Individual differences in sharing false political information on social media: Direct and indirect effects of cognitive-perceptual schizotypy and psychopathy.

Buchanan, T. and Kempley, J.

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Individual differences in sharing false political information on social media: Direct and indirect effects of cognitive-perceptual schizotypy and psychopathy.

Tom Buchanan and James Kempley

University of Westminster

Author Note

Tom Buchanan, Department of Psychology, University of Westminster, London, U.K.

Correspondence concerning this article should be addressed to Tom Buchanan, Department of Psychology, University of Westminster, 115 New Cavendish St, London W1W 6UW, United Kingdom.

E-mail: T.Buchanan@westminster.ac.uk

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Abstract

False political material is widely spread on social media, presenting significant problems for society. Much of this spread arises from the actions of individual social media users. This paper examines individual differences associated with participants' reports of having shared false material online. In two online studies with adult US residents drawn from a research panel (*N*=507, *N*=527), we tested the relationship of cognitive reflection (CRT-2), agreeableness (BFI-2), psychopathy (SD3), schizotypy (SPQ-BRU), and demographic characteristics with self-reports of having shared material later discovered to be false, and material known to be false at the time. Cognitive reflection was not associated with self-reported sharing, and neither were agreeableness, age, gender, education, or level of social media use once other related variables were controlled for. Across both studies, cognitive-perceptual schizotypy had a direct effect on both types of sharing, with higher scorers reporting more sharing of false material. Psychopathy had an indirect positive effect on both types of sharing, mediated by general tendency to share political material online.

Keywords: Misinformation; Disinformation; Psychopathy; Schizotypy; Social Media; Cognitive Reflection; Fake News; Personality

1. Introduction

False political information is widely spread on social media. Sometimes described as 'fake news', this is false or manipulated political material which is likely to mislead audiences (Egelhofer & Lecheler, 2019). Profoundly harmful consequences can arise from this. A recent example is violent insurrection at the US Capitol in January 2021, argued to have been driven by false information about alleged fraud in the 2020 US presidential election (Center for an Informed Public et al., 2021). Once seeded online by its creators, such false information spreads through the actions of individual social media users. Ordinary people who encounter false material may share it to their own social networks, or engage with it in other ways such as 'liking' it, that extend its spread (Vosoughi et al., 2018). While only a minority of individuals do this (Guess et al., 2019), they have the effect of exponentially amplifying its reach (Vosoughi et al., 2018).

Psychological research on the problem of social media users sharing false material has focused on potential underlying mechanisms: the role of heuristics and cognitive biases has been a central interest (e.g., Pennycook & Rand, 2019; Pennycook et al, 2021). The goal of much of this research has been to develop effective interventions (e.g., Moravec et al, 2020; Pennycook et al, 2021). However, less attention has been paid to the question of who shares false information, and most such research focuses on demographic characteristics (e.g., Guess et al, 2019) rather than psychological individual differences.

Understanding the personal attributes of those who share false material is important for two main reasons. The first is that it will dovetail with the afore-mentioned research on underlying mechanisms, helping us to understand the basic psychological

processes. For example, if individuals with characteristics leading them to rely more on heuristics appear to engage with false material more, that lends weight to arguments that largely unthinking processes rather than deliberate actions are involved. The second is that it will enable identification of segments of the population who are more or less likely to engage with false material. This is important for practical reasons, because it can tell us about groups who are more likely to be vulnerable to being targeted by hostile actors. Targeting specific groups is a known strategy of disinformation creators (e.g., DiResta et al, 2019). It can also tell us about groups who should be prioritised for interventions, and perhaps the types of intervention that might be suitable for particular types of people. In a social media world where microtargeting of communications based on psychological characteristics is entirely feasible (e.g., Zuiderveen Borgesius et al., 2018) this merits attention.

1.1 Who Shares False Information Online?

The technical term ‘disinformation’ refers to the deliberate creation and distribution of false material with harmful intent (House of Commons Digital, Culture, Media and Sport Committee, 2019). ‘Misinformation’ refers to false material that people spread in the mistaken belief that it is true. In either case, it could be same false material that is being referred to: what distinguishes disinformation from misinformation is the motive of the individual sharing it. This points to the fact that there are different types of sharing. Some people spread false information to their friends and families in the mistaken belief that it is true. Others engage with the material while knowing it is

false. This project evaluates the role of individual differences in driving both these behaviours.

The proportion of social media users who share false material is believed to be relatively low, with estimates ranging between about 10 and 40% (Buchanan, 2020; Chadwick et al., in press), A limited body of research has considered the personal characteristics that differentiate individuals who share false material from those who do not engage with it. Some of the findings within this literature are contradictory. For example, some work has found that people low in capacity for cognitive reflection are more likely to believe and share false material, and that political partisanship does not have a major influence (Pennycook & Rand, 2019). Other work reports that cognitive reflection has no impact on sharing false political information, and that partisan polarization is more important (Osmundsen et al., 2020). Some work has found that older adults are more likely to share false material (Guess et al., 2019). Other work has found indications of the opposite (Buchanan, 2020).

One possible reason for the contradictions between these findings is that sharers of false information are not a homogenous group. There may well be differences between people who share false political material 'accidentally' and those who share in the full knowledge that material is untrue. Individual characteristics may have different influences on these two distinct types of behaviour.

1.2 Cognitive Reflection

Among those who share material because they mistakenly think it is true, lower capacity for reflective or analytic thought may be important. Cognitive reflection tests (e.g., Thomson & Oppenheimer, 2016) measure the propensity to over-ride an incorrect intuitive response with a more considered correct response when making decisions or answering questions. Pennycook and Rand (2019) reported that individuals with higher scores on a measure of cognitive reflection rated false headlines as being less accurate, and were better able to distinguish real from fake political news. Furthermore, people with lower levels of cognitive reflection reported themselves as more likely to share false headlines they were shown. On this basis, we might predict that 'accidentally' sharing false information, that people did not realise was false at the time, would be associated with reduced analytic thought. Thus, we hypothesise that people who have shared false material not knowing it was false, will have lower scores on a measure of cognitive reflection (Hypothesis 1).

1.3 Agreeableness

As well as individual differences in cognitive reflection, personality traits may be important. Past research on personality and sharing false political information has pointed to relatively small and inconsistent effects. Perhaps the characteristic for which there is currently most evidence is trait agreeableness. Buchanan and Benson (2019) found that people lower in agreeableness rated themselves as more likely to engage with a potentially untrue political story. Lower agreeableness scores have also been found to be associated with a greater self-reported likelihood of sharing exemplars of

political disinformation, and of having shared false political stories in the past (Buchanan, 2020). This may be because false stories are normally negative in their tone, or critical of the person they focus on. We speculate that less agreeable people are likely to be more critical, and unconcerned about offending others. They may be more willing share false material to achieve their goals (e.g., advocating for a particular political position), being less concerned about harming others in the process. It is thus plausible that lower levels of agreeableness will be associated with higher levels of deliberately sharing disinformation (Hypothesis 2).

