

Title: Appendix for “Who knowingly shares false information online?”

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Date: August 25th, 2023

Note: The material contained herein is supplementary to the article named in the title and published in the Harvard Kennedy School (HKS) Misinformation Review.

Appendix

Demographic items and sample composition

Sex

I am:

- Male
- Female

Race

I am: (please check all that apply)

- White
- Black or African-American
- Asian-American or Pacific Islander
- Native American or American Indian
- Other

Are you of Hispanic or Latino/a origin?

- Yes
- No

Income

What is your annual household income?

- \$24,999 or less
- \$25,000 to \$49,999
- \$50,000 to \$74,999
- \$75,000 to \$99,999
- \$100,000 to \$149,999
- \$150,000 to \$199,999
- \$200,000 or more

Education

What is the highest level of education you have completed?

- Less than high school
- High school graduate or GED
- Some college, but no degree (yet)
- 2-year college degree
- 4-year college degree
- Post-graduate degree (MA, MBA, MD, JD, PhD, etc.)

Age (Calculated from Birth Year)
 What year were you born?

Table A1. Sample demographics.

	Survey sample	U.S. Census (age 18+)
Sex ¹		
male	45.0%	49.1
female	55.0	50.9
Education ²		
some high school or less	2.9	10.0
high school graduate/GED	27.2	28.0
some college	18.4	17.0
2-year degree	10.8	10.0
college graduate	25.8	22.0
Graduate Degree	17.7	13.0
Household Income ³		
\$24,999 or less	18.8	18.1
\$25,000 to \$49,999	20.4	19.7
\$50,000 to \$74,999	16.6	16.5
\$75,000 to \$99,999	12.3	12.2
\$100,000 to \$149,999	14.4	15.3
\$150,000 to \$199,999	7.7	8.0
\$200,000 or more	9.9	10.3
Race ¹		
White, non-Hispanic	67.7	62.6
Black, non-Hispanic	13.5	12.2
Asian, non-Hispanic	2.7	2.8
Native American, non-Hispanic	1.9	0.7
Hispanic or Latino origin	16.2	16.6
Age ¹		
18 to 24 years	7.9	11.7
25 to 44 years	42.6	34.4
45 to 64 years	19.4	32.8
65 years and over	30.2	21.1

U.S. Census Sources:

¹<https://www.census.gov/data/tables/time-series/demo/popest/2020s-national-detail.html>

²<https://www.census.gov/data/tables/2021/demo/educational-attainment/cps-detailed-tables.html>

³<https://www.census.gov/data/tables/time-series/demo/income-poverty/cps-hinc/hinc-01.html>

Table A2. Descriptive statistics and item wordings for all variables.

	N	M	SD	Min	Max
Shares false political information	1999	1.99	1.22	1	5
Gender (Female)	2001	0.55	0.50	0	1
Race (White)	2001	0.78	0.41	0	1
Income	2001	3.46	1.93	1	7
Education	2001	3.86	1.54	1	6
Age	2001	48.54	18.52	19	95
Religiosity	2000	0.54	0.32	0	1
Party ID (Dem-Rep)	2001	3.49	2.24	1	7
Ideology (Lib-Con)	2000	3.88	1.84	1	7
Partisan Strength	2001	3.00	1.12	1	4
Ideological Strength	2000	2.39	1.22	1	4
Conspiracy thinking	1999	3.15	1.04	1	5
Need for Chaos	2000	2.11	1.06	1	5
Dark Tetrad	2001	2.36	0.87	1	5
Paranoia	2000	2.06	1.13	1	5
Right-Wing Authoritarianism	2000	3.16	0.87	1	5
Left-Wing Authoritarianism	2001	2.76	0.93	1	5
Dogmatism	2000	3.14	0.90	1	5
Victimhood	2000	2.78	1.07	1	5
Conflict	1993	0.81	1.46	0	6
Argumentativeness	1999	2.86	1.06	1	5
Uncertainty intolerance	2001	3.13	1.98	1	5
Subjective numeracy	2001	4.29	1.30	1	6
Media use: perceived power	1482	2.93	1.14	1	5
Media use: self-expression	2001	2.52	1.16	1	5
Positive Affect	1995	30.54	8.65	10	50
Negative Affect	1998	20.02	8.79	10	50
Follows Politics	2000	3.66	1.12	1	5
Legacy Mainstream News Media Use	2000	3.19	1.13	1	5
Online Mainstream News Media Use	2001	2.71	1.28	1	5
Mainstream Social Media Use	2001	2.93	1.33	1	5
Alternative Social Media Use	2001	1.72	1.02	1	5
Scientific Literacy	1993	3.98	1.24	0	6
Denialism	2001	3.33	0.88	1	5
Confidence in Scientific Community	1999	3.81	1.02	1	5

Main dependent variable of interest

(rated “strongly agree” to “strongly disagree.” Reverse-scored for analysis)

I share information on social media about politics even though I believe it may be false.

