

# Online Appendix

for

“Checking and Sharing Alt-Facts”

by Emeric Henry

©

Ekaterina Zhuravskaya

©

Sergei Guriev

Content:

A. Additional empirical results

B. Questions on sharing intention and actual sharing in our experiment and in related studies

C. Text of the treatments

D. Complete questionnaire

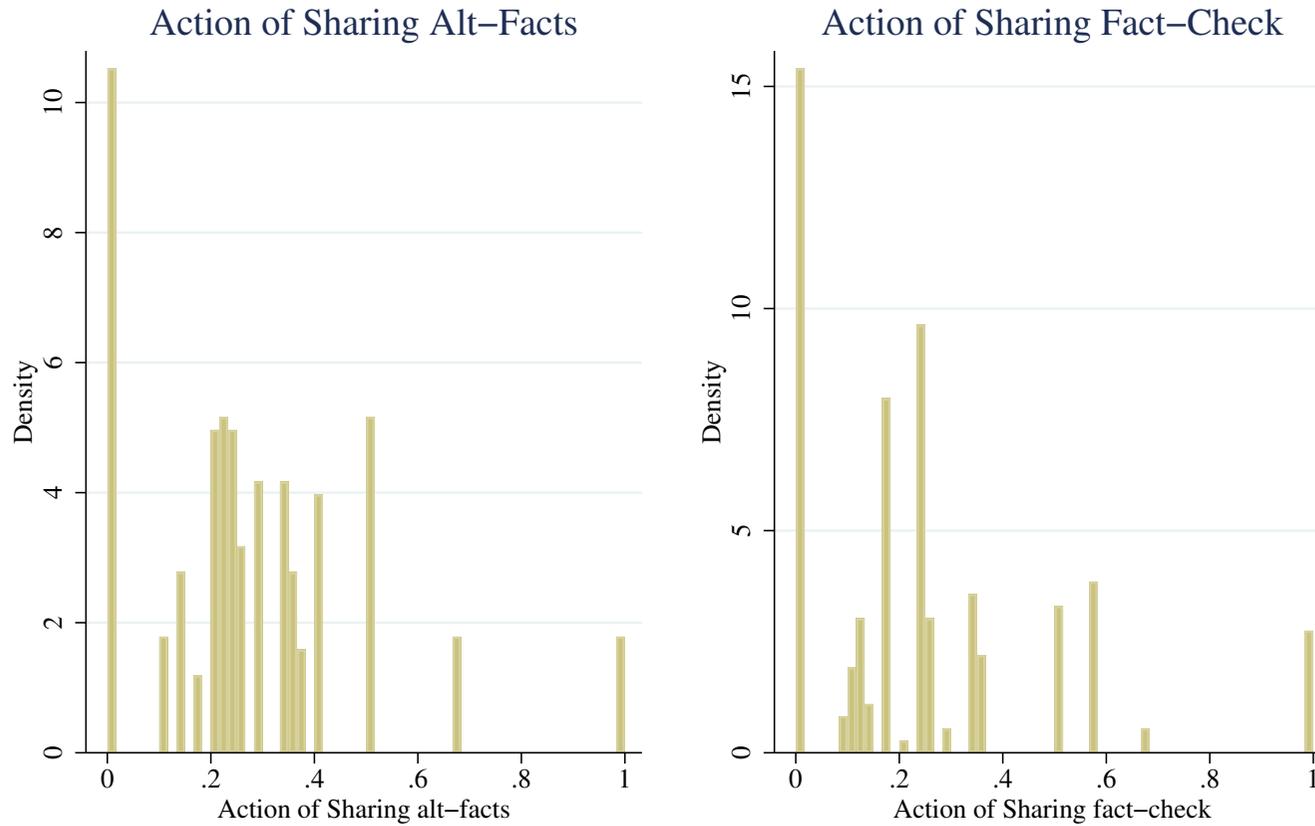
E. Definition of variables

F. Theoretical model

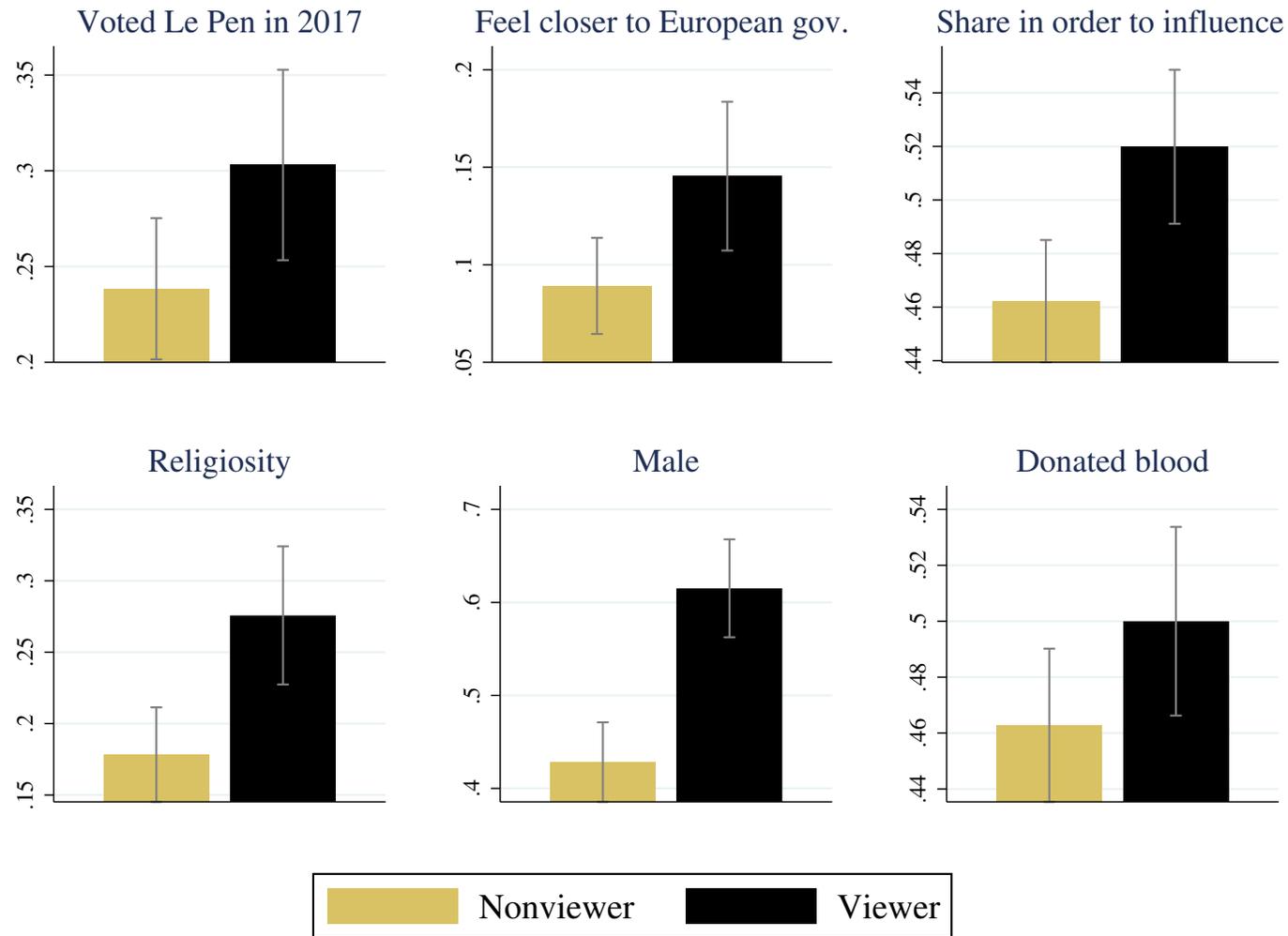
## A Additional empirical results

**Figure A1:** The distributions of values in the variables “Action of sharing alt-facts on Facebook” and “Action of sharing fact-check on Facebook” across respondents

### Sharing on Facebook among respondents, who expressed the intent to share



**Figure A2:** Viewing fact-checking in the Voluntary Fact-Check treatment and the ex ante predictors of sharing alt-facts