1.4 Psychopathy

Another potentially influential variable is sub-clinical psychopathy, a personality characteristic typified by high impulsivity and thrill-seeking along with low empathy and anxiety (Paulhus & Williams, 2002). It is negatively associated with agreeableness (Muris et al., 2017), which has been found to be associated with lower potential willingness to spread false material. Psychopathy is known to predict belief in conspiracy theories (March & Springer, 2019), which have conceptual and practical overlap with online misinformation and disinformation.

Believing false material is not the same as sharing it, and the potential role of psychopathy in sharing false political information has not previously been examined. However, it is known to be associated with other disruptive online behaviours. For example, psychopathy is associated with ‘cyber-aggression’ among adolescents (Pabian et al., 2015), and with online trolling on Facebook and other platforms (e.g., Buckels et al, 2014). Therefore, it might be reasonable to expect that individuals with

higher levels of trait psychopathy would be more likely to share information that they knew to be false. This might be simply for mischief-making, or because they are willing to act disruptively to achieve some desired goal such as supporting a particular political party. Therefore, we hypothesise that people who have shared false material deliberately will have higher psychopathy scores (Hypothesis 3).

1.5 Schizotypy

A further variable that may be important is trait schizotypy. Conceptualisations and structural models of schizotypy vary, but it can be generally thought of as comprising a collection of traits including "…symptom-like experiences, cognitive disorganisation, and social and personal affective difficulties…" (Davidson et al., 2016 , p. 345). High levels of schizotypy are often associated with clinically significant symptoms. At lower levels, schizotypal traits are a source of variance in behaviour within the general population.

Like psychopathy, some research has shown that schizotypy is negatively associated with agreeableness (Kwapil et al., 2018), which may be implicated in sharing false material. It is also associated with a disposition towards believing conspiracist material (e.g., Barron et al., 2014). Again, links withy sharing such material, as opposed to simply believing it, have not been assessed to date--though there is evidence that we are more likely to share things that are consistent with our existing beliefs (e.g., Buchanan, 2020).

One potential reason for its relevance is that schizotypy is associated with numerous changes to cognition, and specifically a tendency to defer to heuristic

processing (as opposed to analytical processing) when making logical and social judgements (Broyd et al., 2019). Schizotypy has also been associated with a wide range of cognitive biases that include jumping to conclusions based on little evidence when under stress (Le et al., 2019), and a bias against disconfirmatory evidence (Buchy et al., 2007). These biases of reasoning may increase the likelihood of disinformation being effective for individuals with higher levels of trait schizotypy. This would apply not just to believing disinformation, but also to sharing it, given work suggesting that reliance on heuristics is related to the likelihood sharing false material (e.g., Pennycook & Rand, 2019).

Therefore, we hypothesise that higher levels of schizotypy will be associated with higher levels of sharing disinformation (Hypothesis 4). We make no distinction here between deliberately and accidentally sharing falsehoods. A multidimensional measure of schizotypy will be used, given that past research has used various measures and found different aspects of schizotypy to be important.

1.6 Aims

In summary, this project seeks to investigate individual differences associated with sharing false political information online. Some of these variables (e.g., agreeableness, psychopathy and schizotypy) may be interrelated. We consider that different effects may operate for people who share ‘innocently’, and those who do so in the full knowledge that the material is false. We therefore predict that ‘innocent’ sharing will be associated with lower tendencies towards cognitive reflection (Hypothesis 1) and higher levels of trait schizotypy (Hypothesis 4). We predict that deliberate sharing of

falsehoods will be associated with lower levels of agreeableness (Hypothesis 2), higher levels of psychopathy (Hypothesis 3) and higher levels of schizotypy (Hypothesis 4). In this paper we describe two studies: the first tests these four hypotheses. The second is a partial replication, which also tests additional hypotheses based on the findings of the first.

2. Study 1

Study 1 was a questionnaire-based study using participants drawn from an online research panel. It evaluated the extent to which individual differences in trait agreeableness, schizotypy, psychopathy and cognitive reflection were related to self-reports of having shared false information on social media.

2.1 Method

This study was conducted online using the Qualtrics research platform. Ethical approval came from the host University's Psychology Research Ethics Committee. Hypotheses and primary analyses were preregistered. The preregistration document can be seen at https://osf.io/vm2gy/?view_only=75ae63d287184a20b9f431ba2b762332 . Analysis was conducted using SPSS 25 for Mac. All data, analysis syntax, and materials can be seen at https://osf.io/25gmx/?view_only=e829a34a35a24b7dbc69e92203f9728b .

2.1.1 Materials

Past sharing of false political material on social media was assessed using two questions drawn from previous research on disinformation (Barthel et al., 2016; Buchanan, 2020). These were “Have you ever shared a political news story online that you later found out was made up?”, then “And have you ever shared a political news story online that you thought AT THE TIME was made up?”. Both were answered by selecting ‘yes’ or ‘no’. The former evaluated inadvertent, ‘innocent’ sharing, while the latter evaluated deliberate sharing of false material.

Other interactions with online political material were assessed using three items, asking “How much trust do you normally place in political information you come across on social media?”; “Does political information you come across on social media influence your behaviour (e.g., who you would vote for)?”; and “How much do you tend to share political information you come across on social media?”. Each was measured using a 5-point rating scale, anchored at “Not at all” and “A great deal”.

Schizotypy was measured using the SPQ-BRU (Schizotypal Personality Questionnaire – Brief Revised (Updated); Davidson et al., 2016). This is a 32-item multidimensional measure of variance in schizotypy within the general population. Items such as “I sometimes feel that people are talking about me” are answered on a 5-point rating scale. The questionnaire can be scored in different ways, including the approach adopted in this paper: scoring four domains labelled ‘inter-personal’, ‘cognitive-perceptual’, ‘disorganized’, and ‘social anxiety’. It has been successfully used in online studies (e.g., Davidson et al., 2016).

Psychopathy was measured using the relevant subscale of the SD3 (Short Dark Triad; Jones & Paulhus, 2014). The SD3 conceptualises psychopathy as a socially-aversive personality characteristic, reflecting deficits in affect and self-control. The psychopathy subscale comprises nine items such as “I like to get revenge on authorities” which are answered using a 5-point rating scale. The measure was validated online. It is intended for use with general, not clinical, populations.