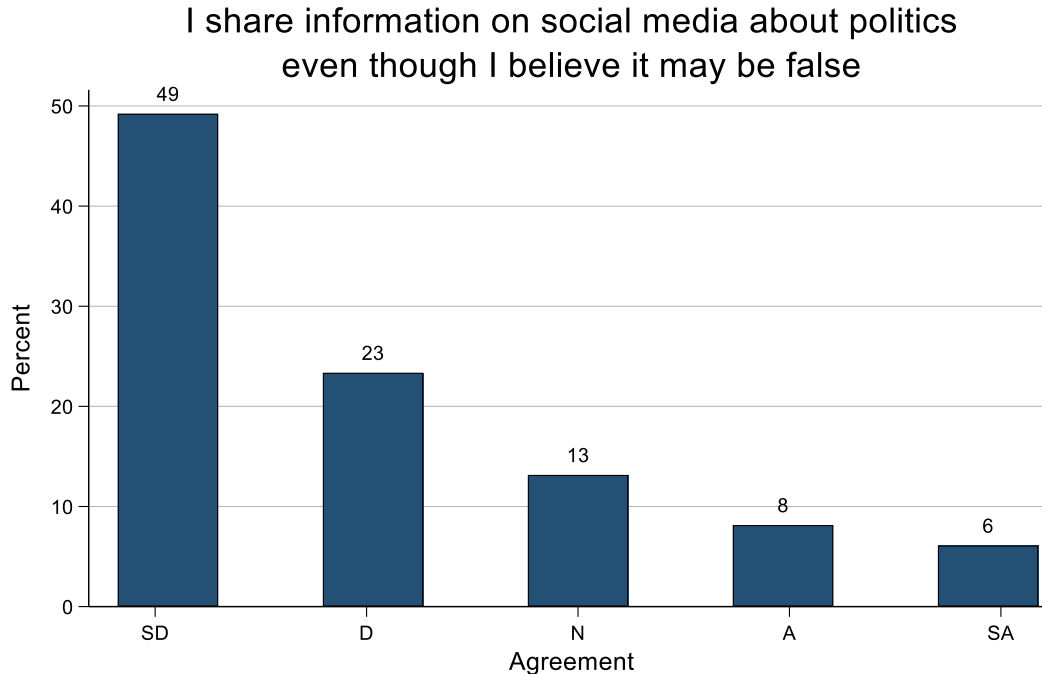


Figure A1. Distribution of participants' agreement that they intentionally share false information online. Bars indicate the percentage of participants who selected each response. SD = strongly disagree, N = neither agree/nor disagree, SA = strongly agree. N = 2,001.

Independent variables

Psychological factors: Personality characteristics and thinking styles

Need for Chaos (Petersen et al., 2020)

Here are some ideas that some people agree with, and others disagree with. In thinking about each one, please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- I fantasize about a natural disaster wiping out most of humanity such that a small group of people can start all over. (17.37)
- I think society should be burned to the ground. (14.46)
- When I think about our political institutions, I cannot help thinking "just let them all burn." (21.00)
- We cannot fix the problems in our society, we need to tear it down and start over. (20.57)
- I need chaos around me – it is too boring if nothing is going on. (15.22)
- Sometimes I just feel like destroying beautiful things. (13.60)

Dark Tetrad

Machiavellianism (Jonason & Webster, 2010)

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- I tend to manipulate others to get my way. (15.34)
- I have used deceit or lied to get my way. (22.20)
- I have used flattery to get my way. (31.43)
- I tend to exploit others towards my own end. (14.34)

Narcissism (Jonason & Webster, 2010)

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- I tend to want others to admire me. (30.22)
- I tend to want others to pay attention to me. (30.07)
- I tend to seek prestige or status. (23.57)
- I tend to expect special favors from others. (19.26)

