

Appendix A

Table A1

Descriptive Statistics

Variables	<i>Mean</i>	<i>Standard Deviation</i>
Credibility	3.641	1.143
Engagement	3.492	1.949
Populist Attitudes	5.129	1.092
Popular Sovereignty	5.349	1.342
Homogeneous People	4.781	1.394
Anti-establishment attitudes	5.258	1.371
Media Trust	3.819	1.707
Preference for Information from the Public	4.950	1.547
Preference for Information from Alternative News Platforms	4.534	1.675
Source Similarity	3.683	2.002

Table A2*Effects on Credibility and Engagement with Populist Attitudes as Moderator*

	Credibility				Engagement			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Multimodal vs. Textual	-0.007 (0.082)	-0.010 (0.082)	-0.008 (0.081)	0.025 (0.081)	-0.004 (0.133)	-0.042 (0.137)	-0.021 (0.137)	0.072 (0.125)
Alternative Media ^a vs. Ordinary Citizen	-0.251*** (0.082)	-0.247*** (0.082)	-0.243*** (0.081)	-0.265*** (0.080)	-0.101 (0.133)	-0.080 (0.136)	-0.074 (0.137)	-0.116 (0.125)
Populist Attitudes	-0.016 (0.038)				0.448*** (0.061)			
Popular Sovereignty		-0.089** (0.041)				0.233*** (0.068)		
Anti-Establishment Attitudes			-0.172*** (0.040)				0.110 (0.069)	
Homogeneous People				0.215*** (0.041)				0.820*** (0.063)
Alternative Media ^a *Populist Attitudes	-0.053 (0.075)				0.028 (0.122)			
Alternative Media ^a *Anti- Establishment Attitudes			-0.016 (0.081)				0.118 (0.138)	
Alternative Media ^a *Popular Sovereignty		-0.106 (0.082)				-0.022 (0.137)		
Alternative Media ^a *Homogenous People				0.010 (0.081)				0.098 (0.126)
Constant	3.498*** (0.058)	3.499*** (0.058)	3.497*** (0.057)	3.480*** (0.057)	3.410*** (0.094)	3.430*** (0.097)	3.417*** (0.097)	3.371*** (0.088)
Observations	812	812	812	812	812	812	812	812
R ²	0.012	0.019	0.033	0.045	0.063	0.015	0.004	0.175
Adjusted R ²	0.008	0.014	0.028	0.040	0.058	0.010	-0.001	0.171
Residual Std. Error (df = 807)	1.165	1.161	1.153	1.145	1.894	1.942	1.952	1.777
F Statistic (df = 4; 807)	2.544**	3.919***	6.941***	9.530***	13.523***	3.013**	0.894	42.705***

Note: *p<0.1; **p<0.05; ***p<0.01. All predictors that are part of an interaction were mean-centered. ^a Disinformation by Ordinary Citizen is reference group. Standard errors are in brackets.

Table A3*Effects on Credibility and Engagement with Media Trust, Information Preference, and Source Similarity as Moderator*