Agreeableness was measured using the relevant subscale of the BFI-2 (Big Five Inventory-2; Soto & John, 2017). This is an updated version of a widely used measure of the five main domains of personality. It was developed and validated online. Respondents use a 5-point rating scale to indicate the extent to which 12 items such as “is compassionate, has a soft heart” describe them. Either a total measure of Agreeableness, or scores on three constituent facet scales (Compassion, Respectfulness and Trust) can be derived. In this study, only the total score was used.

Capacity for reflective thought was measured using the CRT-2 (Thomson & Oppenheimer, 2016); an alternative form of the Cognitive Reflection Test. This is a four-item measure comprising ‘brain teaser’ questions to which the intuitive answer is not correct. It is intended to measure a respondent’s propensity to override an intuitive, but incorrect, answer with a more considered response. Higher scores on the test would be associated with less reliance on heuristics, and a greater tendency towards rational thinking. This evolution of the classic Cognitive Reflection Test does not rely on numerical ability, and participants are less likely to have previously encountered it. It was validated for use online. It was followed by a question asking people if they had seen any of the CRT-2 items before.

Frequency of social media use was measured using the item “About how often do you visit or use social media? (e.g., Facebook, Twitter, TikTok, Instagram, Discord, Reddit or any others).”, with response options ranging from ‘not at all’ to ‘several times a day’.

2.1.2 Procedure

Participants first saw a page describing the study, and details of the ethical approval of the research project. They then answered demographic items: gender, location, highest level of education (less than high school – professional degree), age, occupational status, and frequency of social media use.

Participants then answered the questions about political information on social media (how much trust they normally place in it, the extent to which it influences their behavior, and how much they tended to share it). These were followed by the two questions about sharing political news stories that they later found were made up, and stories that they thought at the time were made up. Participants answering ‘yes’ to the latter question, were also asked to report briefly why they had done it. This was intended to capture pilot data for future work and is not analysed in this study.

They then completed the measures of schizotypy (SPQ-BRU), psychopathy (SD3 psychopathy subscale), agreeableness (BFI-2 Agreeableness subscale), and the CRT 2. Finally, participants were asked to reconfirm their consent, then debriefed.

2.1.3 Data Screening and Processing

As specified in the preregistration document, a number of checks were conducted to ensure data quality and problematic responses deleted prior to any analysis. Two responses were deleted due to withholding consent at the end of the questionnaire. Fifteen responses were deleted due to zero inter-item variance on SPQ-BRU items (indicating ‘straightlining’, a form of inauthentic responding), and a further three with zero inter-item variance on the psychopathy scale. Twenty participants reported using social media 'not at all' (10) or 'less often' than every few weeks (10) and were deleted. Prolific’s and Qualtrics’ proprietary quality control mechanisms minimized the likelihood of duplicate responding. However, two responses included the same idiosyncratic error in one of the answers to a CRT-2 question; identical demographics; a number of similar answers; and very similar participation timestamps. These were both excluded on the basis of potential fraudulent responding. Finally, one person giving their location (selected from a list of countries) as Georgia was also excluded, given that the sample was restricted to people located in the US and it was not known whether the respondent meant the country or the state. No participants were excluded due to zero inter-item variance on Agreeableness; implausibly fast completion time; not indicating an age of 18 years or above; or implausible patterns of demographic responses. Following these checks, 507 responses remained from the initial 550 recorded. Nine participants indicating their gender as being other than male or female were excluded from analyses including gender (due to the low number of respondents falling into this group), but included in all other analyses. CRT-2 scores were not computed for 154

individuals who indicated they had seen any of the four questions previously, reducing the sample size for analyses including that variable.

2.1.4 Participants

Participants were drawn from the Prolific research panel, and paid £1 GBP each. Inclusion criteria were that the participants be US citizens, resident in the US, who had English as a first language, had not participated in any previous related studies, and had indicated they were not members of any other crowdsourced research panels (to limit potential prior exposure to the CRT-2). Participants were recruited in two waves: one including people aged 18-40, and one including people aged over 40. This was done to ensure variance in ages. Participant demographics are shown in Table 1 (left side).

Table 1

Demographic Data: Study 1 and 2

	Study 1 *N*=507	Study 2 *N*=527
Sex		
Men	259 (51.1%)	238 (45.2%)
Women	239 (47.1%)	275 (52.2%)
Other	7 (1.4%)	12 (2.3%)
Prefer not to say	2 (0.4%)	2 (0.4%)
About how often do you use social media?		
Every few weeks	15 (3.0%)	15 (2.8%)
A few times a week	30 (5.9%)	35 (6.6%)
About once a day	57 (11.2%)	92 (17.5%)
Several times a day	405 (79.9%)	385 (73.1%)
Have you ever shared a political news story online that you later found out was made up?		
No	404 (79.7%)	424 (80.5%)
Yes	103 (20.3%)	103 (19.5%)
And have you ever shared a political news story online that you thought AT THE TIME was made up?		
No	444 (87.6%)	463 (87.9%)
Yes	63 (12.4%)	64 (12.1%)
Highest level of education completed		
Less than high school	3 (0.6%)	1 (0.2%)
High school / secondary school	61 (12.0%)	64 (12.1%)
Some post-school College or University education	118 (23.0%)	126 (23.9%)
College or University undergraduate degree	208 (41.0%)	225 (42.7%)
Master's degree	85 (16.8%)	88 (16.7%)
Doctoral degree	15 (3.0%)	6 (1.1%)
Professional degree (JD, MD)	17 (3.4%)	17 (3.2%)
Main current occupational status		
Employed for wages	288 (56.8%)	265 (50.3%)
Self-employed	56 (11.0%)	72 (13.7%)
Unemployed but looking for work	44 (8.7%)	50 (9.5%)
Home-maker	24 (4.7%)	29 (5.5%)
Student	40 (7.9%)	63 (12.0%)
Retired	33 (6.5%)	30 (5.7%)
Unable to work for health or other reasons	22 (4.3%)	18 (3.4%)

Note. Percentages may not sum exactly to 100% due to rounding errors.

The sample size was planned to confer over 80% power to detect an effect size of *d*=.41 (based on Ferguson, 2009's, criterion for the minimum practically important effect size) in the focal *t*-test analyses for Hypotheses 1 and 3. Given that an uneven split was expected for people who had or had not shared false information (with most not having done so), allocation ratios were estimated based on previous studies which had used the same dependent measure (Buchanan, 2020). For 80% power in the tests of Hypotheses 1 and 3, 318 and 492 participants respectively were required. Accordingly, target sample size was set at 550. The 507 responses remaining after data screening exceeded these power thresholds.