Psychopathy (Jonason & Webster, 2010)

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- I tend to lack remorse. (14.55)
- I tend to be unconcerned with the morality of my actions. (15.80)
- I tend to be callous or insensitive. (16.25)
- I tend to be cynical. (26.00)

Sadism (Paulhus et al., 2021)

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- It's funny when idiots fall flat on their face. (34.92)
- Some people deserve to suffer. (26.66)
- Just for kicks, I've said mean things on social media. (18.05)
- I know how to hurt someone with words alone. (46.95)

Paranoia (Green et al., 2008)

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- Certain people have it in for me. (20.57)
- There is a conspiracy against me. (13.45)
- People are persecuting me. (13.90)

Dogmatism (McClosky & Chong, 1985)

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- On important public issues, I believe you should always be uncompromising, and either be for them or against them. (33.20)
- It is better to take a stand on an issue even if it's wrong. (32.85)
- When it comes to the really important questions about religion and philosophy of life, a person must decide them, one way or the other. (51.50)

Conspiracy Thinking (Edelson et al., 2017)

Here are some ideas that some people agree with, and others disagree with. In thinking about each one, please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- Even though we live in a democracy, a few people will always run things anyway. (59.28)
- The people who really "run" the country, are not known to the voters. (44.19)

- Big events like wars, the recent recession, and the outcomes of elections are controlled by small groups of people who are working in secret against the rest of us. (35.64)
- Much of our lives are being controlled by plots hatched in secret places. (34.27)

Right-Wing Authoritarianism (Bizumic & Duckitt, 2018)

Please tell us how much you agree or disagree with each of the statements below:

- God's laws about abortion, pornography, and marriage must be strictly followed before it is too late. (percent agree/strongly agree: 40.60)
- There is nothing wrong with premarital sexual intercourse. (percent disagree/strongly disagree: 20.85)
- Our society needs stricter laws. (percent agree/strongly agree: 47.75)
- Crime and the recent public disorders show that we have to crack down harder on troublemakers, if we are going to preserve law and order. (percent agree/strongly agree: 63.40)

Left-Wing Authoritarianism (Costello et al., 2022)

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- The rich should be stripped of their belongings and status. (19.40)
- Rich people should be forced to give up most of their wealth. (23.99)
- If I could remake society, I would put people who currently have the most privilege at the very bottom. (27.09)

Victimhood (Armaly & Enders, 2022)

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- I rarely get what I deserve in life. (26.85)
- Great things never come to me. (25.36)
- I usually have to settle for less. (34.72)
- I never seem to get an extra break. (32.55)

General Conflict Tactic Scale (Conrad et al., 2010)

During the past 12 months, have you done the following things when having a disagreement with another person? Yes = 1, No = 0 (scores can range from 0 to 6)

Insulted or swore at someone?

Pushed, grabbed, or shoved someone?

Threatened to hit another person?

Hit, kicked, bit, or slapped someone?

Beat up someone?

Threatened to use or actually used a knife or gun on someone?

Argumentativeness (Uscinski et al., 2021)

Here are some ideas that some people agree with, and others disagree with. In thinking about each one, please tell us how much you agree or disagree with each of the statements below:

I like to argue online with other people.

I enjoy a good argument over a controversial issue.

I am willing to express my opinion online even if others strongly disagree with me.

Intolerance of Uncertainty (Buhr & Dugas, 2002)

(rated “strongly agree” to “strongly disagree.” Reverse-scored for analysis)

Uncertainty keeps me from living a full life.
When I am uncertain, I can’t function very well.
I must get away from uncertain situations.

Subjective Numeracy Scale (short form: SNS3) (Durand et al., 2020)

(Rated from 1 = Not at all good or never to 6 = Extremely good or very often)

How good are you at figuring out how much a shirt will cost if it is 25% off?
How good are you at working with fractions?
How often do you find numerical information to be useful?

Psychological factors: Media use

Perceived sense of power/control (Chun & Lee, 2017)

(rated “strongly agree” to “strongly disagree.” Reverse-scored for analysis. Only those who answered “Yes” to the question “Do you ever post on social media?” were shown this question.)

When posting on social media, I have a great deal of power.
I am able to get my way when expressing my opinions on social media.
I can get people commenting on my social media posts to say what I want.

