.
15. A lot of important information is deliberately concealed from the public out of self-interest.

Appendix H: Schizotypal Personality Questionnaire - Brief Revision (SPQ-BR)

On a scale of 1 to 7 please indicate YOUR agreement with the following statements if 1 means total agreement, 4 means unsure, and 7 means total disagreement.

1. Do you sometimes feel that people are talking about you?
2. Do you sometimes feel that other people are watching you?
3. When shopping, do you get the feeling that other people are taking notice of you?
4. I often feel that others have it in for me.
5. Do you sometimes get concerned that friends or co-workers are not really loyal or trustworthy?
6. Do you often have to keep an eye out to stop people from taking advantage of you?
7. Do you feel that you cannot get "close" to people?
8. I find it hard to be emotionally close to other people.
9. Do you feel that there is no one you are really close to outside of your immediate family, or people you can confide in or talk to about a personal problem?

10. I tend to keep my feelings to myself.
11. I rarely laugh and smile.
12. I am not good at experiencing my true feelings by the way I talk and look.
13. Other people see me as slightly eccentric (odd).
14. I am an odd, unusual person.
15. I have some eccentric (odd) habits.
16. People sometimes comment on my unusual mannerisms and habits.
17. Do you often feel nervous when you are in a group of unfamiliar people?
18. I get anxious when meeting people for the first time.
19. I feel very uncomfortable in social situations involving unfamiliar people.
20. I sometimes avoid going to places where there will be many people because I will get anxious.
21. Do you believe in telepathy (mind-reading)?
22. Do you believe in clairvoyance (psychic forces, fortune telling)?
23. Have you had experiences with astrology, seeing the future, UFO's, ESP, or a sixth sense?
24. Have you ever felt that you are communicating with another person telepathically by mind-reading?
25. I sometimes jump quickly from one topic to another when speaking.
26. Do you tend to wander off the topic when having a conversation?
27. I often ramble on too much when speaking.
28. I sometimes forget what I am trying to say.
29. I often hear a voice speaking my thoughts aloud.

30. When you look at a person or yourself in a mirror, have you ever seen the face right before your eyes?
31. Are your thoughts sometimes so strong that you can almost hear them?
32. Do everyday things seem unusually large or small?

Appendix I: The Peters Delusions Inventory (PDI)

On a scale of 1 to 7 please indicate YOUR agreement with the following statements if 1 means total agreement, 4 means unsure, and 7 means total disagreement.

1. Do you ever feel as if people seem to drop hints about you or say things with a double meaning?
2. Do you ever feel as if things in magazines or on TV were written especially for you?
3. Do you ever feel as if some people are not what they seem to be?
4. Do you ever feel as if you are being persecuted in some way?
5. Do you ever feel as if there is a conspiracy against you?
6. Do you ever feel as if you are or destined to be someone very important?
7. Do you ever feel that you are a very special or unusual person?
8. Do you ever feel that you are especially close to God?
9. Do you ever think people can communicate telepathically?
10. Do you ever feel as if electrical devices such as computers can influence the way you think?
11. Do you ever feel as if you have been chosen by God in some way?
12. Do you believe in the power of witchcraft, voodoo or the occult?
13. Are you often worried that your partner may be unfaithful?

14. Do you ever feel that you have sinned more than the average person?
15. Do you ever feel that people look at you oddly because of your appearance?
16. Do you ever feel as if you had no thoughts in your head at all?
17. Do you ever feel as if the world is about to end?
18. Do your thoughts ever feel alien to you in some way?
19. Have your thoughts ever been so vivid that you were worried other people would hear them?
20. Do you ever feel as if your own thoughts were being echoed back to you?
21. Do you ever feel as if you are robot or zombie without a will of your own?