2.2 Results and Discussion

Descriptive statistics are shown in Table 2. All scales had internal consistency above .70, bar the CRT-2. The value of Cronbach's alpha of .52 obtained for that instrument was however consistent with that from the validation study (Thomson & Oppenheimer, 2016)

Table 2

Descriptive Statistics, Study 1

	N	*M*	*SD*	α[a]	Range		Skew	Kurtosis
					Potential	Actual		
Age	507	39.52	13.93		18+	18-84	0.42	-0.56
Trust in political info	507	2.37	0.96		1-5	1-5	0.49	-0.08
Influenced by political info	507	2.26	1.20		1-5	1-5	0.59	-0.71
Shares political info	507	2.13	1.24		1-5	1-5	0.81	-0.46
CRT-2[b]	353	1.86	1.15	.52	0-4	0-4	0.00	-0.93
BFI-2 Agreeableness	507	45.69	7.55	.84	12-60	16-60	-0.33	-0.11
SPQ-BRU Social Anxiety	507	12.42	4.68	.92	4-20	4-20	-0.18	0.22
SPQ-BRU Interpersonal	507	15.16	5.61	.86	6-30	6-30	0.16	-0.73
SPQ-BRU Disorganized	507	21.57	7.25	.90	8-40	8-40	0.09	-0.53
SPQ_BRU Cognitive-Perceptual	507	28.78	10.27	.90	14-70	14-66	0.66	0.15
SD3 Psychopathy	507	17.83	5.92	.78	9-45	9-41	0.73	0.33

[a]Cronbach's alpha, internal consistency.

[b]Restricted to those unfamiliar with items.

The pre-registered analysis for Hypothesis 1 was an independent-samples *t*-test comparing the CRT-2 scores of participants who answered 'yes' to the question "Have you ever shared a political news story online that you later found out was made up?" with those who had answered 'no'. There was no statistically significant difference ($t_{(351)}$=-.75, p=.46, g_{Hedges}=-.10) between the 284 who had not (M=1.84, SD=1.17) and the 69 who had (M=1.96, SD=1.06). Thus, the data were inconsistent with Hypothesis 1: there was no evidence that differences in cognitive reflection were associated with inadvertent sharing of false information.

The pre-registered analysis for Hypothesis 3 was an independent-samples *t*-test comparing the SD3 Psychopathy scores of participants who answered 'yes' to the question "And have you ever shared a political news story that you thought AT THE TIME was made up?" with those who had answered 'no'. There was a statistically significant difference ($t_{(505)}$=-5.19, p<.001, g_{Hedges}=0.70) between the 444 who had not (M=17.33, SD=5.54) and the 63 who had (M=21.37, SD=7.23). Thus, the data were consistent with Hypothesis 3: there was evidence that people who had deliberately shared false information had higher levels of trait psychopathy.

Hypothesis 2 was that lower agreeableness would be associated with higher levels of deliberately sharing false information. Hypothesis 4 was that higher levels of schizotypy would be associated with higher levels of sharing false information (both deliberate and accidental). These were tested simultaneously using binary logistic regressions, controlling for other variables that might influence sharing. As a preliminary step, correlations between all measured variables and the outcome variables were computed, to identify other predictors that should be included in the

regressions for control purposes. Correlations between all variables are shown in Table 3. Given the large sample size, even small correlations are statistically significantly different from zero. When interpreting these statistics, more attention should be paid to the magnitude of the correlation.

Table 3

Intercorrelations Among Variables, Study 1

	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Gender (M=1, F=2)	-.10*	.08	.12**	-.09*	-.08	.00	.24**	-.34**	.06	-.09*	-.06	-.05	-.12*	-.05	-.03
2. Education		.14**	-.04	.09*	.03	.04	.01	.06	-.18**	-.09*	-.14**	-.06	.08	-.03	.00
3. Age			-.16**	-.22**	-.29**	-.11*	.20**	-.26**	-.23**	-.11*	-.26**	-.29**	-.12*	-.06	-.13**
4. Social media use				.19**	.17**	.14**	.09	-.10*	.05	-.03	-.01	-.02	-.07	.12**	.08
5. Trust in political info					.64**	.57**	-.02	.23**	-.04	-.05	.06	.28**	.00	.22**	.13**
6. Influenced by political info						.52**	-.07	.21**	.09*	.11*	.21**	.34**	.03	.24**	.08
7. Shares political info							-.10*	.24**	.05	.03	.19**	.34**	.01	.38**	.21**
8. BFI-2 Agreeableness								-.57**	-.30**	-.49**	-.45**	-.38**	-.02	-.10*	-.12**
9. SD3 Psychopathy									.16**	.34**	.47**	.61**	.04	.21**	.23**
10. SPQ-BRU Social Anxiety										.54**	.56**	.32**	.03	.04	-.01
11. SPQ-BRU Interpersonal											.51**	.42**	-.01	.10*	.07
12. SPQ-BRU Disorganized												.54**	-.02	.16**	.12**
13. SPQ-BRU Cognitive-Perceptual													-.03	.21**	.24**
14. CRT-2														.04	-.03
15. Shared false info innocently															.31**
16. Shared false info deliberately															

Note. N=507 for all correlations not involving gender or CRT-2, n=348 for correlation of gender with CRT-2, n=353 for all other correlations with CRT-2, n=498 for all other correlations with gender. Point-biserial correlations are presented for gender and for sharing false information either innocently or deliberately; Pearson's r is presented in all other cases.

*p<.05.

**p<.01.

Having previously shared a political news story online that was subsequently found to have been made up was associated with higher levels of social media use; higher trust placed in online political information; higher rating of being influenced by such information; higher level of sharing political information; lower agreeableness; higher psychopathy; and higher scores on the Interpersonal, Disorganized and Cognitive-Perceptual domains of the SPQ-BRU (Table 3). Including all these variables as predictors in a binary logistic regression (Table 4) indicated that sharing false political information on social media by mistake was associated with higher levels of social media use (p=.049); higher tendency to share political information (p<.001); and higher psychopathy (p=.044).

Having previously shared false material on purpose was associated with lower age; higher trust in political information; higher level of sharing; lower agreeableness; higher psychopathy; and higher scores on the Disorganized and Cognitive-Perceptual domains of the SPQ-BRU (Table 3). Including all these variables as predictors in a binary logistic regression (Table 5) indicated that sharing false political information on purpose was associated with higher tendency to share political information (p=.005) and higher cognitive-perceptual schizotypy (p=.031).