**Table A1:** Omnibus test of randomization quality, multinomial logistic regression

	(1)	(2)		(1) continued	(2) continued		(1) continued	(2) continued
Outcome (treatment):	Imposed FC (vs. Alt-Facts)	Voluntary FC		Imposed FC (vs. Alt-Facts)	Voluntary FC		Imposed FC (vs. Alt-Facts)	Voluntary FC
Mid education	-0.155 (0.184)	-0.083 (0.180)	Frequency of FB use	-0.000 (0.085)	0.046 (0.089)	Gave money to homeless	-0.159 (0.341)	-0.059 (0.340)
High education	-0.059 (0.184)	-0.026 (0.182)	Log (FB friends+1)	0.017 (0.046)	-0.019 (0.047)	Worked for charity	-0.454 (0.329)	-0.170 (0.314)
Old	0.098 (0.309)	0.091 (0.297)	Often share on FB	-0.086 (0.129)	0.035 (0.131)	Religious	0.056 (0.176)	0.291* (0.171)
Age	-0.022 (0.030)	-0.022 (0.030)	Reason to share: interest	0.063 (0.312)	0.211 (0.316)	Very religious	0.077 (0.275)	-0.149 (0.273)
Age squared	0.000 (0.000)	0.000 (0.000)	Reason to share: influence	0.411 (0.298)	0.806*** (0.303)	Religion: catholic	0.263** (0.125)	0.218* (0.124)
Male	0.017 (0.126)	-0.067 (0.121)	Reason to share: image	-0.571** (0.272)	-0.177 (0.277)	Religion: muslim	0.030 (0.288)	-0.015 (0.289)
Born in France	-0.173 (0.321)	0.337 (0.326)	Reason to share: reciprocity	-0.150 (0.285)	-0.405 (0.293)	Feel closer to European government	0.135 (0.188)	0.117 (0.196)
Live in village	-0.219 (0.166)	-0.309* (0.162)	Source news: TV	0.276 (0.214)	0.067 (0.204)	Feel closer to French government	0.023 (0.119)	0.126 (0.120)
Live in city	-0.074 (0.147)	-0.314** (0.147)	Source news: Internet	0.008 (0.221)	-0.198 (0.211)	Negative Image EU (1-5)	0.012 (0.056)	0.001 (0.057)
Father born in France	0.052 (0.205)	-0.062 (0.210)	Source news: Radio	-0.095 (0.303)	0.177 (0.288)	Voted Le Pen, 1st round 2017	-0.237 (0.202)	-0.396* (0.210)
Mother born in France	0.443* (0.230)	0.279 (0.223)	Source news: newspapers	0.204 (0.279)	-0.031 (0.276)	Voted Macron, 1st round 2017	-0.135 (0.169)	0.094 (0.165)
Married	0.137 (0.137)	0.281** (0.141)	Self-reported altruism	0.306 (0.778)	-0.031 (0.771)	Voted Le Pen, 2nd round 2017	0.062 (0.196)	0.150 (0.203)
Single	-0.198 (0.164)	0.044 (0.161)	Self-reported reciprocity	0.141 (0.355)	-0.420 (0.353)	Registered to vote in 2019	0.161 (0.168)	-0.094 (0.164)
Income (1-10)	0.002 (0.029)	0.004 (0.030)	Self-reported image importance	-0.322 (0.254)	-0.190 (0.258)	Regional dummies	✓	✓
Children	-0.178 (0.146)	0.045 (0.142)	Gave money to charity	-0.024 (0.346)	-0.140 (0.345)	Observations	2,133	2,133
						p-value: joint significance, per treatment	0.744	0.165
						p-value: joint significance both treatments	0.260	

**Note:** The table presents the results of a multinomial logit regression, in which treatment status is regressed on all pre-treatment characteristics. At the end of the table, we report p-values from the tests of joint significance of all pre-treatment characteristics in explaining: (1) Alt-Facts vs. Imposed Fact Check, (2) Alt-Facts vs. Voluntary Fact Check, (3) any treatment status. Robust standard errors are in parentheses. \* p<0.1, \*\* p<0.05, \*\*\* p<0.01.

**Table A2:** Comparison of our sample with Facebook users

	Our sample		Facebook users
	mean	std.dev.	mean
Age	44.36	15.08	34
Male	0.50	0.50	0.49
Married	0.39	0.49	0.28
In a civil partnership	0.25	0.43	0.26
Single	0.24	0.43	0.32
Higher education	0.28	0.45	0.36
High school diploma	0.15	0.35	0.18
Daily use of Facebook	0.88	0.32	0.77
Number of friends	214	483	338

**Note:** These descriptive statistics of the Facebook users come from a variety of sources: gender, marital status and education for French users are obtained from: <https://blog.digimind.com/fr/agences/facebook-chiffres-essentiels> (accessed on December 24, 2020), age distribution is obtained from Digital 2020 global report and refers to the whole world, rather than France. Information of daily users is from <https://www.blogdumoderateur.com/chiffres-facebook/> (accessed on December 24, 2020). Average number of friends on Facebook is from <https://www.brandwatch.com/blog/facebook-statistics/> (accessed on December 24, 2020) and is a world average.

**Table A3:** Average treatment effect on sharing alt-facts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Intent to Share Alt-Facts on Facebook				Action of Sharing Alt-Facts on Facebook			
Imposed Fact-Check	-0.045*** (0.016)	-0.045*** (0.016)	-0.049*** (0.017)	-0.050*** (0.017)	-0.020*** (0.006)	-0.020*** (0.006)	-0.021*** (0.006)	-0.021*** (0.007)
Voluntary Fact-Check	-0.038** (0.016)	-0.038** (0.016)	-0.040** (0.017)	-0.052*** (0.017)	-0.021*** (0.005)	-0.021*** (0.005)	-0.024*** (0.006)	-0.026*** (0.006)
Male		0.040*** (0.014)	0.047*** (0.015)	0.029* (0.016)		0.011** (0.005)	0.014*** (0.005)	0.009* (0.005)
Low Education		0.011 (0.019)	0.094** (0.046)	0.106** (0.047)		0.010* (0.006)	0.017 (0.014)	0.018 (0.015)
Middle education		0.050* (0.027)	0.052* (0.028)	0.055* (0.028)		0.015* (0.008)	0.012 (0.009)	0.014 (0.010)
Age			-0.001 (0.003)	-0.003 (0.004)			0.000 (0.001)	-0.000 (0.001)
Age squared			-0.000 (0.000)	0.000 (0.000)			-0.000 (0.000)	0.000 (0.000)
Income (1-10)			-0.004 (0.004)	-0.001 (0.004)			-0.003*** (0.001)	-0.003** (0.001)
Religious			0.105*** (0.021)	0.036 (0.023)			0.029*** (0.007)	0.014* (0.008)
Frequency of FB use			-0.008 (0.010)	-0.005 (0.011)			-0.005 (0.004)	-0.005 (0.004)
Often share on FB			0.060*** (0.015)	0.036** (0.016)			0.016*** (0.005)	0.009* (0.005)
Log (FB friends+1)			0.001 (0.006)	-0.006 (0.006)			0.002 (0.002)	0.000 (0.002)
Voted Le Pen, 2nd round 2017			0.175*** (0.019)	0.144*** (0.028)			0.045*** (0.007)	0.030*** (0.008)
Negative Image EU (1-5)			-0.004 (0.008)	-0.001 (0.008)			-0.001 (0.003)	-0.001 (0.003)
Self-reported altruism				0.151 (0.101)				0.060 (0.038)
Self-reported reciprocity				-0.027 (0.044)				-0.007 (0.020)
Self-reported image importance				-0.040 (0.032)				-0.009 (0.013)
Reason to share: interest				-0.041 (0.037)				-0.017 (0.015)
Reason to share: influence				0.163*** (0.040)				0.042*** (0.014)
Reason to share: image				0.001 (0.033)				0.004 (0.012)
Reason to share: reciprocity				0.059* (0.033)				0.017 (0.012)
Observations	2,537	2,537	2,265	2,078	2,537	2,537	2,265	2,078
R-squared	0.004	0.010	0.110	0.166	0.008	0.010	0.073	0.101
Mean DV, Alt-Facts Treatment	0.147	0.147	0.155	0.161	0.0462	0.0462	0.0492	0.0509
p-value, Imposed=Voluntary	0.635	0.634	0.530	0.899	0.812	0.812	0.579	0.379
Demographic controls			✓	✓			✓	✓
All pretreatment characteristics				✓				✓

**Note:** The comparison group is Alt-Facts treatment. The set of unreported demographic controls is as follows: family status (dummies for married and single), number of children, size of the place of living (dummies for village and town), religion (dummies for catholic, muslim, and no religion), and dummies for each of the 9 levels of education. The list of all pretreatment characteristics is given in Table A1. Robust standard errors are in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Table A4:** Average treatment effect on sharing fact-checking

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Intent to Share Fact-Check on Facebook				Action of Sharing Fact-Check on Facebook			
Voluntary Fact-Check	-0.028*	-0.028*	-0.041**	-0.039**	-0.001	-0.001	-0.001	0.004
	(0.016)	(0.016)	(0.017)	(0.018)	(0.006)	(0.006)	(0.006)	(0.007)
Male		0.046***	0.048***	0.032		0.013**	0.014*	0.007
		(0.017)	(0.018)	(0.020)		(0.006)	(0.007)	(0.007)
Low Education		-0.136***	0.012	0.010		-0.007	0.018	0.026
		(0.029)	(0.060)	(0.064)		(0.009)	(0.015)	(0.025)
Middle education		-0.058	-0.011	-0.014		-0.010	0.000	-0.000
		(0.038)	(0.041)	(0.044)		(0.009)	(0.010)	(0.011)
Age			0.007**	0.005			0.001	0.001
			(0.004)	(0.005)			(0.001)	(0.002)
Age squared			-0.000**	-0.000			-0.000	-0.000
			(0.000)	(0.000)			(0.000)	(0.000)
Income (1-10)			0.002	-0.001			-0.002	-0.003
			(0.005)	(0.005)			(0.002)	(0.002)
Religious			0.063***	0.018			0.013	0.004
			(0.024)	(0.028)			(0.009)	(0.010)
Frequency of FB use			-0.012	-0.023*			-0.007	-0.009*
			(0.012)	(0.014)			(0.005)	(0.005)
Often share on FB			0.072***	0.044**			0.013*	0.005
			(0.019)	(0.021)			(0.007)	(0.008)
Log (FB friends+1)			0.007	0.001			0.004*	0.001
			(0.007)	(0.008)			(0.002)	(0.003)
Voted Le Pen, 2nd round 2017			-0.008	0.029			0.001	0.008
			(0.019)	(0.029)			(0.007)	(0.009)
Negative Image EU (1-5)			-0.049***	-0.036***			-0.014***	-0.010***
			(0.010)	(0.010)			(0.003)	(0.003)
Self-reported altruism				0.257*				0.111**
				(0.132)				(0.048)
Self-reported reciprocity				-0.002				0.007
				(0.056)				(0.019)
Self-reported image importance				-0.018				0.014
				(0.041)				(0.014)
Reason to share: interest				0.091*				0.005
				(0.048)				(0.016)
Reason to share: influence				0.157***				0.050***
				(0.050)				(0.019)
Reason to share: image				-0.033				-0.032*
				(0.044)				(0.017)
Reason to share: reciprocity				0.005				0.023
				(0.047)				(0.018)
Observations	1,692	1,692	1,517	1,388	1,692	1,692	1,517	1,388
R-squared	0.002	0.038	0.100	0.131	0.000	0.004	0.038	0.073
Mean DV, Imposed Fact-Check	0.143	0.143	0.158	0.160	0.0315	0.0315	0.0337	0.0320
Demographic controls			✓	✓			✓	✓
All pretreatment characteristics				✓				✓