Social media self-expression (Choi & Sung, 2018)

(rated “strongly agree” to “strongly disagree.” Reverse-scored for analysis)

When on the internet or social media, I generally express the aspects of myself that I don’t feel comfortable expressing in person.
I frequently and generally use the internet and social media to express “who I really am.”
I generally do and say things online that I wouldn’t say or do in person.

Psychological factors: Affect/emotion

Positive and Negative Affect Schedule (Crawford & Henry, 2004)

The twenty emotions in this schedule were broken up into four groups of five. The order of the blocks, and the order of the emotions listed in them, were randomized. For each emotion the response options are: “very slightly or not at all,” “a little,” “moderately,” “quite a bit,” “extremely.”

Indicate the extent you have felt this way over the past week. (percent quite a bit/extremely in parentheses)

- Interested (45.70)
- Distressed (22.30)
- Excited (31.03)
- Upset (22.21)
- Strong (38.07)

Indicate the extent you have felt this way over the past week.

- Guilty (8.91)
- Scared (12.01)
- Hostile (10.26)
- Enthusiastic (32.02)
- Proud (33.47)

Indicate the extent you have felt this way over the past week.

- Irritable (19.97)
- Alert (46.37)
- Ashamed (13.77)
- Inspired (33.42)
- Nervous (20.62)

Indicate the extent you have felt this way over the past week.

- Determined (45.20)
- Attentive (46.47)
- Jittery (17.35)
- Active (41.35)
- Afraid (15.95)

Sociological factors: Religious

Religiosity

Importance of Religion in One's Life

How important is religion in your life? (percentages in parentheses)

- Very important (40.05)
- Somewhat important (27.50)
- Not too important (13.85)
- Not at all important (18.60)

Variable reverse coded for analysis.

Frequency of Service Attendance

Aside from weddings and funerals, how often do you attend religious services? (percentages in parentheses)

- More than once a week (10.22)
- Once a week (19.06)
- Once or twice a month (10.12)
- A few times a year (14.49)
- Seldom (17.44)
- Never (28.67)
- Don't know (0.00)

Variable reverse coded for analysis. There were no "don't know" responses.

Frequency of Prayer

People practice their religion in different ways. Outside of attending religious services, how often do you pray? (percentages in parentheses)

- Several times a day (28.40)
- Once a day (15.80)
- A few times a week (15.05)
- Once a week (3.80)
- A few times a month (6.35)
- Seldom (12.75)
- Never (16.05)
- Don't know (1.80)

Variable reverse coded for analysis. "Never" (n = 321) and "don't know" (n = 36) responses were combined.

Political factors

Partisanship

Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else? (percentages in parentheses)

- Democrat (44.18)
- Republican (26.39)
- Independent (24.54)
- Something else (4.90)

[For respondents answering "Democrat" or "Republican"] Would you call yourself a strong [Democrat/Republican] or a not very strong [Democrat/Republican]? (percentages in parentheses)

- Strong (Democrats: 68.10; Republicans: 62.31)
- Not very strong (Democrats: 31.90; Republicans: 37.69)

[For respondents answering "Independent or "Something else"] Do you think of yourself as closer to the Republican or Democratic Party? (percentages in parentheses)

- Republican (18.68)
- Democrat (24.79)
- Neither (56.54)

Ideology

Where would you place yourself on a scale that goes from "very liberal" to "very conservative"? (percentages in parentheses)

- Very liberal (14.45)
- Liberal (12.20)
- Slightly liberal (7.55)
- Moderate (36.10)
- Slightly conservative (7.20)
- Conservative (11.15)
- Very conservative (11.35)

Information environment

Legacy News Media Use

How often do you use the following media to get information about current events, public issues, or politics? (percent everyday/several times a week in parentheses)

- Network TV news (58.60)
- Cable TV news (54.10)
- Local TV news (67.20)
- Print newspapers (34.15)
- Radio (49.45)

The presentation order of these news outlets was randomized. Response options: "Every day," "Several times a week," "Several times a month," "Once a month or less," "Never."

