

Online Appendix

Moralizing the COVID-19 Pandemic: Self-Interest Predicts Moral Condemnation of Other's Compliance, Distancing and Vaccination

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A Study 1 Question Wordings

Outcomes: Condemn

To what extent do you agree with the following statements? “It is completely justified to condemn those who do not keep a distance to others in public.”

[Completely agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, Completely disagree]

Outcomes: Blame

In your opinion, why did the corona crisis become so severe? Please select all that applies. “Because lay individuals did not take the virus seriously enough.”

[Yes / No]

Concern about COVID-19

To what degree are you concerned about the consequences of the coronavirus ...

1. ... *for you and your family?*
2. ... *for hospitals' ability to help the sick?*
3. ... for society's ability to help the disadvantaged?
4. ... on social unrest and crime?
5. ... on the country's economy?

[To a high degree, To a certain degree, To a lesser degree, Not at all]

Note that the first two items in *italics* form the personal concern scale, whereas the other three items form the social concern scale.

Changing behavior

To what degree do you feel that the current situation with the Corona virus has made you change your behavior to avoid spreading infection?

[To a high degree, To a certain degree, To a lesser degree, Not at all]

Institutional trust

Give your assessment on a scale from 0 to 10, where 0 indicates that you have no confidence in the government at all and 10 indicates that you have full confidence in the government.

[0 - No confidence at all ... 10 - Full confidence]

Social trust

Do you think that most people by and large are to be trusted or that you cannot be too careful when it comes to other people?

[0 - You cannot be too careful . . . 10 - Most people are to be trusted]

B Study 1 Descriptive Statistics

B.1 Macro-Level Statistical Indicators

Table OA1: Country Level Macro Statistics Reflecting Considerable Variability in Our Case Selection

	Denmark	France	Germany	Hungary	Italy	Sweden	UK	USA
Stringency (Apr 7)	72	88	77	77	92	65	80	73
Stringency (Nov 9)	40	79	59	57	67	56	75	63
Deaths (Apr 7)	2.4	13.4	2.3	1.0	9.7	8.7	13.7	5.3
Deaths (Nov 9)	0.6	7.6	1.5	9.1	6.4	2.1	5.1	2.9
GDP	\$60K	\$49K	\$56K	\$34K	\$44K	\$56K	\$49K	\$65K
Welfare state (%GDP)	28	31.2	25.1	19.4	27.9	26.1	20.6	18.7
Ethnic fraction.	0.08	0.10	0.17	0.15	0.11	0.06	0.12	0.49
FH Dem-cy Score	97	90	94	70	89	100	94	86

Notes: 1) Stringency: Oxford COVID-19 Government Response Tracker, Blavatnik School of Government. 0-100 scale, higher number indicate more restrictive COVID-19 policies 2) Deaths: 7-day rolling average of COVID-19 related deaths per million citizens via European Centre for Disease Prevention and Control. 3) GDP: World Bank’s estimates of per capita Gross Domestic Product at purchasing power parity (2019). 4) Welfare state: Social expenditure as percentage of GDP from OECD. 5) Ethnic fractionalization: an index developed by Alberto Alesina; et. al (2003). J of Econ Growth 8, 155–194. The numbers reflect the probability that two randomly drawn individuals from a country are not from the same group 6) Freedom House’s Democracy Scores: Freedom in the world 2020 report. Aggregate scores reflecting both political rights and civil liberties: 0 = least free, 100 = most free