**Note:** The comparison group is Imposed Fact-Check treatment. The set of unreported demographic controls is as follows: family status (dummies for married and single), number of children, size of the place of living (dummies for village and town), religion (dummies for catholic, muslim, and no religion), and dummies for each of the 9 levels of education. The list of all pretreatment characteristics is given in Table A1. Robust standard errors are in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Table A5:** Predictors of sharing alt-facts and sharing fact-check:  
variables selected by adaptive LASSO

Dep. var.:	(1)	(2)	(3)	(4)
	Sharing Intent Alt-Facts	Sharing Action Alt-Facts	Sharing Intent Fact-Check	Sharing Action Fact-Check
Sample:	Alt-Facts Treatment		Imposed Fact-Check Treatment	
Voted Le Pen, 2nd round 2017	0.197*** (0.051)	0.073*** (0.012)		
Voted Le Pen, 1st round 2017	0.057 (0.053)			
Feel closer to European gov.	-0.080*** (0.024)	-0.039*** (0.008)	0.105** (0.050)	
Feel closer to French gov.				-0.013* (0.007)
Negative Image EU (1-5)			-0.026* (0.014)	-0.009** (0.004)
Education level (1-9)			0.016*** (0.005)	
Male	0.053** (0.024)	0.027*** (0.009)	0.048** (0.024)	0.014** (0.007)
Frequency of FB use			-0.031* (0.017)	-0.011** (0.005)
Reason to share: interest			0.156** (0.062)	
Reason to share: influence	0.257*** (0.057)	0.054** (0.021)	0.081 (0.061)	0.037* (0.019)
Reason to share: reciprocity			0.093 (0.059)	0.023 (0.015)
Source news: Internet			-0.034 (0.026)	
Self-reported reciprocity			0.086 (0.067)	0.046*** (0.018)
Gave money to charity			0.130** (0.054)	0.039*** (0.015)
Gave money to homeless			0.048 (0.059)	
Donated blood	0.076* (0.041)	0.026* (0.015)	0.062 (0.043)	
Log (FB friends+1)	-0.014 (0.009)			
Religious	0.145*** (0.036)	0.056*** (0.016)		
Father born in France				-0.015 (0.014)
Married				0.014* (0.008)
Income not reported	-0.102*** (0.029)			
Observations	778	790	773	781
R-squared	0.196	0.136	0.133	0.082

**Note:** OLS regression results reported. The explanatory variables in each of these regressions were selected by LASSO from all 37 pretreatment characteristics. Standard errors are corrected for heteroscedasticity. \*  $p \leq 0.05$ , \*\*  $p \leq 0.01$ , \*\*\*  $p \leq 0.001$ .

**Table A6:** Actual compared to predicted sharing for viewers and nonviewers

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Difference b/w actual and predicted: Intent to Share Alt-Facts on Facebook				Difference b/w actual and predicted: Action of Sharing Alt-Facts on Facebook			
Imposed Fact-Check	-0.046*** (0.016)	-0.045*** (0.016)	-0.052*** (0.017)	-0.051*** (0.018)	-0.021*** (0.006)	-0.021*** (0.006)	-0.022*** (0.007)	-0.021*** (0.007)
Voluntary Fact-Check: Viewer	-0.025 (0.023)	-0.028 (0.023)	-0.028 (0.024)	-0.025 (0.024)	-0.023*** (0.008)	-0.022*** (0.008)	-0.022*** (0.008)	-0.020** (0.008)
Voluntary Fact-Check: Nonviewer	-0.066*** (0.017)	-0.063*** (0.017)	-0.074*** (0.018)	-0.072*** (0.019)	-0.026*** (0.006)	-0.027*** (0.006)	-0.032*** (0.007)	-0.030*** (0.007)
Male		-0.019 (0.014)	-0.014 (0.016)	-0.021 (0.016)		-0.017*** (0.005)	-0.013** (0.005)	-0.016*** (0.006)
Low Education		-0.029 (0.019)	0.094* (0.048)	0.111** (0.048)		-0.001 (0.006)	0.016 (0.014)	0.017 (0.015)
Middle education		0.027 (0.026)	0.047* (0.029)	0.058** (0.029)		0.010 (0.009)	0.011 (0.010)	0.014 (0.010)
Age			-0.003 (0.003)	-0.004 (0.004)			0.000 (0.001)	-0.000 (0.001)
Age squared			0.000 (0.000)	0.000 (0.000)			-0.000 (0.000)	0.000 (0.000)
Income (1-10)			-0.003 (0.004)	-0.002 (0.004)			-0.003** (0.001)	-0.003* (0.001)
Religious			-0.047** (0.022)	-0.097*** (0.023)			-0.022*** (0.008)	-0.035*** (0.008)
Frequency of FB use			-0.009 (0.011)	-0.005 (0.011)			-0.006 (0.004)	-0.005 (0.004)
Often share on FB			0.030* (0.015)	0.035** (0.016)			0.010* (0.005)	0.010* (0.005)
Log (FB friends+1)			0.000 (0.006)	0.001 (0.006)			0.000 (0.002)	0.000 (0.002)
Voted Le Pen, 2nd round 2017			-0.073*** (0.020)	-0.057** (0.028)			-0.032*** (0.007)	-0.045*** (0.008)
Negative Image EU (1-5)			-0.005 (0.008)	-0.001 (0.008)			-0.002 (0.003)	-0.001 (0.003)
Self-reported altruism				-0.103 (0.101)				0.019 (0.038)
Self-reported reciprocity				-0.016 (0.044)				-0.007 (0.020)
Self-reported image importance				-0.048 (0.032)				-0.009 (0.013)
Reason to share: interest				-0.046 (0.038)				-0.018 (0.015)
Reason to share: influence				-0.090** (0.040)				-0.013 (0.014)
Reason to share: image				0.008 (0.033)				0.004 (0.012)
Reason to share: reciprocity				0.055 (0.034)				0.017 (0.012)
Observations	2,219	2,219	2,051	2,018	2,349	2,349	2,112	2,078
R-squared	0.007	0.011	0.038	0.069	0.010	0.016	0.046	0.063
Mean Dep. var., Alt-Facts T	-0.0014	-0.0014	0.0036	0.0023	0.0006	0.0006	0.0027	0.0019
Mean predicted Alt-Facts T	0.150	0.150	0.156	0.159	0.0474	0.0474	0.0483	0.0490
Mean Predict. Imposed Fact-Check T	0.158	0.158	0.159	0.159	0.0467	0.0467	0.0479	0.0480
Mean Predict., Voluntary T, Viewer	0.188	0.188	0.190	0.190	0.0589	0.0589	0.0592	0.0592
Mean Predict., Voluntary T, Nonviewer	0.136	0.136	0.144	0.144	0.0432	0.0432	0.0442	0.0442
Demographic controls			✓	✓			✓	✓
All pretreatment characteristics				✓				✓

**Note:** The comparison group is Alt-Facts treatment. The set of unreported demographic controls is as follows: family status (dummies for married and single), number of children, size of the place of living (dummies for village and town), religion (dummies for catholic, muslim, and no religion), and dummies for each of the 9 levels of education. The list of all pretreatment characteristics is given in Table A1. Robust standard errors are in parentheses. \*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ .

**Table A7:** Predictors of sharing behavior for alt-facts only, fact-check only, and both alt-facts and fact-check: variables selected by adaptive LASSO

Dep. var.:	(1) Sharing Intent Alt-Facts only	(2) Sharing Action Alt-Facts only	(3) Sharing Intent Fact-Check only	(4) Sharing Action Fact-Check only	(5) Sharing Intent Both	(6) Sharing Action Both
Sample: Treatment	Alt-Facts		Imposed Fact-Check		Imposed Fact-Check	
Voted Le Pen, 2nd round 2017	0.197*** (0.051)	0.073*** (0.012)	-0.054*** (0.019)	-0.010* (0.006)	0.064*** (0.021)	0.003 (0.002)
Voted Le Pen, 1st round 2017	0.057 (0.053)					0.003 (0.002)
Feel closer to European gov.	-0.080*** (0.024)	-0.039*** (0.008)	0.094** (0.045)			
Feel closer to French gov.				-0.014** (0.007)		
Negative Image EU (1-5)			-0.018 (0.012)	-0.006* (0.003)	-0.015 (0.010)	-0.002 (0.002)
Age			0.002** (0.001)		-0.000 (0.000)	
Single					0.017 (0.019)	
Education level (1-9)			0.011** (0.005)		0.006** (0.003)	
Male	0.053** (0.024)	0.027*** (0.009)	0.040* (0.021)	0.015** (0.007)		
Father born in France			-0.037 (0.036)	-0.015 (0.014)		
Frequency of FB use			-0.019 (0.015)	-0.011** (0.005)		
Log (FB friends+1)	-0.014 (0.009)					
Reason to share: interest			0.163*** (0.048)			
Reason to share: influence	0.257*** (0.057)	0.054** (0.021)		0.030 (0.018)	0.107*** (0.036)	0.008*** (0.002)
Reason to share: reciprocity				0.022 (0.015)		
Source news: TV			-0.062** (0.031)			
Source news: Internet			-0.066** (0.033)			0.003 (0.002)
Self-reported reciprocity			0.123** (0.059)	0.047*** (0.018)		
Gave money to charity			0.110** (0.052)	0.032** (0.014)		
Worked for charity			-0.082* (0.049)			
Religion: catholic			-0.032 (0.023)	-0.011 (0.007)		
Donated blood	0.076* (0.041)	0.026* (0.015)				
Religious	0.145*** (0.036)	0.056*** (0.016)			0.023 (0.019)	
Married				0.017** (0.008)		-0.002* (0.001)
Live in city					-0.035** (0.014)	-0.003* (0.002)
Often share on FB					0.029** (0.012)	
Self-reported altruism					0.150*** (0.049)	0.013** (0.006)
Income not reported	-0.102*** (0.029)			0.003 (0.031)		
Observations	778	790	773	781	771	678
R-squared	0.196	0.136	0.117	0.083	0.117	0.073

**Note:** OLS regression results reported. The explanatory variables in each of these regressions were selected by LASSO from all 37 pretreatment characteristics. Standard errors are corrected for heteroscedasticity. \*  $p \leq 0.05$ , \*\*  $p \leq 0.01$ , \*\*\*  $p \leq 0.001$ .