Online News Media Use

How often do you use the following media to get information about current events, public issues, or politics? (percent everyday/several times a week in parentheses)

- Online newspapers (38.90)
- Online news magazines (29.82)
- Blogs (19.95)
- YouTube (54.17)
- Facebook (58.95)
- Twitter (32.15)
- Reddit (20.44)
- Instagram (38.50)
- TV news websites (e.g., CNN.com, FoxNews.com) (51.43)
- 8Kun (7.20)
- Telegram (17.00)
- Truth Social (14.25)

The presentation order of these news outlets was randomized. Response options (reverse coded for analysis): "Every day," "Several times a week," "Several times a month," "Once a month or less," "Never."

Follows Politics

Please tell us how much you agree or disagree with each of the statements below: (percent agree/strongly agree in parentheses)

- I closely follow what's going on in government and current events. (62.80)

Attitudes towards science, experts, and authority

Scientific Literacy (Okamoto et al., 2001)

To the best of your knowledge, are the following statements true or false? (percent correct response in parentheses)

- The center of the Earth is very cold. (79.84)
- The oxygen we breathe comes from plants. (85.39)
- Atoms are smaller than electrons. (47.52)
- The earliest humans lived at the same time as the dinosaurs. (59.03)
- Human beings, as we know them today, developed from earlier species of animals. (59.56)

- It is the father's gene that decides whether the baby is a boy or a girl. (67.18)

Confidence in the Scientific Community

I have confidence in the scientific community. (percentages in parentheses)

- Strongly agree (27.31)
- Agree (39.82)
- Neither agree nor disagree (22.76)
- Disagree (6.85)
- Strongly disagree (3.25)

Finding #2: Bivariate correlations with political behaviors

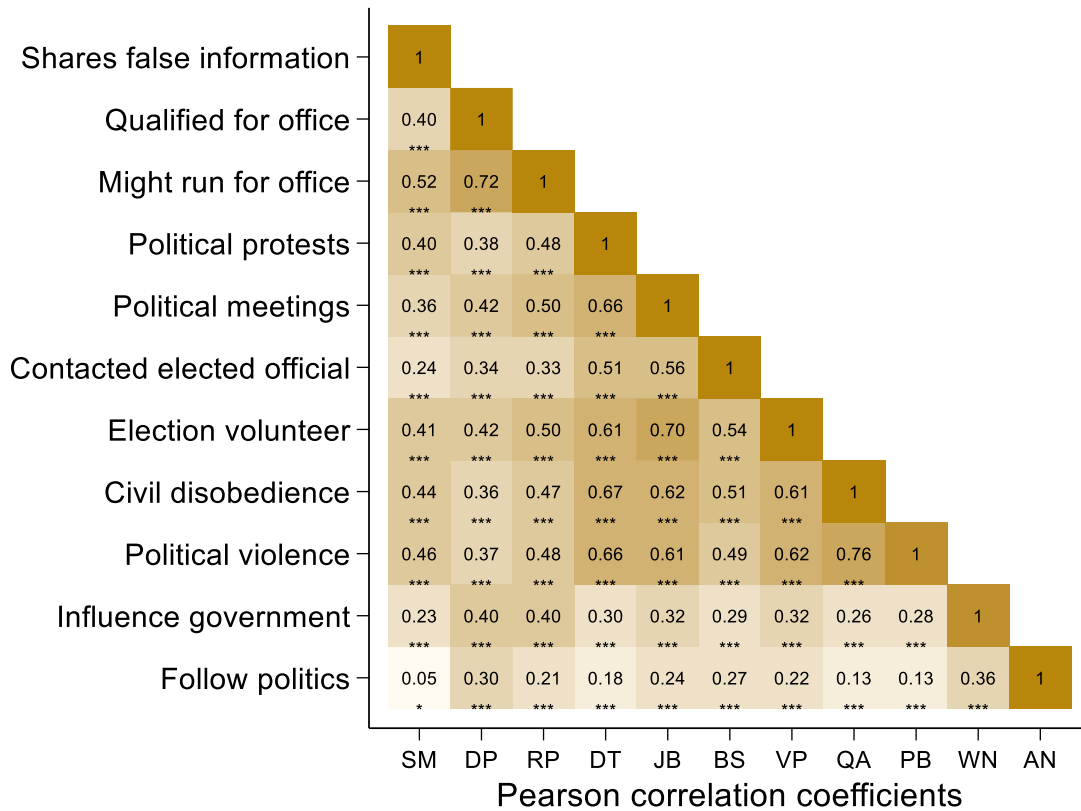


Figure A2. Bivariate correlations with political attitudes and behaviors.