B.2 Sample sizes and dates by waves and countries

Table OA2: Sample sizes and dates by Survey Waves and Country

Wave	Median date	Denmark	France	Germany	Hungary	Italy	Sweden	UK	USA
1	2020-04-10	556	505	493	473	513	493	485	493
2	2020-04-13	564	492	503	494	494	489	484	495
3	2020-04-17	544	505	512	478	497	477	488	498
4	2020-04-20	545	500	482	523	520	505	512	493
5	2020-04-24	511	494	488	482	500	479	493	485
6	2020-04-27	501	0	0	0	0	0	0	0
7	2020-04-30	508	504	550	530	509	483	531	488
8	2020-05-04	498	0	0	0	0	0	0	0
9	2020-05-06	373	501	505	527	489	484	510	487
10	2020-05-11	646	0	0	0	0	0	0	0
11	2020-05-14	529	509	515	528	504	491	517	492
12	2020-05-18	524	0	0	0	0	0	0	0
13	2020-05-21	466	505	533	523	498	485	517	497
14	2020-05-26	498	0	0	0	0	0	0	0
15	2020-05-28	516	503	525	519	513	495	509	493
16	2020-06-01	510	0	0	0	0	0	0	0
17	2020-06-04	517	494	506	500	516	485	483	492
18	2020-06-09	505	0	0	0	0	0	0	0
19	2020-06-11	513	516	502	497	510	499	494	503
20	2020-06-17	501	504	503	498	510	478	488	495
21	2020-06-24	499	493	514	492	513	495	486	493
22	2020-06-30	503	0	0	0	0	0	0	0
23	2020-07-08	511	495	513	474	508	493	482	478
24	2020-07-15	506	0	0	0	0	0	0	0
25	2020-07-22	518	509	506	516	509	504	488	511
26	2020-08-05	488	500	513	521	494	504	495	505
27	2020-08-19	519	491	512	513	497	505	491	510
28	2020-09-02	513	504	505	518	509	500	495	508
29	2020-09-16	519	0	0	0	0	0	0	0
30	2020-09-23	0	508	513	517	524	517	498	518
31	2020-09-29	513	0	0	0	0	0	0	0
32	2020-10-14	508	510	507	508	503	498	489	501
33	2020-10-28	508	0	0	0	0	0	0	0
34	2020-11-04	0	510	514	510	529	499	505	493

B.3 Sample Demographics with and without Weighting

Table OA3: Sample Characteristics by Country Group

variable	Denmark	France	Germany	Hungary	Italy	Sweden	UK	USA
Age	48 (19)	46 (15)	48 (15)	45 (15)	42 (13)	47 (16)	42 (14)	41 (14)
Age – weighted	49 (18)	48 (16)	49 (16)	47 (15)	47 (14)	48 (17)	46 (15)	45 (15)
Female	0.5 (0.5)	0.52 (0.5)	0.51 (0.5)	0.52 (0.5)	0.52 (0.5)	0.5 (0.5)	0.52 (0.5)	0.53 (0.5)
Female – weighted	0.51 (0.5)	0.52 (0.5)	0.51 (0.5)	0.53 (0.5)	0.52 (0.5)	0.5 (0.5)	0.51 (0.5)	0.51 (0.5)
Higher education	0.55 (0.5)	0.45 (0.5)	0.41 (0.49)	0.37 (0.48)	0.35 (0.48)	0.4 (0.49)	0.48 (0.5)	0.7 (0.46)
Higher education – weighted	0.33 (0.47)	0.33 (0.47)	0.29 (0.45)	0.26 (0.44)	0.17 (0.38)	0.37 (0.48)	0.39 (0.49)	0.58 (0.49)
Left	0.51 (0.5)	0.39 (0.49)	0.36 (0.48)	0.2 (0.4)	0.18 (0.38)	0.36 (0.48)	0.44 (0.5)	0.33 (0.47)
Left – weighted	0.45 (0.5)	0.35 (0.48)	0.32 (0.47)	0.16 (0.37)	0.19 (0.39)	0.33 (0.47)	0.4 (0.49)	0.35 (0.48)
Right	0.36 (0.48)	0.28 (0.45)	0.35 (0.48)	0.35 (0.48)	0.52 (0.5)	0.43 (0.5)	0.34 (0.47)	0.32 (0.47)
Right – weighted	0.41 (0.49)	0.32 (0.47)	0.43 (0.5)	0.4 (0.49)	0.5 (0.5)	0.47 (0.5)	0.36 (0.48)	0.33 (0.47)
Abstain	0.13 (0.34)	0.34 (0.47)	0.29 (0.45)	0.46 (0.5)	0.3 (0.46)	0.21 (0.41)	0.22 (0.42)	0.34 (0.48)
Abstain – weighted	0.13 (0.34)	0.33 (0.47)	0.25 (0.43)	0.44 (0.5)	0.31 (0.46)	0.2 (0.4)	0.24 (0.43)	0.32 (0.47)
N	16,430	11,052	11,214	11,141	11,159	10,858	10,940	10,928

C Study 1 Supplementary Results

C.1 Full Model Details

Tables OA4 and OA5 report full details for the seven multilevel models in the step-wise regression-building procedures. In both tables, model 7 denotes the final model constituting the basis of Figures 2 and 3 in the main text.