**Table A8:** Testing for experimenter demand effects: heterogeneity by social desirability score

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Intent to Share Alt-Facts on Facebook				Action of Sharing Alt-Facts on Facebook			
Imposed Fact-Check	-0.041** (0.016)	-0.041** (0.016)	-0.046*** (0.016)	-0.050*** (0.017)	-0.019*** (0.006)	-0.019*** (0.006)	-0.020*** (0.006)	-0.021*** (0.007)
Voluntary Fact-Check	-0.034** (0.016)	-0.034** (0.016)	-0.037** (0.016)	-0.052*** (0.017)	-0.020*** (0.005)	-0.020*** (0.005)	-0.023*** (0.006)	-0.026*** (0.006)
Imposed Fact-Check × × Social Desirability Score	-0.022 (0.015)	-0.022 (0.015)	-0.015 (0.016)	-0.011 (0.016)	-0.009 (0.006)	-0.009 (0.006)	-0.007 (0.006)	-0.007 (0.006)
Voluntary Fact-Check × × Social Desirability Score	-0.007 (0.015)	-0.009 (0.015)	-0.001 (0.015)	0.007 (0.016)	-0.005 (0.005)	-0.006 (0.005)	-0.004 (0.005)	-0.002 (0.006)
Social Desirability Score	0.050*** (0.011)	0.050*** (0.011)	0.032*** (0.012)	–	0.015*** (0.004)	0.015*** (0.004)	0.011** (0.004)	–
Observations	2,537	2,537	2,265	2,078	2,537	2,537	2,265	2,078
R-squared	0.026	0.030	0.119	0.167	0.020	0.022	0.078	0.101
Strata controls		✓	✓	✓		✓	✓	✓
Demographic controls & Facebook use			✓	✓			✓	✓
All pretreatment characteristics				✓				✓

**Note:** The comparison group is Alt-Facts treatment. Controls are the same as in the respective columns of Table 2. Coefficients for the social desirability score are not reported in columns (4) and (8) as the social desirability score is a linear combination of three pretreatment variables. Social Desirability Score has mean of zero and SD of 1.16. Robust standard errors are in parentheses. \*  $p \leq 0.05$ , \*\*  $p \leq 0.01$ , \*\*\*  $p \leq 0.001$ .

## B Questions on sharing intention and actual sharing in our experiment and in related studies

### B.1 Questions on sharing intention and actual sharing in our experiment

French original (English translation is in Figure 1 of the main text):

#### Screen 1: measurement of “Sharing Intention” variable

Voulez vous partager cet article "RN : L'Union Européenne contrôle 87% de nos lois et souhaite ouvrir la porte à 50 millions d'immigrés", contenant les déclarations de Marine Le Pen et Jordan Bardella sur votre mur Facebook ?

- Oui
- Non
- Ne souhaite pas répondre

#### Screen 2: measurement of “Sharing Action” variable

Vous avez la possibilité de partager l'article que vous venez de lire sur votre mur Facebook en cliquant sur ce bouton de partage (si vous n'êtes pas déjà connecté sur Facebook et que vous souhaitez partager le contenu, vous pouvez soit vous connecter maintenant sur une page séparée, soit vous serez amené à vous connecter lorsque vous cliquerez sur le bouton de partage) :

 PARTAGER

## B.2 Questions about sharing alt-facts used in related studies

In this section, we list the formulation of the question about sharing fake news used in the related literature (cited and described in the main text). All of them are hypothetical questions about self-reported willingness to share. In contrast, as one of the two main outcomes in our study, we use clicking on the Facebook share button. In addition, there are two important differences in our self-reported intention to share alt-facts variable compared to the formulations adopted by other studies. First, the formulations of the intent to share question in these papers is much more hypothetical than in our case. Second, these questions do not specify the specific platform on which sharing takes place.

List of questions about sharing alt-facts in other studies:

- Fazio (2020):

*“How likely would you be to share this story online?”*

- Pennycook et al. (2020a):

*“We are interested in whether you would consider sharing these stories on social media (such as Facebook or Twitter).”*

- Pennycook et al. (2020b):

*“Would you consider sharing this story online (for example, through Facebook or Twitter?)”*

- Yaqub et al. (2020):

*“Would you share this headline with your friends on social media?”*

- Altay et al. (2020):

*“How likely would you be to share this story online (for example, through Facebook or Twitter?)”*

## C Treatments (translated from French)

### C.1 Translation of the Text of the Alt-Facts Treatment

**We are going to show you a set of articles on the European Union. Please read them carefully.**

**Article 1 RN:** the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants.

In an interview on the 25th of June 2018 Marine Le Pen accused the European Union of wanting to open the doors to immigrants:

**“The European Union wants immigration. It has said this multiple times, through the voices, among others, of multiple European Commissioners. They even went as far as saying 50 millions immigrants by 2050.”**

*[The participants were presented with a photo image from this interview and could click on the video of the interview. The interview is available at: [https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat\\_2795231.html](https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat_2795231.html), accessed May 17, 2021.]*

On the 4th of June 2018 on Sud Radio, Jordan Bardella, the lead candidate for the National Rally at the European Elections, pointed to another risk

**"We need to regain control over our budget, regain control of our laws. I remind you that 87% of our laws, of the laws that are voted, comes from European directives"**

*[The participants were presented with a photo image from this interview. The photo is available at: <https://www.sudradio.fr/politique/jordan-bardella-rn-si-on-fait-liste-commune-on-gagne-les-elections-europeennes/>, accessed May 17, 2021.*

*The full interview is available at: <https://www.sudradio.fr/emission/linvite-politique-sud-radio-188/>, accessed May 17, 2021. The relevant text starts at 11 minutes 10 seconds and ends at 11 minutes 20 seconds.]*

**Q29** Do you want to share the article “RN: the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants” containing the claims made by Marine Le Pen and Jordan Bordella on your Facebook page?

1. Yes

2. No
3. I prefer not to answer this question

You can share the article that you have just read on your Facebook page by clicking on this sharing button (if you are not already connected don Facebook and you want to share the content you can either connect yourself on a separate page or you will be redirected to Facebook login page after clicking on the button)

**Q30** Do you want to share the article “RN: the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants” containing the claims made by Marine Le Pen and Jordan Bordella with 100 other participants that will take this survey after you?

1. Yes
2. No
3. I prefer not to answer this question

## C.2 Translation of the text of the Imposed Fact-Check Treatment

**We are going to show you a set of articles on the European Union. Please read them carefully.**

**Article 1** RN: the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants.

In an interview on the 25th of June 2018 Marine Le Pen accused the European Union of wanting to open the doors to immigrants:

**“The European Union wants immigration. It has said this multiple times, through the voices, among others, of multiple European Commissioners. They even went as far as saying 50 millions immigrants by 2050.”**

*[The participants were presented with a photo image from this interview and could click on the video of the interview. The interview is available at: [https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat\\_2795231.html](https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat_2795231.html), accessed May 17, 2021.]*

On the 4th of June 2018 on Sud Radio, Jordan Bardella, the lead candidate for the National Rally at the European Elections, pointed to another risk

**"We need to regain control over our budget, regain control of our laws. I remind you that 87% of our laws, of the laws that are voted, comes from European directives"**

*[The participants were presented with a photo image from this interview. The photo is available at: <https://www.sudradio.fr/politique/jordan-bardella-rn-si-on-fait-liste-commune-on-gagne-les-elections-europeennes/>, accessed May 17, 2021.*

*The full interview is available at: <https://www.sudradio.fr/emission/linvite-politique-sud-radio-188/>, accessed May 17, 2021. The relevant text starts at 11 minutes 10 seconds and ends at 11 minutes 20 seconds.]*

Several fact-checking articles have shown these claims are false.

Intox: the European Union does not control 87% of our laws and is not organizing an influx of 50 millions immigrants!

**“We need to regain control over our budget, regain control of our laws. I remind you that 87% of our laws, of the laws that are voted, comes from European directives.”**

The myth of the European Union imposing 80% of laws originated in a Jacques Delors’ statement made on the 14th of April 1988: “By 1992, 80% of the economic, financial and fiscal legislation will be of European origin”. His prediction is far from being met.

In 2014, the Notre Europe institute showed that 20% of French laws came directly or indirectly from a decision taken at the European level. In a 2009 paper entitled “The national legislation of European origin: breaking the myth” Bertoncini shows that European acts represent only 36.2% of the French laws.

A more recent study—“Are French laws written in Bruxelles?”—published in the *Revue de l’Union Européenne* in 2012, the proportion of laws with European origins reaches 13.3%. In a paper written for the LSE, Annette Elisabeth Toeller of the University of Hagen: “The most striking conclusion is that most of these studies show a relatively low rate of europenisation of European laws: 15.5% in the UK, 14% in Denmark, 10.6% in Austria, between 3 and 27% in France, between 1 and 24% in Finland, but 39.1% in Germany.”

Even if estimating this proportion precisely is not an easy task and these studies do not agree on the exact number, all of them show that we are well below 50% and therefore far from the 87% referred to by Jordan Bardella.