Table 4

Logistic Regression: Predictors of Sharing Information Later Discovered to be False, Study 1

	B	*S.E.*	*Wald*	*df*	*p*	*Exp(B)*	95% C.I. for *Exp(B)*
Social media use	0.43	0.22	3.86	1	.049	1.54	[1.00, 2.37]
Trust in political info	-0.16	0.19	0.73	1	.39	0.85	[0.59, 1.23]
Influenced by political info	0.10	0.14	0.55	1	.46	1.11	[0.85, 1.44]
Shares political info	0.67	0.12	30.37	1	<.001	1.96	[1.54, 2.49]
BFI-2 Agreeableness	0.01	0.02	0.22	1	.64	1.01	[0.97, 1.05]
SD3 Psychopathy	0.06	0.03	4.06	1	.04	1.06	[1.00, 1.12]
SPQ-BRU Interpersonal	0.03	0.03	0.76	1	.38	1.03	[0.97, 1.08]
SPQ-BRU Disorganized	0.01	0.02	0.06	1	.81	1.01	[0.96, 1.05]
SPQ_BRU Cognitive-Perceptual	0.00	0.02	0.04	1	.84	1.00	[0.97, 1.04]
Constant	-7.05	1.81	15.19	1	<.001	0.00	

Note. N=507.

Table 5

Logistic Regression: Predictors of Sharing Information Known at Time to be False, Study 1

	B	*S.E.*	*Wald*	*df*	*p*	*Exp(B)*	95% C.I. for *Exp(B)*
Age	-0.02	0.01	2.56	1	.11	0.98	[0.96, 1.00]
Trust in political info	-0.18	0.19	0.88	1	.35	0.84	[0.57, 1.22]
Shares political info	0.40	0.14	8.05	1	.005	1.49	[1.13, 1.96]
BFI-2 Agreeableness	0.00	0.03	0.00	1	1.00	1.00	[0.95, 1.05]
SD3 Psychopathy	0.06	0.03	3.22	1	.07	1.06	[1.00, 1.13]
SPQ-BRU Disorganized	-0.03	0.03	1.26	1	.26	0.97	[0.92, 1.02]
SPQ_BRU Cognitive-Perceptual	0.04	0.02	4.67	1	.03	1.04	[1.00, 1.08]
Constant	-3.48	1.70	4.17	1	.04	0.03	

Note. N=507.

Thus, Hypothesis 4 was partly supported by the data in that cognitive-perceptual schizotypy predicted deliberate but not inadvertent sharing of false information. Hypothesis 2 was not supported, in that agreeableness was not linked to either type of sharing false information when other variables were controlled for. The findings for psychopathy are inconsistent with the prior analysis. People who had shared false information on purpose did have higher psychopathy scores. However, psychopathy was not a statistically significant predictor in the regression analysis reported in Table 5, with p=.073. These findings are further discussed later in the paper, in combination with the findings of Study 2.

Finally, for consistency and to enable comparisons with the tests for Hypotheses 1 and 3, we computed *t*-tests comparing the agreeableness scores of those who had and had not shared false information on purpose, and the cognitive-perceptual schizotypy scores of those who had or had not shared false information either inadvertently or on purpose. The 63 people who reported sharing material they knew was false had statistically significantly lower agreeableness ($t_{(74.19)}$=2.30, p=.024, g_{Hedges}=0.36; adjusted *df* used due to significant Levene's test for heterogeneity of variance) than the 444 who did not (M=43.32, SD=8.92; M=46.03, SD=7.28 respectively). The 103 people who reported sharing material they later discovered was false had statistically significantly higher cognitive-perceptual schizotypy ($t_{(132.10)}$=-4.05, p<.001, g_{Hedges}=0.53; adjusted *df* used due to significant Levene's test for heterogeneity of variance) than the 404 who did not (M=33.03, SD=12.53; M=27.69, SD=9.32 respectively). The 63 people who reported sharing material they knew was false had statistically significantly higher cognitive-perceptual ($t_{(72.62)}$=-4.60, p<.001, g_{Hedges}=0.75; adjusted *df* used due to

significant Levene's test for heterogeneity of variance) than the 444 who did not (*M*=35.38, *SD*=12.52; *M*=27.84, *SD*=9.56 respectively).

2. Study 2

Study 2 was planned as a partial replication of Study 1, to confirm the effects found. It employed the same methods, but only measured those variables associated with sharing false information. Several further hypotheses were advanced based on Study 1 findings. It was predicted that individuals who reported having shared information that they subsequently discovered was false would score higher on tendency to share political information (H5), psychopathy (H6) and social media use (H7). Individuals who reported having shared information that they knew at the time was false were predicted to score higher on tendency to share political information (H8), psychopathy (H9), and cognitive-perceptual schizotypy (H10). Hypotheses and primary analyses (*t*-tests as in Study 1) were preregistered at https://osf.io/5kvh4/?view_only=8a6739a7aa154c628433042d816fe084 . Given the intercorrelations among these variables (see Table 3), follow-up logistic regressions were again planned to establish the unique effect of each predictor.

3.1 Method

Study 2 was conducted online using Qualtrics. Hypotheses and primary analyses were preregistered. Analysis was conducted using SPSS 25 for Mac. All data, analysis syntax, and materials can be seen at https://osf.io/25gmx/?view_only=e829a34a35a24b7dbc69e92203f9728b .

3.1.1 Materials and Procedure

Materials and procedure were same as for Study 1, save that some elements were removed to lessen the assessment load on participants. These were the request for descriptions of why people had shared false information; the BFI-2 Agreeableness scale; and the CRT-2.

3.1.2 Data Screening and Processing

The same pre-registered checks on data quality were conducted as for Study 1, prior to any analysis. From 551 responses initially recorded, one response was deleted due to withholding consent at end of questionnaire. Two responses were deleted due to zero inter-item variance on SPQ-BRU items (indicating ‘straightlining’, a form of inauthentic responding), and a further four with zero inter-item variance on the psychopathy scale. Sixteen participants reported using social media 'not at all' (5) or 'less often' than every few weeks (11) and were deleted. One participant was removed for an implausible combination of demographic information (claiming to have completed a Masters’ degree at the age of 20). No participants were excluded due to implausibly fast completion times, or not indicating an age of 18 years or above. Following these checks, 527 responses remained from the initial 551 recorded.

3.1.3 Participants

Participants, drawn from the Prolific research panel, were paid £0.50 GBP. Inclusion criteria were that the participants be US citizens, resident in the US, who had English as a first language, and had not participated in any previous related studies. Participants were recruited in two waves: one including people aged 18-40, and one

including people aged over 40. This was done to ensure variance in age. Participant demographics are shown in Table 1 (right side). As in Study 1, target sample size was set at 550 to ensure the replication was similarly powered. The final sample following data screening comprised 527 responses.

3.2 Results and Discussion

Descriptive statistics are shown in Table 6. All measures had satisfactory internal consistency. Tests of hypotheses 5-10 were conducted using independent samples *t*-tests. Findings are summarized in Tables 7 and 8.