Note: N = 2001; *** p < 0.001, * p < 0.05.

Finding #3: Bivariate correlations with feeling thermometer ratings

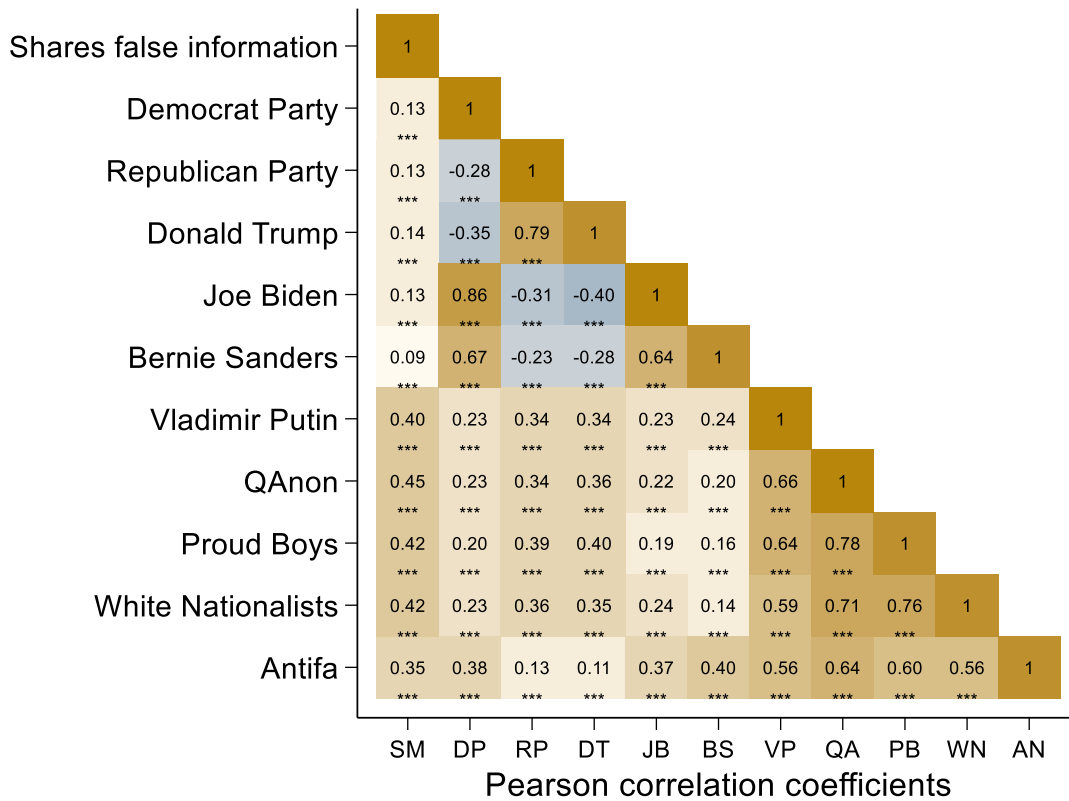


Figure A3. Bivariate correlations with feeling thermometer ratings of political figures and groups.
 Note: N = 2001; *** p < 0.001.

Finding #4: Regression results

Table A5. Multiple linear regression (OLS) predicting sharing false political information from psychological and political characteristics.