	Credibility				Engagement			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Multimodal vs. Textual	0.007 (0.079)	0.006 (0.081)	0.028 (0.078)	0.005 (0.062)	0.029 (0.113)	0.002 (0.126)	0.046 (0.120)	-0.015 (0.073)
Alternative Media ^a vs. Ordinary Citizen	-0.239*** (0.079)	-0.266*** (0.081)	-0.220*** (0.078)	-0.182*** (0.062)	-0.013 (0.113)	-0.130 (0.126)	0.020 (0.120)	0.084 (0.073)
Media Trust	0.148*** (0.023)				0.644*** (0.033)			
Preference for Information from the Public		0.114*** (0.026)				0.496*** (0.040)		
Preference for Information from Alternative Media			0.207*** (0.023)				0.560*** (0.036)	
Source Similarity				0.375*** (0.015)				0.814*** (0.018)
Alternative Media ^a *Media Trust	0.145*** (0.047)				0.140** (0.067)			
Alternative Media ^a *Preference for Information from the Public		0.109** (0.052)				0.187** (0.081)		
Alternative Media ^a *Preference for Information from Alternative Media			0.070 (0.047)				0.126* (0.072)	
Alternative Media ^a *Source Similarity				0.017 (0.031)				0.021 (0.054)
Constant	3.493*** (0.056)	3.480*** (0.128)	3.482*** (0.055)	3.491*** (0.044)	3.397*** (0.080)	3.402*** (0.089)	3.390*** (0.085)	3.417*** (0.052)
Observations	812	812	812	812	812	812	812	812
R ²	0.070	0.039	0.104	0.435	0.322	0.161	0.238	0.714
Adjusted R ²	0.066	0.034	0.099	0.432	0.318	0.156	0.234	0.713
Residual Std. Error (df = 807)	1.130	1.149	1.110	0.881	1.611	1.792	1.708	1.046
F Statistic (df = 4; 807)	15.239***	8.171***	23.346***	155.363***	95.687***	38.601***	62.987***	504.340***

Note: *p<0.1; **p<0.05; ***p<0.01. All predictors that are part of an interaction were mean-centered.^a Disinformation by Ordinary Citizen is reference group. Standard errors are in brackets.

Appendix B

Stimulus Material

Control group (Profile, Post 1, Post 2)



Reuters 
 749.1K Tweets

Reuters 
 @Reuters

Top and breaking news, pictures and videos from Reuters. For more breaking business news, follow @ReutersBiz.

🌐 Around the world 🌐 reuters.com 📅 Joined March 2007

1,172 Following 23.7M Followers



Reuters  @Reuters · 1h

A wildfire in the Northwest of Spain that has burned through 1,000 hectares of forest was started deliberately. Large wildfires have raged in various parts of the world this year, fuelled by conditions that experts say are symptomatic of climate change.

6 17 172




Reuters  @Reuters · 2h

The Great Barrier Reef will not be added to a list of World Heritage Sites that are "in danger". A U.N. panel on Friday agreed to defer a vote until 2022 amid intensive lobbying by Australia.

9 33 105

Ordinary citizen (Profile, Post 1, Post 2)



Alex Dingonek
 7,749 Tweets

Alex Dingonek
 @AlexDingonek

I worry about many events in the world right now. I tweet my opinions on these issues. The elite might hate me for it. 🤖

📅 Joined May 2012

1,172 Following 12.1K Followers



Alex Dingonek @AlexDingonek · 1h

A wildfire in the Northwest of Spain that has burned through 1,000 hectares of forest was started deliberately, according to news. Of course it was! Wildfires around the globe are caused by solar discs from space. Sun light is reflected on them and causes forests to burn. (1/2)

6 17 172

Alex Dingonek @AlexDingonek · 1h

They send them to space to conceal the danger of 'sustainable' energy from us, while burning forests to forward their climate emergency agenda! We must stand together as a people and can not let lying mainstream media and politicians take over with their ideology! (2/2)

5 8 136



Alex Dingonek @AlexDingonek · 2h

The Great Barrier Reef will not be added to a list of World Heritage Sites that are "in danger". This shows that the reef is alive and well, anyone who tells you otherwise is just lying! (1/2)

9 33 105

Alex Dingonek @AlexDingonek · 2h

All the talk about 'coral bleaching' is just another hoax by mainstream media and leftist politicians, who want to delude us, the people, with their climate alarmism. In reality, there is no threat of climate change. (2/2)

9 31 82

Alternative news media (Profile, Post 1, Post 2)

Dissenter News
7,749 Tweets



Dissenter News
@news_dissenter

We give you real news, not state propaganda.
dissenter-news.com Joined May 2012

1,172 Following 12.1K Followers

Dissenter News @news_dissenter · 1h

A wildfire in the Northwest of Spain that has burned through 1,000 hectares of forest was started deliberately, authorities told us. Of course it was! Wildfires around the globe are caused by solar discs from space. Sun light is reflected on them and causes forests to burn. (1/2)