**"The European Union wants immigration. It has said this multiple times, through the voices, among others, of multiple European Commissioners. They even went as far as saying 50 millions immigrants by 2050."**

*[The participants were presented with a photo image from the same interview of Marine Le Pen with a large red sign “False.” The interview is available at: [https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat\\_2795231.html](https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat_2795231.html), accessed May 17, 2021.]*

The 50 millions figure appeared in a declaration made by the European commissioner to Interior Affairs, Dimitris Avramopoulos on the 8th of June: “We all know that Europe is an ageing continent. Without immigration, the active population will fall by 20 million individuals in the next 15 years. And by 2060, the active population will shrink by 10%, meaning by 50

millions.”

Even if the problem of an ageing population is often mentioned, the proposed solution is rarely to promote immigration and if this is the case, only a regulated type of immigration as the one proposed in this document.

A recent document by the Commission mentioned by the RN says: “The fact is that by 2050, in the improbable absence of immigration and with a constant rate of participation to the labour market, the active population in the EU will decrease by 68 millions workers. Given that not all of the immigrants join the active workforce, we will need a net increase of around 100 million people in order to close the deficit.” Objectively, an influx of this magnitude in the next 40 years is neither likely and nor necessarily desirable.”

Finally and most importantly, the European Commission does not have the authority over admitting residents into European member states. This is clearly stated in this communication by the Commission to the Parliament: “The member States will maintain their exclusive right on matters related to the numbers of admissions of non-EU migrants in search of work.”

**Q29** Do you want to share the article “RN: the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants” containing the claims made by Marine Le Pen and Jordan Bordella on your Facebook page?

1. Yes
2. No
3. I prefer not to answer this question

You can share the article that you have just read on your Facebook page by clicking on this sharing button (if you are not already connected don Facebook and you want to share the content you can either connect yourself on a separate page or you will be redirected to Facebook login page after clicking on the button)

**Q30** Do you want to share the article “RN: the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants” containing the claims made by Marine Le Pen and Jordan Bordella with 100 other participants that will take this survey after you?

1. Yes
2. No
3. I prefer not to answer this question

**Q31** Do you want to share the fact-checking article on your Facebook page?

1. Yes
2. No
3. I prefer not to answer this question

You can share the article that you have just read on your Facebook page by clicking on this sharing button (if you are not already connected on Facebook and you want to share the content you can either connect yourself on a separate page or you will be redirected to Facebook login page after clicking on the button).

### C.3 Translation of the text of the Voluntary Fact-Check Treatment

**We are going to show you a set of articles on the European Union.  
Please read them carefully.**

**Article 1** RN: the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants.

In an interview on the 25th of June 2018 Marine Le Pen accused the European Union of wanting to open the doors to immigrants:

**“The European Union wants immigration. It has said this multiple times, through the voices, among others, of multiple European Commissioners. They even went as far as saying 50 millions immigrants by 2050.”**

*[The participants were presented with a photo image from this interview and could click on the video of the interview. The interview is available at: [https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat\\_2795231.html](https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat_2795231.html), accessed May 17, 2021.]*

On the 4th of June 2018 on Sud Radio, Jordan Bardella, the lead candidate for the National Rally at the European Elections, pointed to another risk

**"We need to regain control over our budget, regain control of our laws. I remind you that 87% of our laws, of the laws that are voted, comes from European directives"**

*[The participants were presented with a photo image from this interview. The photo is available at: <https://www.sudradio.fr/politique/jordan-bardella-rn-si-on-fait-liste-commune-on-gagne-les-elections-europeennes/>, accessed May 17, 2021.*

*The full interview is available at: <https://www.sudradio.fr/emission/linvite-politique-sud-radio-188/>, accessed May 17, 2021. The relevant text starts at 11 minutes 10 seconds and ends at 11 minutes 20 seconds.]*

**Q28** Do you want to read some fact-checking articles concerning the claims that you have just read?

1. Yes
2. No
3. I prefer not to answer this question

IF THE RESPONDENTS ANSWERED YES, SHOW THE REST.

IF THE RESPONDENT ANSWERED NO, SKIP TO QUESTIONS Q29 AND Q30. DO NOT ASK QUESTION Q31.

Several fact-checking articles have shown these claims are false.

Intox: the European Union does not control 87% of our laws and is not organizing an influx of 50 millions immigrants!

**“We need to regain control over our budget, regain control of our laws. I remind you that 87% of our laws, of the laws that are voted, comes from European directives.”**

The myth of the European Union imposing 80% of laws originated in a Jacques Delors’ statement made on the 14th of April 1988: “By 1992, 80% of the economic, financial and fiscal legislation will be of European origin”. His prediction is far from being met.

In 2014, the Notre Europe institute showed that 20% of French laws came directly or indirectly from a decision taken at the European level. In a 2009 paper entitled “The national legislation of European origin: breaking the myth” Bertoincini shows that European acts represent only 36.2% of the French laws.

A more recent study—“Are French laws written in Bruxelles?”—published in the *Revue de l’Union Européenne* in 2012, the proportion of laws with European origins reaches 13.3%. In a paper written for the LSE, Annette Elisabeth Toeller of the University of Hagen: “The most striking conclusion is that most of these studies show a relatively low rate of europenisation of European laws: 15.5% in the UK, 14% in Denmark, 10.6% in Austria, between 3 and 27% in France, between 1 and 24% in Finland, but 39.1% in Germany.”

Even if estimating this proportion precisely is not an easy task and these studies do not agree on the exact number, all of them show that we are well below 50% and therefore far from the 87% referred to by Jordan Bardella.

**"The European Union wants immigration. It has said this multiple times, through the voices, among others, of multiple European Commissioners. They even went as far as saying 50 millions immigrants by 2050."**

*[The participants were presented with a photo image from the same interview of Marine Le Pen*

*with a large red sign “False.” The interview is available at: [https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat\\_2795231.html](https://www.francetvinfo.fr/replay-radio/8h30-aphatie/elections-europeennes-marine-le-pen-sera-en-premiere-ligne-et-a-la-tete-de-ce-combat_2795231.html), accessed May 17, 2021.]*

The 50 millions figure appeared in a declaration made by the European commissioner to Interior Affairs, Dimitris Avramopoulos on the 8th of June: “We all know that Europe is an ageing continent. Without immigration, the active population will fall by 20 million individuals in the next 15 years. And by 2060, the active population will shrink by 10%, meaning by 50 millions.”

Even if the problem of an ageing population is often mentioned, the proposed solution is rarely to promote immigration and if this is the case, only a regulated type of immigration as the one proposed in this document.

A recent document by the Commission mentioned by the RN says: “The fact is that by 2050, in the improbable absence of immigration and with a constant rate of participation to the labour market, the active population in the EU will decrease by 68 millions workers. Given that not all of the immigrants join the active workforce, we will need a net increase of around 100 million people in order to close the deficit.” Objectively, an influx of this magnitude in the next 40 years is neither likely and nor necessarily desirable.”

Finally and most importantly, the European Commission does not have the authority over admitting residents into European member states. This is clearly stated in this communication by the Commission to the Parliament: “The member States will maintain their exclusive right on matters related to the numbers of admissions of non-EU migrants in search of work.”

**Q29** Do you want to share the article “RN: the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants” containing the claims made by Marine Le Pen and Jordan Bordella on your Facebook page?

1. Yes
2. No
3. I prefer not to answer this question

You can share the article that you have just read on your Facebook page by clicking on this sharing button (if you are not already connected on Facebook and you want to share the content you can either connect yourself on a separate page or you will be redirected to Facebook login page after clicking on the button)

**Q30** Do you want to share the article “RN: the European Union controls 87% of our laws and aims at opening the door to 50 millions immigrants” containing the claims made by Marine Le

Pen and Jordan Bordella with 100 other participants that will take this survey after you?

1. Yes
2. No
3. I prefer not to answer this question

**Q31** Do you want to share the fact-checking article on your Facebook page?

1. Yes
2. No
3. I prefer not to answer this question

You can share the article that you have just read on your Facebook page by clicking on this sharing button (if you are not already connected on Facebook and you want to share the content you can either connect yourself on a separate page or you will be redirected to Facebook login page after clicking on the button).

## D Complete questionnaire (translated from French)

### [Part 1. Introduction and pretreatment questions]

We carry out a survey on behaviour in social networks. This survey includes a set of questions about you, your use of social networks and your political preferences. You will then be exposed to information that you could usually find in your Facebook newsfeed. The questionnaire will take about 15 minutes to be completed.

Your answers are anonymous; we will publish only aggregate results based on the survey.

**Q0** Do you want to proceed with the survey?

- Yes
- No

**Q1** Among the following social networks, which ones do you use?

- Facebook
- Instagram
- Twitter
- Snapchat
- LinkedIn
- None of the above

**Q2** How old are you?

- Age (in years):

**Q3** What is the size of the city or town where you currently live?

- 1) Less than 2500 people
- 2) Between 2500 and 5000 people
- 3) More than 5000 people
- 4) I prefer not to answer this question

**Q4** What is the highest academic degree that you have?

- No diploma
- Primary school certificate
- B.E.P.C. certificate
- Certificate of professional skill (CAP)
- Certificate of vocational education (BEP)
- Vocational high school degree (BAC)
- High school degree (BAC)
- BAC + 2 (BUT, BTS, schoolteacher, DEUG, social or paramedical diploma)
- Higher education

**Q5** What is your gender?

- 1) Male
- 2) Female

**Q6** Your place of birth:

- 1) France
- 2) Abroad
- 3) I prefer not to answer this question

**Q7** Place of birth of your father:

- 1) France
- 2) Abroad
- 3) I prefer not to answer this question

**Q8** Place of birth of your mother:

- 1) France
- 2) Abroad
- 3) I prefer not to answer this question

**Q9** Region of current residence:

– Region:

**Q10** What is your marital status?

- 1) Single
- 2) Married
- 3) Civil union without being married
- 4) PACS (civil solidarity pact)
- 5) Divorced
- 6) Widow
- 7) I prefer not to answer this question