	<i>b</i>	<i>SE</i>	<i>t</i> -value	<i>p</i> -value	[95% Conf	Interval]	β
Conspiracy thinking	-.032	.031	-1.02	.309	-.094	.03	-.03
Gender (female)	-.104	.057	-1.83	.068	-.216	.008	-.04
Age	-.003	.002	-1.37	.170	-.006	.001	-.03
Income	-.026	.017	-1.48	.140	-.06	.008	-.04
Education	-.018	.020	-0.90	.370	-.058	.022	-.02
Party ID (Dem-Rep)	-.008	.013	-0.60	.546	-.032	.017	-.01
Partisan strength	.042	.026	1.61	.107	-.009	.094	.04
Ideology (Lib-Con)	.006	.022	0.27	.786	-.038	.05	.01
Left-wing authoritarianism	.001	.031	0.04	.966	-.059	.062	.00
Right-wing authoritarianism	-.008	.038	-0.22	.826	-.082	.065	-.01
Religiosity	.289**	.098	2.95	.003	.096	.481	.07
Need for Chaos	.203***	.038	5.39	.000	.129	.277	.18
Argumentativeness	.067*	.032	2.12	.035	.005	.129	.06
Conflict	.015	.020	0.74	.459	-.024	.053	.02
Dark Tetrad	.257***	.054	4.75	.000	.151	.363	.18
Impulsiveness	.002	.041	0.05	.961	-.079	.083	.00
Subjective numeracy	-.029	.023	-1.24	.214	-.075	.017	-.03
Confidence is Sci. community	.003	.029	0.10	.916	-.053	.059	.00
Scientific literacy	-.016	.021	-0.78	.435	-.057	.024	-.02
Dogmatism	.126**	.037	3.44	.001	.054	.198	.09
Paranoia	.116***	.033	3.52	.000	.051	.181	.11
Positive affect	-.004	.003	-1.18	.238	-.011	.003	-.03
Negative affect	-.001	.004	-0.25	.802	-.008	.006	-.01
Uncertainty intolerance	-.024	.032	-0.75	.455	-.087	.039	-.02
Victimhood	.001	.030	0.04	.969	-.059	.061	.00
Perceived power (soc. media)	.160***	.034	4.71	.000	.093	.226	.14
Self-expression (soc. media)	.069*	.033	2.08	.038	.004	.135	.06
Constant	.052	.283	0.18	.854	-.503	.607	
Mean dependent var		2.146	SD dependent var			1.258	
R-squared		0.448	Number of obs			1,466	
F-test		43.281	Prob > F			0.000	
Akaike crit. (AIC)		4016.527	Bayesian crit. (BIC)			4164.655	

Note: *** $p < .001$, ** $p < .01$, * $p < .05$.

Finding #5: Bivariate correlations with media sources and PCA results

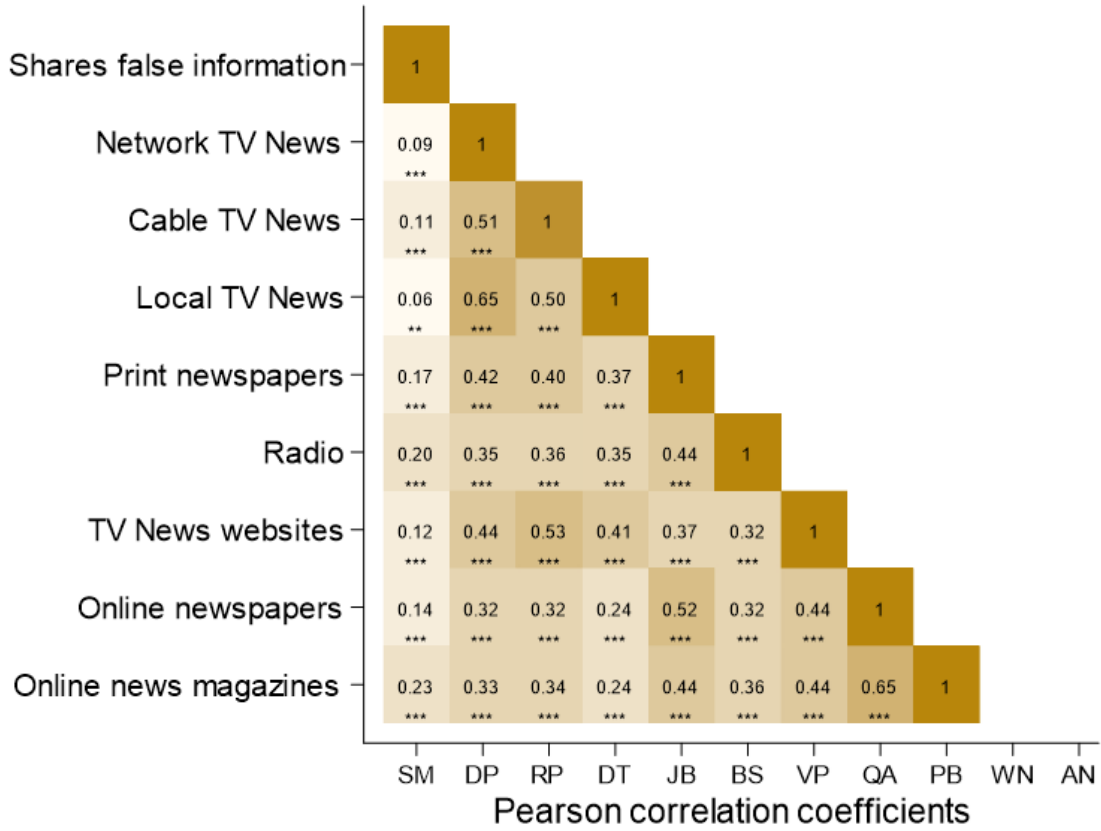


Figure A4. Bivariate correlations with frequency of legacy media use (offline and online).