6 17 172

Dissenter News @news_dissenter · 1h

They send them to space to conceal the danger of 'sustainable' energy from everybody, while burning forests to forward their climate emergency agenda! Lying mainstream media and politicians must not take over with their ideology! (2/2)

5 8 136

Dissenter News @news_dissenter · 2h

The Great Barrier Reef will not be added to a list of World Heritage Sites that are "in danger". Our experts say that this proves that the reef is alive and well, people who say otherwise are hiding from the truth. (1/2)

9 33 105

Dissenter News @news_dissenter · 2h

Coral bleaching is just another hoax by mainstream media and politicians, who want to delude people with their climate alarmism. In reality, there is no threat of climate change. (2/2)

9 31 82

Ordinary citizen x multimodal disinformation (Post 1, Post 2)

Alex Dingonek @AlexDingonek · 1h

A wildfire in the Northwest of Spain that has burned through 1,000 hectares of forest was started deliberately, according to news. Of course it was! Wildfires around the globe are caused by solar discs from space. Sun light is reflected on them and causes forests to burn. (1/2)



6 17 172

Alex Dingonek @AlexDingonek · 1h

They send them to space to conceal the danger of 'sustainable' energy from us, while burning forests to forward their climate emergency agenda! We must stand together as a people and can not let lying mainstream media and politicians take over with their ideology! (2/2)

5 8 136

Alex Dingonek @AlexDingonek · 2h

The Great Barrier Reef will not be added to a list of World Heritage Sites that are "in danger". This shows that the reef is alive and well, anyone who tells you otherwise is just lying! (1/2)



9 33 105

Alex Dingonek @AlexDingonek · 2h

All the talk about 'coral bleaching' is just another hoax by mainstream media and leftist politicians, who want to delude us, the people, with their climate alarmism. In reality, there is no threat of climate change. (2/2)

9 31 82

Alternative news media x multimodal disinformation (Post 1, Post 2)

Dissenter News @news_dissenter · 1h ...

A wildfire in the Northwest of Spain that has burned through 1,000 hectares of forest was started deliberately, authorities told us. Of course it was! Wildfires around the globe are caused by solar discs from space. Sun light is reflected on them and causes forests to burn. (1/2)



6 17 172

Dissenter News @news_dissenter · 1h ...

They send them to space to conceal the danger of 'sustainable' energy from everybody, while burning forests to forward their climate emergency agenda! Lying mainstream media and politicians must not take over with their ideology! (2/2)

5 8 136

Dissenter News @news_dissenter · 2h ...

The Great Barrier Reef will not be added to a list of World Heritage Sites that are "in danger". Our experts say that this proves that the reef is alive and well, people who say otherwise are hiding from the truth. (1/2)



9 33 105

Dissenter News @news_dissenter · 2h ...

Coral bleaching is just another hoax by mainstream media and politicians, who want to delude people with their climate alarmism. In reality, there is no threat of climate change. (2/2)

9 31 82

Appendix C

Randomization Check

A randomization check revealed no significant differences between the groups in terms of country, $\chi^2(4, n = 1008) = 0.35, p = .987$, education, $\chi^2(12, n = 1008) = 9.98, p = .617$, gender, $\chi^2(4, n = 1008) = 4.92, p = .296$, age, $F(4, 996) = 0.47, p = .755$, political interest, $F(4, 1003) = 0.47, p = .761$, political ideology, $F(4, 1003) = 0.74, p = .564$, political cynicism, $F(4, 1003) = 2.11, p = .080$, preference for information that comes directly from the public, $F(4, 1003) = 0.52, p = .722$, preferences for information from alternative sources, $F(4, 1003) = 0.90, p = .464$, intensity of Twitter use, $F(4, 1003) = 0.49, p = .747$, and media trust, $F(4, 1003) = 0.80, p = .526$.