**Q11** If you add all income sources in your household, what is your household's monthly income?

- 1) Less than 1000 euros per month
- 2) Between 1001 and 1500 euros per month
- 3) Between 1501 and 1750 euros per month
- 4) Between 1751 and 2000 euros per month
- 5) Between 2001 and 2500 euros per month
- 6) Between 2501 and 3000 euros per month
- 7) Between 3001 and 4000 euros per month
- 8) Between 4001 and 5000 euros per month
- 9) Between 5001 and 7000 euros per month
- 10) More than 7001 euros per month
- 11) I prefer not to answer this question

**Q12** Do you have children?

- 1) Yes
- 2) No
- 3) I prefer not to answer this question

**Q13** How often do you use Facebook?

- 1) Several times a day
- 2) Once a day
- 3) Once a week
- 4) Once a month or less
- 5) I prefer not to answer this question

**Q14** How many Facebook friends do you have?

- Number of friends:

**Q15** How frequently do you share content on Facebook?

- 1) Never
- 2) Seldom
- 3) Often
- 4) I prefer not to answer this question

**Q16 (on a scale from 1 to 5 )** For you, how important are the following reasons to share content on Facebook?

- **Q16 \_ 1:** I think that the content could be of interest to my friends
- **Q16 \_ 2:** I want to influence my friends
- **Q16 \_ 3:** I want my friends to have a good image of me
- **Q16 \_ 4:** My friends make the effort of sharing content with me, I want to do the same

**Q17** In order to be informed on politics, which media do you use most often?

- 1) TV
- 2) Radio
- 3) Internet
- 4) National newspapers
- 5) Local newspapers
- 6) Free newspapers
- 7) Other:
- 8) None
- 9) I prefer not to answer this question

**Q18** On a scale from “1” (never) to “5” (often), comment on the following statements

- **Q18 \_ 1:** I have given money to a charitable organization
- **Q18 \_ 2:** I have given money to a foreigner in need (or a foreigner who asked me for money)
- **Q18 \_ 3:** I have worked for a charitable organization
- **Q18 \_ 4:** I have donated blood

**Q19** On a scale from 1 to 5, where 1 means “it does not fit me” and 5 means “it fits me perfectly”, comment on the following statements

- **Q19 \_ 1:** If someone helps me, I am ready to help back
- **Q19 \_ 2:** I go out of my comfort zone in order to help someone who helped me in the past
- **Q19 \_ 3:** I am ready to bear a personal cost in order to help someone who helped me in the past

**Q20** On a scale from 1 to 5, where 1 means "it does not fit me" and 5 means "it fits me perfectly", comment on the following statement

- It is important for me not to be considered selfish

**Q21** Can you tell me what your religion is, if any?

- 1) Catholic
- 2) Protestant
- 3) Jewish
- 4) Muslim
- 5) Buddhist
- 6) Other religion
- 7) No religion
- 8) I prefer not to answer this question

**Q22** Do you usually attend religious services:

- 1) Several times a week
- 2) Once a week
- 3) Once or twice a month
- 4) Sometimes, during important festivities
- 5) Only for ceremonies, marriages, ...
- 6) Never
- 7) I prefer not to answer this question

**Q23** Which are the levels of government that you feel closer to?

- 1) Europe
- 2) France
- 3) Region
- 4) Department
- 5) City/town
- 6) Local community
- 7) I prefer not to answer this question

**Q24** Are you registered to vote?

- 1) Yes
- 2) No
- 3) Soon
- 4) I prefer not to answer this question

**Q25** Who did you vote for in the first round of the 2017 presidential elections?

- Francois Fillon
- Marine Le Pen
- Emmanuel Macron
- Jean-Luc Melanchon
- Other candidate
- I did not vote

**Q26** Who did you vote for in the second round of the 2017 presidential elections?

- Marine Le Pen
- Emmanuel Macron
- I did not vote

**Q27** In general what is your opinion of the European Union?

- 1) Very positive
- 2) Positive
- 3) Neutral
- 4) Negative
- 5) Very negative

**[End of Part 1.]**

**[Part 2. Treatments.]**

See Section **C** of this Appendix.

**Alt-Facts Treatment** Text and questions presented in Subsection **C.1**

**Imposed Fact-Check Treatment** Text and questions presented in Subsection **C.2**

**Imposed Fact-Check Treatment** Text and questions presented in Subsection **C.3**

**[End of Part 2.]**

**[Part 3. Post-treatment Questions]**

**Q32** We usually rank French people on a scale from 1 to 10 going from the left to the right of the political spectrum. How would rank yourself on this scale?

- Political orientation (ten-point scale):

**Q33** Are you likely to vote for any of the following party lists? ("1" not very likely, "5" very likely)

- **Q33\_1:** La France Insoumise
- **Q33\_2:** LREM (Renaissance supported by La Republique En Marche, Le Modem and their allies)
- **Q33\_3:** RN (Prenez le Pouvoir, list supported by Marine Le Pen)
- **Q33\_4:** UMP (union of the right and the center)
- **Q33\_5:** Europe Ecologie
- **Q33\_6:** A list organised by the "Yellow Vests" movement

**Q34** On a scale from “1” (strongly against) to “5” (strongly in favour), are you in favour of France leaving the European Union?

– Support for France leaving the EU (1 to 5 answer):

**Q35** Do you think that France gains or loses from its membership in the EU? (on a scale from “1” loses to “5” gains)

– France gains from its EU membership (1 to 5 answer)

**Q36** From your perspective, does the European project constitute a source of hope or a source of concern?

- 1) Neither of them
- 2) A source of hope
- 3) A source of concern
- 4) I prefer not to answer this question

**Q37** Are you concerned by the fact that France does not control its borders and laws anymore due to its membership in the European Union?

- 1) Not at all concerned
- 2) A little concerned
- 3) Very concerned
- 4) I prefer not to answer this question

**Q38** In your opinion, who has the most to lose from Brexit, i.e., the UK’s leaving the European Union?

- 1) Everyone
- 2) The UK
- 3) The other countries in the EU
- 4) Nobody
- 5) I do not have an opinion on the matter
- 6) I prefer not to answer this question

**Q39** In your opinion, which are the two major problems that the EU is currently facing?

- 1) Purchasing power
- 2) Immigration
- 3) Security and fight against terrorism
- 4) Climate change
- 5) French sovereignty and French identity
- 6) Health
- 7) Taxation
- 8) Unemployment
- 9) Education

**Q40** Among the following issues, which are the ones that will be most relevant for your vote at the European elections? (choose up to 2 options)

- 1) Purchasing power
- 2) Immigration
- 3) Security and fight against terrorism
- 4) Climate change
- 5) French sovereignty and French identity
- 6) Health
- 7) Taxation
- 8) Unemployment
- 9) Education

**Q41** In your opinion, what is the percentage of French laws coming from European directives?

- 1) 0%
- 2) 10%
- 3) 20%
- 4) 30%
- 5) 40%
- 6) 50%
- 7) 60%
- 8) 70%
- 9) 80%
- 10) 90%
- 11) 100%

**Q42** We are going to present you a list of sources. For every source you can specify the degree of confidence that it inspires you: a lot, enough, not much, not at all

- **Q42\_1**: National newspapers
- **Q42\_2**: Local newspapers
- **Q42\_3**: Online newspapers
- **Q42\_4**: Fact-checking websites
- **Q42\_5**: TV
- **Q42\_6**: OECD
- **Q42\_7**: Eurostat

**[End of Part 3.]**

## E Definitions of variables

### E.1 Measuring sharing

For each URL, Google Analytics provided us with hourly data such as the number of visits, the location (city), and the share of visitors who did not interact with the page i.e., the “bounce rate”.<sup>26</sup> We merged the survey data and the data from Google Analytics by hour of the day and treatment.

This matching allowed us first of all to measure the probability that a participant visited the survey. The variable *visit the webpage* takes the value

The other goal was to measure the probability that someone actually shared on Facebook and the total number of reshares by friends of participants. To measure the number of shares on Facebook by the participants we use the bounce rate indicated by Google Analytics and the number of entrances in the website:

$$\text{Number of shares}_{Survey} = (100 - \text{Bounce Rate}) \times \text{Entrances}$$

Note that we use the number of entrances instead of visits because the bounce rate is computed within a session such that someone has to enter the website via a specific page and if he did not interact with the page the session ends on the same page and the bounce rate is 100%. The number of entrances can differ from the number of unique visits since people could also view the fact check or open both the article from the survey and the one shared on Facebook which will count as one entrance on the landing page only. In addition, since the data are aggregated per hour, if someone stays on the same page for more than one hour and refreshes it, it will count as one unique view in both hours but only one entrance.

Finally, the number of reshares can be calculated using the total number of shares from Facebook via the share buttons with the count option. From this total number of shares, we just subtract the shares by the participants, as calculated above:

$$\text{Number of shares}_{Facebook} = \text{Number of shares}_{Total} - \text{Number of shares}_{Survey}$$

Since the only interactive component of the webpage was the share button, we can use the bounce rate to infer the number of visitors who clicked on the share button.

---

<sup>26</sup>The bounce rate is equal to 100% for a visitor who came to the page and closed it without clicking anywhere on the page during his session.

## E.2 Construction of variables measuring behavioral traits and motives to share

### Social desirability score:

**Social desirability score** is defined as the first principal component of answers to the following three questions in the survey: “I have worked for a charitable organization,” “I have donated blood,” and “It is important for me not to be considered selfish.” For each of these questions the participants gave an answer on a scale from 1 to 5 (“never” to “often” for the first two questions, and “it does not fit me” to “it fits me perfectly” for the third question). The factor loadings are: 0.6493 (worked for charity); 0.6412 (blood donor); 0.4090 (importance of not being considered selfish).