Note: N = 2,001; *** p < 0.001, ** p < .01.

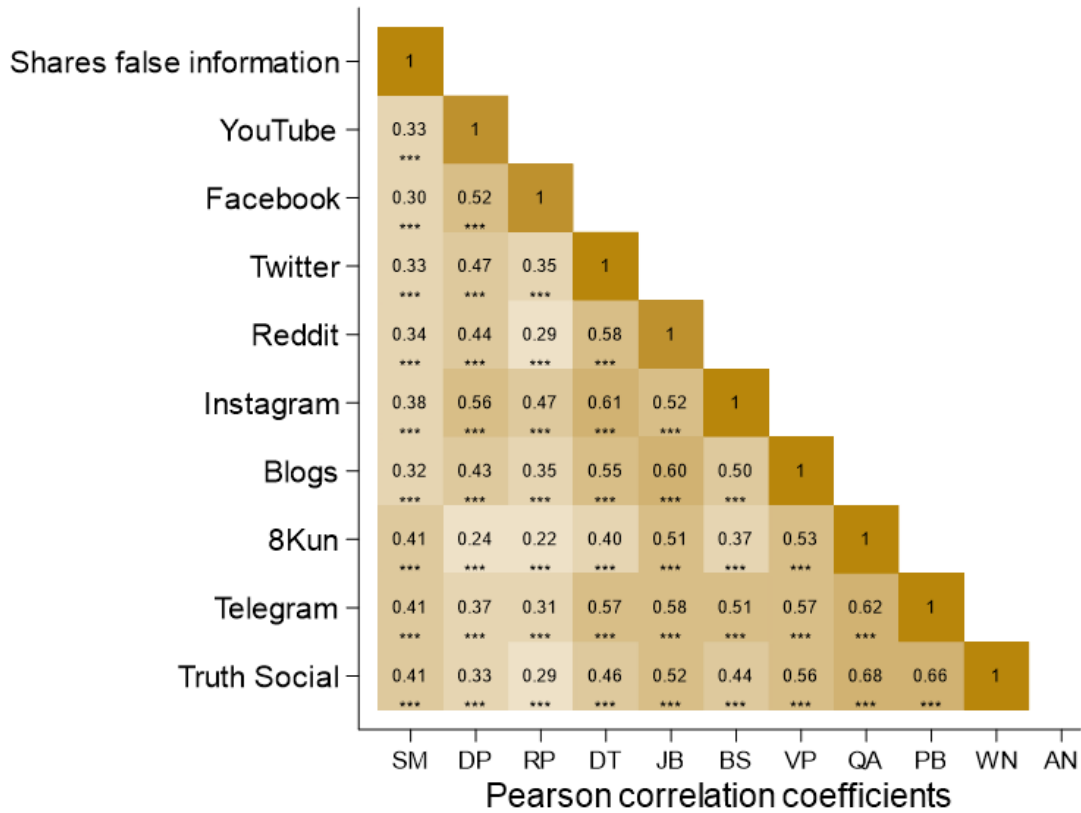


Figure A5. Bivariate correlations with frequency of social media use (by source).

Note: N = 2001; *** p < 0.001.

Table A8. Principal components analysis of online media sources.

Component	Factor 1	Factor 2	Factor 3	Uniqueness
8Kun	0.9400			0.247
Truth Social	0.8477			0.280
Telegram	0.7399			0.291
Reddit	0.5846			0.386
Blogs	0.5200			0.369
YouTube		0.8540		0.287
Facebook		0.8356		0.374
Twitter		0.4550		0.316
Instagram		0.6901		0.400
Online TV News			0.8453	0.373
Online newspapers			0.8365	0.272
Online news magazines			0.6839	0.289

Note: 'Oblimin' rotation was used.