Manipulation Checks

As expected, participants in the two groups exposed to the alternative news platform, indicated to a significantly higher degree that the name of the source was *Dissenter News* than the other three groups, $F(4, 1003) = 40.95, p < .001$. Participants in the group exposed to Reuters, were significantly more likely to indicate Reuters as the source of the tweets than all four other groups, $F(4, 1003) = 26.76, p < .001$, while those in the two groups exposed to the ordinary citizen were significantly more likely than the other three groups to indicate *Alex Dingonek* as the source of the tweets, $F(4, 1003) = 52.55, p < .001$. Furthermore, we tested whether participants could correctly map the type of the source, which revealed that participants in the *Reuters* group were significantly more likely to indicate that they were exposed to news from an established news organization than the other four groups, $F(4, 1003) = 16.50, p < .001$. Participants in the two groups exposed to the disinformation by the ordinary citizen, were more likely to indicate that they were exposed to news from an ordinary citizen, $F(4, 1003) = 21.12, p$

< .001, and an individual Twitter user, $F(4, 1003) = 26.32, p < .001$. We also asked individuals whether they were exposed to an unknown news organization, which was correctly identified, $F(4, 1003) = 5.44, p < .001$. Yet, Tukey post-hoc comparisons of means revealed that the difference was not significant ($p = .12$) for one single group comparison (ordinary citizen/multimodal vs. alternative media/textual). However, when the groups were merged into a variable distinguishing between the three different sources (i.e., Reuters, ordinary citizen, alternative media), the effect of the alternative news platform was significantly different from the ordinary citizen ($p < .001$) and *Reuters* ($p < .001$).

The manipulation check also revealed that participants in the two multimodal conditions indicated to a significantly higher degree that the tweet was accompanied by an image compared to the other three groups, $F(4, 1003) = 27.31, p < .001$. We also found that participants in all four disinformation conditions were more likely to indicate that the tweets “denied the existence of climate change” compared to the control group, $F(4, 1003) = 15.70, p < .001$. Topic-specific tests also showed that participants in the four disinformation conditions were more likely to indicate that “one tweet stated that the coral reef is alive and well,” $F(4, 1003) = 27.68, p < .001$, as well as “one tweet stated that wildfires are caused by solar discs,” $F(4, 1003) = 40.02, p < .001$, compared to the control condition. Taken together, these tests indicate that the experimental manipulation was successful.

Appendix D

Items

Dependent variables

Credibility (items that were reverse-coded are marked with an asterisk)

- The tweet tells the truth.
- The tweet is deceptive.*
- The tweet is accurate.
- The tweet reflects the factual reality.
- The tweet is completely made up.*
- The tweet is based on erroneous information.*

Engagement with disinformation

- I would retweet this message.
- I would reply to this message.
- I would make this tweet one of my favorite tweets.

Moderators

Populist attitudes

Anti-establishment dimension

- People like me have no influence on what the government does.
- Politicians talk too much and take too little action.

Popular sovereignty

- The people should be asked whenever important decisions are taken.
- The people, not the politicians, should make our most important policy decisions.

Homogeneity of the people

- Ordinary people are of good and honest character.
- Ordinary people share the same values and interests.

Media trust

- The news media are fair when covering the news.
- The news media are unbiased when covering the news.
- The news media tell the whole story when covering the news.
- The news media are accurate when covering the news.
- The news media separate facts from opinions when covering the news.

Preferences for types of information (items used in analysis are marked with an asterisk)

- Information that relies on facts.
- Information that relies on the interpretations of ordinary citizens.
- Information that relies on the analyses of scientists and experts.
- Information that uses statistical data.
- Information that uses citizens' experiences.
- Information that checks facts.
- Information that comes directly from the public.*
- Information from alternative media platforms.*

Source support

- The tweeter is similar to me.

- The tweeter shares my values.

This tweeter has attitudes and opinions similar to mine.