Table 6

Descriptive Statistics, Study 2

					Range			
	N	*M*	*SD*	α[a]	Potential	Actual	Skew	Kurtosis
Age	527	38.64	13.59		18+	18-79	0.41	-0.55
Trust in political info	527	2.40	0.90		1-5	1-5	0.30	-0.12
Influenced by political info	527	2.31	1.12		1-5	1-5	0.42	-0.82
Shares political info	527	2.01	1.14		1-5	1-5	0.94	-0.05
SPQ-BRU Social Anxiety	527	12.80	4.86	.93	4-20	4-20	-0.34	-0.94
SPQ-BRU Interpersonal	527	15.60	5.92	.88	6-30	6-30	0.20	-0.87
SPQ-BRU Disorganized	527	22.25	7.38	.89	8-40	8-40	-0.09	-0.67
SPQ_BRU Cognitive-Perceptual	527	28.92	11.70	.93	14-70	14-68	0.90	0.18
SD3 Psychopathy	527	17.79	6.34	.82	9-45	9-36	0.71	-0.05

[a]Cronbach's alpha, internal consistency.

Table 7

Independent Samples t-tests Comparing Those Who Had Shared Material They Later Discovered Was False, With Those Who Had Not, Study 2

	Had not Shared (n=424)		Had Shared (n=103)					
	M	*SD*	*M*	*SD*	*t*	*df*	*p*	g_{Hedges}
Shares political info	1.78	0.98	2.93	1.29	-8.45	131.67[a]	<.001	1.10
SD3 Psychopathy	17.16	5.82	20.4	7.61	-4.04	132.41[a]	<.001	0.52
Social media use	4.64	0.70	4.46	0.86	2.05	136.56[a]	.04	0.25

Note. Hedges'*g* effect size indicator used instead of Cohen's *d* due to unbalanced *n* in comparison groups.

[a]Adjusted *t* statistic and degrees of freedom used due to a significant Levene's test for heterogeneity of variance between comparison groups.

Table 8

Independent Samples t-tests Comparing Those Who Had Shared Material They Knew at Time Was False, With Those Who Had Not, Study 2

	Had not Shared (*n*=463)		Had Shared (*n*=64)					
	M	*SD*	*M*	*SD*	*t*	*df*	*p*	g_{Hedges}
Shares political info	1.89	1.07	2.86	1.25	-6.63	525	<.001	0.89
SD3 Psychopathy	17.04	5.70	23.23	7.92	-6.04	72.29[a]	<.001	1.03
SPQ-BRU Cognitive-Perceptual	27.33	10.32	40.39	14.42	-6.99	72.2[a]	<.001	1.12

Note. Hedges'*g* effect size indicator used instead of Cohen's *d* due to unbalanced *n* in comparison groups.

[a]Adjusted *t* statistic and degrees of freedom used due to a significant Levene's test for heterogeneity of variance between comparison groups.

In line with hypotheses 5 and 6, people who reported having shared political material online that they later discovered was false had statistically significantly higher scores on tendency to share political material online, and on psychopathy. Hypothesis 7 – that people unwittingly sharing false information would have higher social media use scores - was not supported. While there was a statistically significant difference between the conditions, people who had inadvertently shared false material actually reported lower levels of social media use.

Comparisons of those who reported having shared material they knew at the time was false, with those who had not, were consistent with hypotheses 8 (higher tendency to share political material), 9 (higher psychopathy) and 10 (higher cognitive-perceptual schizotypy).

Given that a number of these variables correlated with each other, as well as all correlating with both types of sharing (Table 9), binary logistic regressions were used to evaluate the unique effect of each. In a deviation from the pre-registered analysis, gender and education were also included in these regressions as control variables due to their correlations with self-reports of both types of sharing false information (Table 9). Running the regressions without gender and education gave the same pattern of statistical significance for the other predictors, so their inclusion did not affect the planned hypothesis tests.

Table 9

Intercorrelations Among Variables, Study 2

	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Gender (M=1, F=2)	-.08	.06	.14**	-.03	-.08	-.08	-.44**	-.01	-.23**	-.16**	-.21**	-.17**	-.21**
2. Education		.19**	-.14**	.11*	.06	.13**	.10*	-.11*	-.11*	-.02	.10*	.09*	.13**
3. Age			-.25**	-.12**	-.26**	-.05	-.16**	-.26**	-.13**	-.23**	-.15**	-.02	.02
4. Social media use				.05	.10*	.04	-.15**	.09*	-.10*	-0.04	-.14**	-.10*	-.18**
5. Trust in political info					.64**	.54**	.29**	.07	.14**	.14**	.31**	.25**	.25**
6. Influenced by political info						.50**	.32**	.19**	.16**	.27**	.33**	.29**	.24**
7. Shares political info							.30**	.08	.05	.19**	.30**	.40**	.28**
8. SD3 Psychopathy								.26**	.47**	.49**	.67**	.20**	.32**
9. SPQ-BRU Social Anxiety									.51**	.52**	.36**	.04	.03
10. SPQ-BRU Interpersonal										.46**	.52**	.08	.18**
11. SPQ-BRU Disorganized											.55**	.17**	.17**
12. SPQ-BRU Cognitive-Perceptual												.27**	.37**
13. Shared false info innocently													.32**
14. Shared false info deliberately													

Note. N=527 for all correlations not involving gender, n=513 for correlations with gender. Point-biserial correlations are presented for gender and for sharing false information either innocently or deliberately; Pearson's *r* is presented in all other cases. Given the large sample size even small correlations are statistically significant, so more attention should be paid to the effect size when interpreting these results.

*p<.05.

**p<.01.

Table 10

Logistic Regression: Predictors of Sharing Information Later Discovered to be False, Study 2

	B	*S.E.*	*Wald*	*df*	*p*	*Exp(B)*	95% C.I. for *Exp(B)*
Gender (M=1, F=2)	-0.74	0.30	6.33	1	.01	0.48	[0.27, 0.85]
Education	-0.01	0.12	0.00	1	.97	1.00	[0.79, 1.25]
SD3 Psychopathy	-0.04	0.03	1.81	1	.18	0.96	[0.91, 1.02]
Shares political info	0.77	0.12	44.46	1	<.001	2.15	[1.72, 2.69]
SPQ-BRU Cognitive-Perceptual	0.04	0.01	8.95	1	.003	1.04	[1.02, 1.07]
Social media use	-0.36	0.17	4.69	1	.03	0.70	[0.50, 0.97]
Constant	-1.03	1.14	0.81	1	.34	0.36	

Table 11

Logistic Regression: Predictors of Sharing Information Known at Time to be False, Study 2