### Other behavioral traits:

**Self-reported altruism** was measured as the average response to the following four questions (based on the self-report altruism scale first proposed by [Rushton et al. \(1981\)](#)) divided by 5 (since the responses are on a 1-5 Likert scale)

- I have already given money to a charitable organization
- I have already given money to a foreigner in need (or that asked me for money)
- I have already worked for a charitable organization
- I have already donated blood

**Donor of blood and money** was measured as the average response to the following four questions (based on the self-report altruism scale first proposed by [Rushton et al. \(1981\)](#)) divided by 5 (since the responses are on a 1-5 Likert scale)

- I have already given money to a charitable organization
- I have already given money to a foreigner in need (or that asked me for money)
- I have already donated blood

**Self-reported reciprocity** was measured as the average response to the following three questions (adapted from [Dohmen et al. \(2008\)](#)) divided by 5 (since the responses are on 1-5 Likert scale)

- If someone helps me, I am ready to help her back
- I go out of my comfort zone in order to help someone who helped me in the past
- I am ready to bear a personal cost in order to help someone who helped me in the past

**Importance of self-image** was measured as the response to the following question (adapted from [Henry and Sonntag \(2019\)](#)) divided by 5 (since the responses are on 1-5 Likert scale)

- It is important for me not to be considered selfish

**Motivations for sharing:** We asked the following question before the treatment: “For you, how important are the following reasons to share content on Facebook?” with answers on a 1-5 scale. The answer to each option (divided by five) defines a motive.

- I think that the content could be of interest for my friends (**Interest**)
- I want to influence my friends (**Influence**)
- I want my friends to have a good image of me (**Image**)
- My friends make the effort of sharing content with me, I want to do the same (**Reciprocity**)

## F Theoretical model

### F.1 Analytical framework: checking and sharing

Our empirical results in Section II.D show that Viewers have a much higher ex ante propensity to share alt-facts than Nonviewers. This may seem puzzling: those who would share alt-facts regardless of the information contained in the fact-check should have no incentive to view, thus implying a higher propensity to share for Nonviewers relative to Viewers.

In this section, we develop a theoretical framework to shed light on these results. We jointly model strategic choices of viewing fact-checking and of subsequent sharing of alt-facts. (For the sake of simplicity, we start with a version of the model where we assume away the option of sharing fact-checking.) The key idea is that viewing is costly, so for individuals who have either very high or very low propensity to share, regardless of the evidence, there is no incentive to incur the cost of viewing to collect the evidence. Thus only those with intermediate propensity to share alt-facts are likely to view the fact-checking. The model formalizes this idea and derives conditions under which among those who choose not to view, those who tend not to share alt-facts are more numerous, either because of the underlying heterogeneity in types or because of the way the fact-checking is designed.

We consider a group of individuals  $i$  who receive a piece of news, that could be true or false. The state of the world  $s \in \{0, 1\}$  corresponds to the veracity of the news, where  $s = 1$  indicates that the news is true. To simplify the exposition, we assume that all members of the group initially have the same prior beliefs: they expect that the state is  $s = 1$  with probability  $q$  and  $s = 0$  with probability  $1 - q$ .

Individuals choose whether to share the news. They are heterogeneous in terms of returns to sharing. The payoff of sharing  $V_i^s$  is state-dependent. The net value of sharing is positive when the news is true and negative when it is false  $V_i^0 < 0 < V_i^1$ . The values of  $V_i^s$  could reflect different motives for sharing identified in the empirical results above, such as the intention to influence (see Section F.2 for the formalization of these different motives).

Before sharing each individual has the opportunity to view fact-checking at cost  $c$ . Viewing is expected to produce an ex post belief which is either (i)  $q^- < q$  (with probability  $p$ ), i.e. a report suggesting that the state is probably low, or (ii)  $q^+ > q$  (with probability  $1 - p$ ). Bayes plausibility implies

$$q = pq^- + (1 - p)q^+. \quad (1)$$

To simplify the exposition, we assume here that there is no heterogeneity in their level of trust in the fact-checking.<sup>27</sup>

---

<sup>27</sup>Differential level of trust in fact-checking sources can be modeled as differences in  $q^+ - q^-$ . In particular an individual who has no trust in fact checking sources would have  $q^+ = q^- = q$  and would never choose to view fact-checking — as viewing is costly and she expect no additional information from viewing.

**Sharing.** Individual  $i$  with belief  $q$  shares alt-facts if and only if

$$qV_i^1 + (1 - q)V_i^0 \geq 0 \Leftrightarrow q \geq q_i^* \equiv \frac{-V_i^0}{\Delta V_i}.$$

where  $\Delta V_i \equiv (V_i^1 - V_i^0)$ .

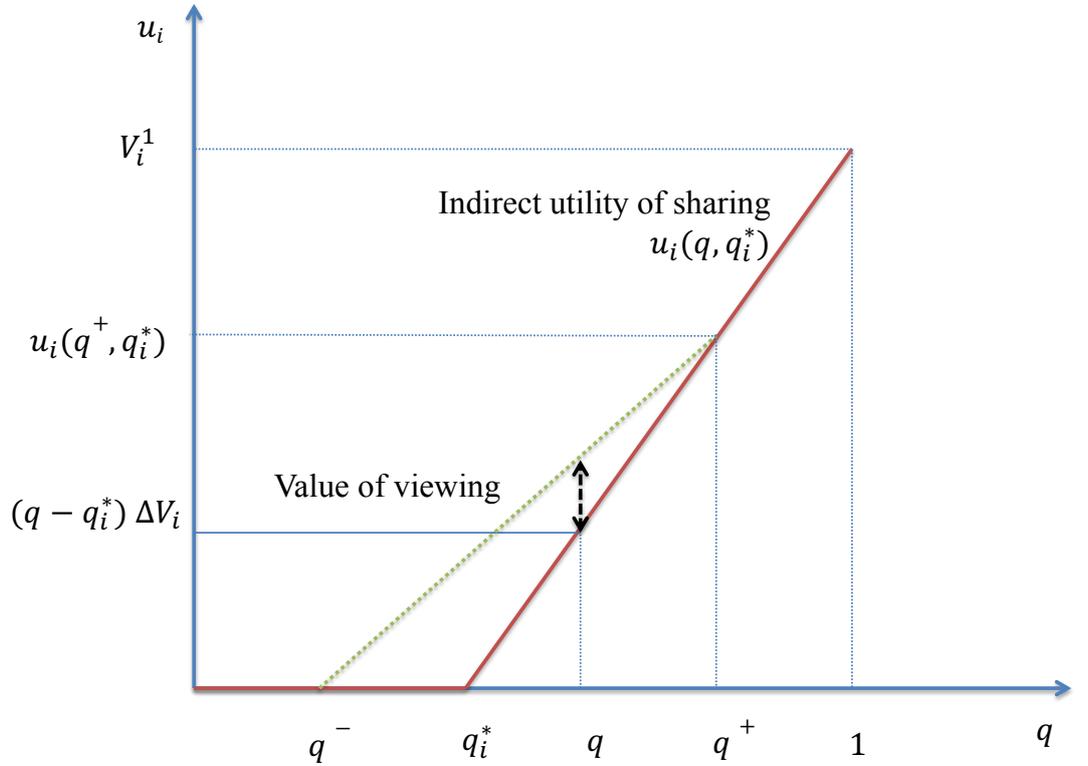
Individual  $i$  shares if and only if  $q$  is higher than an individual-specific threshold  $q_i^*$ . The threshold  $q_i^*$  therefore characterizes the individual's propensity to share. We assume  $q_i^*$  is distributed on  $[0, 1]$  with a cumulative distribution function  $F(\cdot)$ .

The indirect utility of individual  $i$  is thus given by

$$u(q, q_i^*) = \max\{0, qV_i^1 + (1 - q)V_i^0\} = \max\{0, (q - q_i^*)\Delta V_i\}. \quad (2)$$

We plot the value of sharing in Figure F1 (solid line). Individual  $i$  does not share for  $q \leq q_i^*$  and gets zero value while the expected value of sharing is then linearly increasing in  $q$  for  $q > q_i^*$ .

**Figure F1:** Decision to view fact-checking



*Note:* The solid line represents the indirect utility of sharing alt-facts  $u_i(q_i, q_i^*)$ . The dotted line is a straight line connecting points  $q^-, u_i(q^-, q_i^*)$  and  $q^+, u_i(q^+, q_i^*)$ . The distance between two lines represents the value of viewing fact-checking (gross of the cost of viewing  $c$ ) for a given  $q$ .

**Viewing.** We now turn to the decision of whether to view the fact-checking information prior to sharing. The utility of individual  $i$  who does not view is given by expression (2). If the individual does view fact-checking, she expects to get, with probability  $p$ , a report  $q^-$  suggesting that the state is probably low and with complementary probability  $1 - p$  a report  $q^+ > q$  suggesting it is likely to be high. The cost of viewing is  $c$ . The expected utility of a viewer is therefore given by:

$$-c + pu(q^-, q_i^*) + (1 - p)u(q^+, q_i^*).$$

This immediately implies that if individual  $i$  has extreme beliefs ( $q_i^* < q^-$  or  $q_i^* > q^+$ ), she does not view the fact-checking. Indeed, if  $q_i^* < q^- < q < q^+$  she knows that either with or without viewing she would always share; therefore it makes no sense to pay a non-trivial cost of viewing. Similarly, if  $q_i^* > q^+ > q > q^-$ , then she knows that she would never share — so no need to view.

For those with intermediate propensity to share  $q_i^* \in (q^-, q^+)$ , the incentives to view the fact-checking depend on the cost of viewing  $c$  as characterized in Proposition 1.<sup>28</sup>

**Proposition 1.** *Individual  $i$  views the fact-checking if and only if  $q_i^* \in (\underline{q}_i, \bar{q}_i)$ , where  $\underline{q}_i = \min \left\{ q, q^- + \frac{c}{p\Delta V_i} \right\}$  and  $\bar{q}_i = \max \left\{ q, q^+ - \frac{c}{(1-p)\Delta V_i} \right\}$ .*

For the sake of simplicity let us now consider the case where  $\Delta V_i = \Delta V$  for all  $i$ . In this case, there is no variation in the slope of the value function  $\Delta V_i$ , so that variations in  $q_i^*$  are driven by variations in the intercept  $V_i^0$ ; the range  $(\underline{q}_i, \bar{q}_i)$  is the same for all  $i$ . We maintain this assumption below and denote this range  $(\underline{q}, \bar{q})$ .