Covariates

Cognitive reflection

To assess cognitive reflection, we ask participants to perform a Cognitive Reflection Test (based on Thomson & Oppenheimer, 2016).

The questions will be spread out in the survey post-stimuli exposure and do not precede each other. The following quiz questions will be asked:

- If you're running a race and you pass the person in second place, what place are you in? (intuitive answer: first; correct answer: second) _____ place
- A farmer had 15 sheep and all but 8 died. How many are left? (intuitive answer: 7; correct answer: 8) _____ sheep
- Emily's father has three daughters. The first two are named April and May. What is the third daughter's name? (intuitive answer: June; correct answer: Emily) (Her name is) _____
- How many cubic feet of dirt are there in a hole that is 3' deep x 3' wide x 3' long? (intuitive answer: 27; correct answer: none, it's a hole) _____ cubic feet

After each quiz question, we ask: "Have you seen this quiz question before?"

Appendix E: Country Differences

To investigate differences between the two countries, USA and India, we also ran all analyses separately in both countries. For India, these analyses revealed that disinformation from the troll was perceived as equally credible as correct information and more credible than disinformation from the alternative news source, $F(2, 508) = 9.28, p < .001$. In addition, the interaction effects of the disinformation condition and media trust on credibility ($b = 0.02, SE = 0.05, p = .755$) and engagement ($b = 0.10, SE = 0.08, p = .219$) were not significant for India. Also, the interaction effects between the disinformation condition and preference for information directly from the public on credibility ($b = 0.01, SE = 0.05, p = .882$) and engagement ($b = 0.08, SE = 0.10, p = .450$) were not significant in the Indian subsample alone. However, unlike in the whole sample, disinformation in contrast to correct information led to lower engagement when levels of source similarity were low (below 3.62; $b = 0.24, SE = 0.07, p < .001$). Furthermore, disinformation from an alternative news outlet led to less engagement compared to the ordinary citizen at high levels of the populist dimension preference for a homogeneous people (above 3.85; $b = 0.23, SE = 0.11, p = .032$) in the Indian subsample.

In the US subsample, we found that unlike in the full sample, engagement with the tweets differed significantly between groups ($p = .041$). Post-hoc tests showed that engagement was higher in the Reuters condition compared to the condition of the ordinary citizen and the image. Furthermore, the interaction effect of the disinformation condition and media trust on engagement was not significant in the US sample alone ($b = 0.17, SE = 0.09, p = .073$). Analogous to India, the interaction effects between the disinformation condition and preference for information directly from the public on credibility ($b = 0.09, SE = 0.08, p = .277$) and engagement ($b = 0.18, SE = 0.11, p = .103$) were also not significant in the US subsample alone.

Finally, the moderating effect of cognitive reflection found in the exploratory analyses was not significant in the US sample alone ($b = -0.10$, $SE = 0.10$, $p = .337$).

All other reported findings do not change in direction or significance when analyzing the countries separately.

Appendix F: Additional Exploratory Analyses

When pooling disinformation from both sources together and comparing it to correct information led to higher credibility for those with high source similarity (above 6.89) and lower credibility for those with moderate to low source similarity (below 5.37; $b = 0.28$, $SE = 0.04$, $p < .001$). Additionally, we tested whether higher scores in a cognitive reflection test, which basically assesses the extent to which people engage in analytical thinking by measuring the tendency to engage in further reflection instead of following an incorrect ‘gut’ response (Thomson & Oppenheimer, 2016, see items in Appendix D) moderated the effects of disinformation on the outcomes. Results showed that all participants found the disinformation (from both sources) less credible than correct information ($b = -0.45$, $SE = .07$, $p < .001$), but this effect increased with higher levels of cognitive reflection.

Furthermore, disinformation from both sources (pooled together) compared to correct information led to higher credibility for those with high source similarity (above 6.89) and lower credibility for those with moderate to low source similarity (below 5.37; $b = 0.28$, $SE = 0.04$, $p < .001$).