	B	*S.E.*	*Wald*	*df*	*p*	*Exp(B)*	95% C.I. for *Exp(B)*
Gender (M=1, F=2)	-0.82	0.37	5.04	1	.03	0.44	[0.21, 0.90]
Education	-0.01	0.14	0.00	1	.95	0.99	[0.76, 1.30]
SD3 Psychopathy	0.01	0.03	0.08	1	.78	1.01	[0.95, 1.08]
Shares political info	0.52	0.14	14.29	1	<.001	1.68	[1.28, 2.19]
SPQ-BRU Cognitive-Perceptual	0.05	0.02	10.09	1	.001	1.05	[1.02, 1.09]
Social media use	-0.46	0.19	6.04	1	.01	0.63	[0.44, 0.91]
Constant	-1.75	1.33	1.74	1	.19	0.17	

Table 10 summarizes the effects of gender, education, tendency to share political material online, psychopathy, cognitive-perceptual schizotypy, and social media use on whether people had shared material they later discovered was false. Table 11 summarizes the effects of gender, education, tendency to share political material online, psychopathy, cognitive-perceptual schizotypy, and social media use on whether people had shared material they knew at the time was false. In both analyses, male gender, tendency to share political information, cognitive-perceptual schizotypy, and level of social media use were statistically significant predictors. Contrary to hypotheses 6 and 9 however, and the *t*-test findings, psychopathy was not. Counter-intuitively, and contradicting Hypothesis 7, lower levels of social media use were associated with a higher likelihood of reporting having shared false material both accidentally and on purpose.

The fact that psychopathy levels differ between people who had and had not shared false information (Tables 7 and 8), but that psychopathy was not statistically significant as a predictor in the logistic regressions (Tables 10 and 11), suggests that the effect of psychopathy can be attributed to its overlap with other variables, or that it is mediated by other variables. A further exploratory analysis, using combined datasets from both Study 1 and Study 2, was performed to examine this possibility.

An exploratory mediation analysis was conducted using the PROCESS macro (Hayes, 2017; v. 3.5.3 for SPSS, using Model 4 with a binary outcome variable). Data from Study 1 and Study 2 were combined (N=1034) to increase power. This analysis modelled the effect of psychopathy on sharing information later discovered to be false. Tendency to share political information was specified as a mediator because in both

studies it significantly predicted sharing false information (Tables 4, 10), was correlated with psychopathy (Tables 3, 9), and was plausible as a mediator in terms of potential causal pathways. This model is also theoretically plausible, because there is research demonstrating links between psychopathy and political behaviour, notably political extremism (Dumara & Greitemeyer, 2017). There are also documented links between psychopathy and a trait described as 'need for chaos' which is linked to a willingness to share hostile political rumors online (Petersen et al., 2020). Cognitive-perceptual schizotypy, gender (male or female only), and social media use were also related to sharing false information and to psychopathy in Study 2. They were therefore also included in the model as covariates.

This analysis indicated that tendency to share political information had a positive and significant direct effect on sharing information later discovered to be false (b=.69, SE=.07, p<.001). The same was true of cognitive-perceptual schizotypy (b=.03, SE=.01, p=.006). However, the other covariates gender (b=-.38, SE=.20, p=.05) and social media use (b=-.02, SE=.12, p=.90) did not significantly predict this outcome in the combined sample. Psychopathy did not directly predict accidentally sharing false information (b=.01, SE=.02, p=.64). However, there was a positive indirect effect from psychopathy through tendency to share political information (IE=.02) which was statistically significantly different from zero based on bootstrapping with 5000 resamples (95% CI = [.01, .04]).

This implies that psychopathy itself does not influence sharing information later discovered to be false. Rather, people who score high on psychopathy tend to share more political information on social media, and that higher level of sharing leads to a

greater likelihood of having shared false material. Of the other variables included, only cognitive-perceptual schizotypy had an effect: people scoring higher on this characteristic were more likely to report having shared material they later found to be false.

This analysis was then repeated using self-reports of ever having shared material that was known at the time to be false as the outcome variable. The pattern of results was the same. Tendency to share political information (*b*=.39*, SE*=.09, *p*<.001) and cognitive-perceptual schizotypy (*b*=.05*, SE*=.01, *p*<.001) had positive and statistically significant direct effects. Psychopathy (*b*=.04*, SE*=.02, *p*=.08), social media use (*b*=-.11, *SE*=.13, *p*=.43) and gender (*b*=-.33, *SE*=.23, *p*=.15) did not. However, the indirect effect of psychopathy mediated by tendency to share political information was again statistically significant (*I.E.*=.01, 95% *CI*=[.005, .02]).

3. Discussion

Taken together, Studies 1 and 2 showed that around a quarter of individuals report sharing false political information. The correlations shown in Tables 3 and 11 suggest that sharing false information, whether deliberately or by accident, correlates with a plethora of individual differences and other variables. When relationships between these variables were controlled for in logistic regression analyses, it appeared that a smaller set of these inter-related variables accounted for the effects. There were some effects that were only observed in one study – notably, level of social media use which was positively associated with one type of sharing in Study 1, and negatively with

both types in Study 2. To avoid interpreting potentially spurious findings, the focus here will be on effects that were replicated across the two studies.

An important exception to this is cognitive reflection, which was not associated with sharing false information in Study 1 (and was thus not included in Study 2). This finding is surprising, given that work by other researchers has demonstrated strong links (e.g., Pennycook & Rand, 2019). While we previously argued that the effect might only operate for particular types of sharing (accidental vs. deliberate), we had anticipated finding a link with sharing false material accidentally. One reason we did not might revolve around the way we measured this: we asked whether people had ever shared material they had later discovered was untrue. It is entirely possible that people low in cognitive reflection would share false material and never discover it was untrue afterwards, because they had not subsequently thought about it.

A second exception is agreeableness, which has been found in other research to be associated self-reported likelihood of sharing false material (Buchanan & Benson, 2019; Buchanan, 2020). The findings of Study 1 suggest that those observations may be due to the variance it shares with schizotypy and psychopathy, rather than the core trait of agreeableness itself. The results of the *t*-test analyses reported at the end of section 2.2 bear this out: the agreeableness scores of those who had shared false material on purpose were statistically significantly lower, but when included alongside other variables in the regression analysis (Table 5) agreeableness was not a significant predictor of knowingly sharing false information.

Cross-tabulating the pooled data from both studies, 138 (13.3%) participants said they had only shared a political story they later found out was untrue; 59 (5.7%) said

they had only shared one they knew at the time was untrue; 68 (6.6%) had done both; and 769 (74.4%) had done neither. The two types of sharing were statistically significantly associated, $X^2_{(1,N=1034)}=102.58$, $p<.001$. This raises a question as to whether there is really merit in treating these types of sharing as separate behaviours.

This project set out to test whether different factors were associated with sharing false information 'innocently' and doing it in the full knowledge that it was untrue. The overall pattern of results suggests this is not the case. In Study 2, the same set of variables predicted both types of sharing. When the data from the two studies were pooled for the mediation analysis, the pattern of direct and indirect effects appeared to be the same for both innocent and deliberate sharing. Figure 1 presents a tentative model showing these relationships. Three variables appear to be important: tendency to share political information in general; psychopathy; and cognitive-perceptual schizotypy. Based on the between-group comparisons, the effect sizes associated with these variables are in the medium-large range (Cohen, 1992).