Proposition 1 allows us to compare the average ex ante propensity to share of those who decide to view (Viewers) and those who do not (Nonviewers). The probability that a Nonviewer shares is given by  $\frac{F(q)}{F(q)+(1-F(\bar{q}))}$ , while for a Viewer the probability of sharing is  $\frac{F(q)-F(\underline{q})}{F(\bar{q})-F(\underline{q})}$ .

Nonviewers are made up of two distinct groups: those who do not view because they never share or almost never share (very low ex ante propensity), and those that do not view because they share always or almost always (very high ex ante propensity). Whether the average sharing among Nonviewers is higher than among Viewers depends on the relative size of the two groups.

---

<sup>28</sup> In Figure F1 the value of viewing (gross of viewing cost  $c$ )  $pu(q^-, q_i^*) + (1 - p)u(q^+, q_i^*)$  is represented by the dotted line, which is the average between the zero payoff of not sharing if the report is  $q^-$  and the positive payoff if the report is  $q^+$ . The intuition is that the indirect utility of sharing (the solid line in Figure F1) is weakly convex. So the individual receive a strictly positive gain from viewing whenever  $q^- < q_i^* < q^+$ . Indeed, in this case, viewing represents a lottery ( $q^-$  with probability  $p$  and  $q^+$  with probability  $1 - p$ ) while not viewing is a certain outcome  $q = pq^- + (1 - p)q^+$  (see (1)). If  $q_i^* < q^-$  or  $q_i^* > q^+$  then the individual faces a linear part of the indirect utility function. In this case, gain from viewing is precisely zero; as there is a non-trivial cost  $c > 0$ , she never views.

**Proposition 2.** *Viewers have a higher ex ante propensity to share than Nonviewers if and only if*

$$\frac{F(\underline{q})}{1 - F(\bar{q})} < \frac{F(q)}{1 - F(q)}. \quad (3)$$

There are two key parameters in (3): the distribution  $F(\cdot)$  of propensity to share and the design of the fact-checking technology, that determines  $q^-$  and  $q^+$ , and thus ultimately  $\underline{q}$  and  $\bar{q}$ . Condition (3) is more likely to be satisfied if the fact-checking technology tends to disprove statements, i.e.,  $q^-$  or/and  $q^+$  low, if the distribution of propensity to share has a large mass at 1 (i.e.  $1 - F(\bar{q}) \simeq 1 - F(q)$ ) or if the prior  $q$  is high.

Let us first consider the distribution function  $F(q)$ . A large mass at  $q = 1$  implies that there are many individuals who would never share (53% of our sample report never sharing or sharing seldom). The fact-checking technology is also important. For example, condition (3) is more likely to be satisfied when both ex post signals  $q^-$  and  $q^+$  are low (which is the case when there is a high chance of getting message  $q^+$ , see (1)). This is the case where fact-checking either produces a conclusive signal that the information is false ( $q^-$  is close to zero) or an inconclusive signal stating that no evidence was found to disprove it ( $q^+$  is substantially below 1).<sup>29</sup> The individuals who benefit from such a technology are those who are likely to share and would only choose not to share if they received a signal that showed without doubt that the state was low. Thus, when fact-checking produces such signals, high propensity sharers are induced to view.

### Sharing fact-checking.

In this subsection, we extend the model adding an opportunity for the Viewers to share fact-checking as well. We denote the payoff of sharing fact-checking  $V_i^{s,FC}$ . The value of sharing fact-checking when the news is true is smaller than when it is false  $V_i^{1,FC} < 0 < V_i^{0,FC}$ . We also denote  $\Delta V_i^{FC} = V_i^{0,FC} - V_i^{1,FC} \geq 0$ .

This is the mirror case of sharing alt-facts. Individual  $i$  shares the fact-checking if and only if the belief that the news is true is low enough. Specifically, individual  $i$  shares if and only if  $q$  is lower than an individual specific threshold  $q_{i,FC}^*$ . We assume that  $q_{i,FC}^*$  is drawn from a distribution  $G(\cdot)$  with support on  $[0, 1]$ . We further assume that the draw of  $q_i^*$ , that determines the sharing of alt-facts, and the draw of  $q_{i,FC}^*$ , that determines the sharing of fact-checking are independent. The model can easily be extended to the case where the draws are correlated (capturing for instance the idea that some individuals have a general taste for sharing), at the cost of notational complexity.

The (additional) indirect utility from sharing fact-checking is given by

$$u_i^{FC}(q, q_{i,FC}^*) = \max\{0, (q_{i,FC}^* - q)\Delta V_i^{FC}\}. \quad (4)$$

---

<sup>29</sup>This is a good approximation of how fact-checking works in reality: fact checkers either succeed (and produce report  $q^- = 0$ ) or fail to disprove the original statement (and produce an inconclusive report).

However, opportunity to share fact-checking influences the viewing decision in a different way. The reason is that without viewing there is no possibility to share the fact-checking (whereas sharing alt-facts was always a possibility). Viewing thus provides an additional expected benefit due to the possibility to share the fact-checking. This benefit is given by:

$$B^{FC}(q_{i,FC}^*) = pu^{FC}(q^-, q_{i,FC}^*) + (1-p)u^{FC}(q^+, q_{i,FC}^*) \geq 0 \quad (5)$$

This additional benefit is increasing in  $q_i^{*,FC}$ , so that on average, those who view have a higher ex ante propensity to share fact-checking. For the viewing decision this acts as a shifter of costs, so that Proposition 2 naturally extends to the following result:

**Proposition 3.** *Viewers have a higher ex ante propensity to share fact-checking. Furthermore, individual  $i$  views the fact-checking if and only if  $q_i^* \in (\underline{q}_i, \bar{q}_i)$ , where  $\underline{q}_i = \min \left\{ q, q^- + \frac{c-B^{FC}(q_{i,FC}^*)}{p\Delta V_i} \right\}$  and  $\bar{q}_i = \max \left\{ q, q^+ - \frac{c-B^{FC}(q_{i,FC}^*)}{(1-p)\Delta V_i} \right\}$ .*

Overall, the model shows that viewers have a higher propensity to share fact-checking. They also have a higher propensity to share alt-facts under conditions specified in Proposition 2, conditions that appear reasonable in our empirical setting.

## F.2 Formalization of sharing motives

Here we present different interpretations of the value of sharing  $V_i^0$  and  $V_i^1$ :

- If individual  $i$  shares to influence, she knows that if the state is  $s = 0$ , the news is less likely to influence the recipients, who could for instance receive fact-checking from other sources. It is thus natural to have  $V_i^1 > V_i^0$ . Sharing false news might even backfire, implying  $V_i^0 < 0$ .
- If individual  $i$  has image concerns, she might care about inferences others make when she shares news that turns out to be false, inferences about either her motives or her judgment. Denote  $-R$  the negative reputation obtained if  $i$  has shared fake news. Then  $V_i^0 = V_i^1 - \mu_i R$ , where  $\mu_i$  measures the strength of image concerns.
- If individual  $i$  faces moral costs of sharing content she believe has some chance of being false (something we discuss more in depth in the next section), the belief  $q$  will matter. Specifically we assume that sharing provides a payoff  $V$  and has an individual specific cost  $c_m^i(1-q)$  where  $c_m^i$  is the moral cost of sharing and  $(1-q)$  is the belief that the state is wrong. This is exactly the model above with  $V_0^i = V - c_m^i$  and  $V_1^i = V$ .

### F.3 Proofs

#### Proof of Proposition 1

If  $q_i^* < q^-$ , even if the individual receives the low report  $q^-$ , she would still share, so there is no value of checking. Similarly for  $q_i^* > q^+$ ,  $i$  never shares, so there is no value in checking. This proves the first part of the proposition.

We now turn to the second part.

Suppose  $q^- \leq q_i^* < q$ , so that without checking, the individual shares and gets value

$$u_{nc} = (q - q_i^*)\Delta V_i$$

If she checks, she does not share when she receives  $q^-$  (with probability  $p$ ) and shares when receiving  $q^+$  (happens with probability  $1 - p$ ).

$$u_c = (1 - p)(q^+ - q_i^*)\Delta V_i - c$$

Thus the net value of checking is

$$\Delta V_i [(1 - p)q^+ - q + pq_i^*] - c$$

If  $\Delta V_i$  is constant,  $i$  checks if

$$q_i^* \geq \frac{q - (1 - p)q^+}{p} + \frac{c}{p\Delta V} = q^- + \frac{c}{p\Delta V}$$

Similarly, if  $q_i^* > q$ , the net value of checking is

$$\Delta V_i [(1 - p)(q^+ - q_i^*)] - c$$

If  $\Delta V_i$  is constant,  $i$  checks if

$$q_i^* \leq q^+ - \frac{c}{(1 - p)\Delta V}$$

## Proof of Proposition 2

A direct consequence of Proposition 1 is that the probability that a non-checker shares is given by  $\frac{F(\underline{q})}{F(\underline{q})+(1-F(\bar{q}))}$ , while for a checker it is given by  $\frac{F(\underline{q})-F(\bar{q})}{F(\bar{q})-F(\underline{q})}$ . The condition can be expressed as:

$$\frac{F(\underline{q})}{1-F(\bar{q})} < \frac{F(\underline{q})}{1-F(\underline{q})} \quad (6)$$

The left hand side is increasing in  $\underline{q}$  and  $\bar{q}$  while the right hand side is increasing in  $\underline{q}$ , implying the comparative statics in Proposition 2.