The first of these variables is relatively easy to explain: if one tends to share a lot of political information, then there is a higher chance that one will inadvertently share something that is untrue. If one is politically engaged, then there is a possibility that one might deliberately share false material. This is not to say the behaviour would always be malicious: while one might be doing it instrumentally, to achieve some desired outcome such as political influence, one might also be doing it to debunk, criticise, or even mock something one knows to be false (e.g., Chadwick et al, in press).

The relationship between psychopathy and politics has received some attention in the research literature. Some studies (e.g., Jonason, 2014) report that psychopathy is

associated with political conservatism. Others, however, have shown that psychopathy is associated with extremist political views in general (Duspara & Greitemeyer, 2017). On this basis, the finding that people higher in psychopathy report sharing more political news online is not surprising. It may well be that the differences in psychopathy found between people who had and had not shared false material in both Study 1 and Study 2, were thus simply a function of the higher volume of political material that more psychopathic people may share.

The role of cognitive-perceptual schizotypy is perhaps more interesting, given that it had a direct effect on both types of false information sharing in Study 2, deliberate sharing in Study 1, and both types in the mediation analysis using pooled data. Thus, while it may be associated with sharing political information in general (Table 3, Table 9) it is also separately associated with sharing false information specifically.

We had hypothesised that schizotypy might be related to sharing due to increased reliance on heuristics and biases. Pennycook et al. (2021) suggest that sharing material online does not necessarily imply one believes it, and that sharing false information is associated with attention being diverted away from accuracy of the material. Buchy et al. (2007) argue that schizotypy is associated with a bias against disconfirmatory evidence. It may well be that this bias interacts with the effect described by Pennycook et al.: people high on schizotypy pay less attention to information questioning the veracity of the material at hand; their focus is more on the other factors that might make them want to share it. This could account for higher levels of 'accidental' sharing.

The relationship with deliberate sharing of material known to be untrue is more of a puzzle. Given the general link between schizotypy and conspiratorial beliefs, it may be that people high in these characteristics perceive political material they encounter online through a lens of suspicion. It is possible that people high in cognitive-perceptual schizotypy would knowingly share false material to their social networks along with commentary trying to argue against or debunk it. Exploring this possibility requires examination of links between schizotypy and different motivations for sharing false material.

4.1 Limitations and Future Directions

One key limitation of this study is that it relies on self-reports of sharing false material, using a relatively insensitive measure. While the questions used were drawn from work that played a significant role in drawing attention to the problem of 'fake news' (e.g., Barthel et al., 2016), they have two major problems. One involves asking people whether they had shared material they later became aware was false. This relies on them having become aware the material was untrue. It is very likely that participants had shared false material without ever knowing it. The second is that people could have shared information that they knew was untrue for a variety of reasons - ranging from wanting to spread it to deceive others, to wanting to debunk or disagree with it. More nuanced questions are required to distinguish between these different motivations (Chadwick et al., in press).

Asking people about their history of sharing false material is a proxy for actual behavioural observations of whether they have done so. Thus, it may be that the

relationships observed here reflect influences on the behaviour of reporting, not on the behaviour of sharing false material. For example, people higher on cognitive-perceptual schizotypy could mistakenly have thought that they had done these things. On the other hand, there is evidence that people's self-reports of their likelihood of sharing false material do correlate with their real-world behaviour (Mosleh et al., 2020).

Yet another issue is the problem of socially desirable responding. It may be that people under-report their sharing of false material, because it is not something they wish to disclose. Some of the traits addressed – in particular psychopathy – could impact upon this. People higher in psychopathy might care less about social judgements, and thus be more likely to report socially-undesirable behaviour. Therefore, the links found here could again reflect a reporting bias rather than the behaviour itself. The opposite problem - that people high on psychopathy might be more likely to distort their responses in a socially desirable manner - seems less likely, given work that reports negative or negligible associations with socially desirable responding (Ray et al., 2013).

Despite its limitations, the current work with self-report measures provides some pointers to individual differences that might influence sharing false material. The next step is clearly to examine whether those same relationships apply to actual behavioral observations.

4.2 Conclusion

In summary, in two studies we found that a large minority of individuals report having shared false political information either deliberately or accidentally. The same variables appear to influence both types of sharing: tendency to share political information in general, trait psychopathy, and cognitive-perceptual schizotypy. These had substantive effect sizes. While psychopathy has an indirect effect, mediated by political sharing, cognitive perceptual schizotypy has a direct effect on sharing. A limitation of this work was its reliance on self-report measures of sharing false information. However, it points to variables that are likely to be worth evaluating in future behavioural research.

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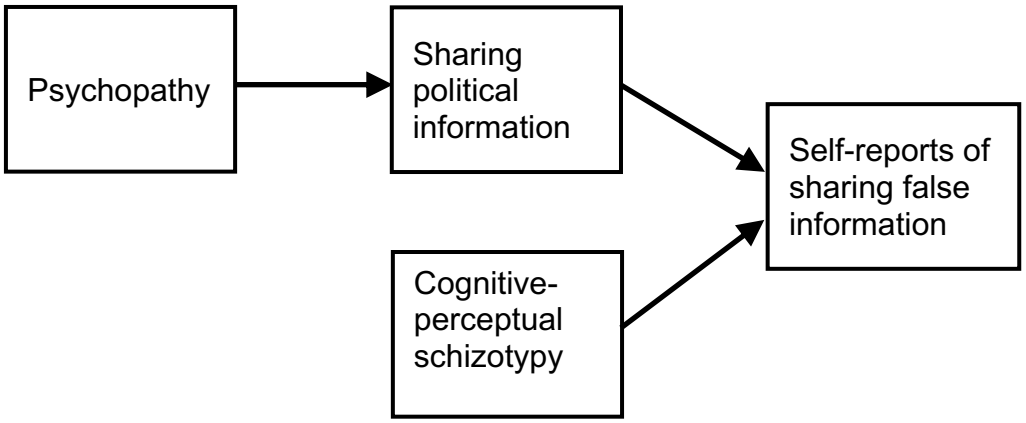
Figure 1

Tentative Model for Variables Influencing Sharing False Information.



Note. The figure summarises direct and indirect effects of psychopathy, cognitive-perceptual schizotypy, and tendency to share political information on social media on self-reports of having shared false information. It is based on both Study 1 and Study 2. It combines the analyses for sharing information that was later found to be false, and material shared in the knowledge that it was untrue. It does not show all correlations between these variables.