Table OA4: Individual Level Correlates of Condemning Norm-breakers

	<i>Dependent variable:</i>						
	Condemning norm-breakers					Pooled model	Varying slopes
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Age	0.1 (0.002)	0.1 (0.002)	0.1 (0.002)	0.1 (0.002)	0.1 (0.002)	0.1 (0.002)	0.1 (0.002)
Female	-0.001 (0.002)	0.003 (0.002)	-0.001 (0.002)	0.01 (0.002)	0.01 (0.002)	-0.01 (0.002)	-0.01 (0.002)
Higher ed.	-0.001 (0.002)	-0.003 (0.002)	-0.01 (0.002)	-0.01 (0.002)	-0.000 (0.002)	-0.001 (0.002)	-0.002 (0.002)
Party:Left	0.03 (0.002)	0.03 (0.002)	0.02 (0.002)	0.02 (0.002)	0.04 (0.002)	0.02 (0.002)	0.01 (0.002)
Party:Right	0.03 (0.002)	0.02 (0.002)	0.02 (0.002)	0.02 (0.002)	0.03 (0.002)	0.02 (0.002)	0.02 (0.002)
Pers.conc.	0.2 (0.002)					0.1 (0.002)	0.1 (0.01)
Soc.conc		0.1 (0.002)				0.005 (0.002)	0.01 (0.01)
Beh.change			0.1 (0.002)			0.1 (0.002)	0.1 (0.01)
Inst. trst				0.1 (0.002)		0.1 (0.002)	0.1 (0.02)
Soc. trst					-0.1 (0.002)	-0.1 (0.002)	-0.1 (0.01)
Constant	0.7 (0.02)	0.7 (0.02)	0.7 (0.02)	0.7 (0.02)	0.7 (0.02)	0.7 (0.02)	0.7 (0.02)
Observations	91,464	91,464	91,464	91,464	91,464	91,464	91,464
Akaike Inf. Crit.	32,854.0	37,218.0	33,450.9	38,436.4	38,177.1	27,664.7	26,079.5

Table OA5: Individual Level Correlates of Blaming Regular People

<i>Dependent variable:</i>							
Blaming laypeople for pandemic							
	(1)	(2)	(3)	(4)	(5)	Pooled model (6)	Varying slopes (7)
Age	0.02 (0.003)	0.01 (0.003)	0.01 (0.003)	0.01 (0.003)	0.01 (0.003)	0.01 (0.003)	0.01 (0.003)
Female	0.02 (0.003)	0.02 (0.003)	0.02 (0.003)	0.03 (0.003)	0.02 (0.003)	0.001 (0.003)	0.000 (0.003)
Higher ed.	0.01 (0.003)	0.01 (0.004)	-0.002 (0.003)	0.01 (0.004)	0.02 (0.004)	0.01 (0.003)	0.01 (0.003)
Party:Left	0.03 (0.004)	0.03 (0.004)	0.02 (0.004)	0.03 (0.004)	0.05 (0.004)	0.02 (0.004)	0.02 (0.004)
Party:Right	-0.02 (0.004)	-0.02 (0.004)	-0.02 (0.004)	-0.02 (0.004)	-0.01 (0.004)	-0.02 (0.004)	-0.02 (0.004)
Pers.conc.	0.1 (0.003)					0.1 (0.004)	0.1 (0.01)
Soc.conc		0.1 (0.003)				0.000 (0.004)	0.004 (0.01)
Beh.change			0.1 (0.003)			0.1 (0.004)	0.1 (0.01)
Inst. trst				0.03 (0.003)		0.1 (0.004)	0.05 (0.03)
Soc. trst					-0.1 (0.003)	-0.1 (0.004)	-0.1 (0.02)
Constant	0.4 (0.03)	0.4 (0.03)	0.5 (0.02)	0.4 (0.03)	0.4 (0.03)	0.5 (0.03)	0.5 (0.03)
Observations	93,166	93,166	93,166	93,166	93,166	93,166	93,166
Akaike Inf. Crit.	146,493.1	147,671.8	146,717.5	148,280.2	147,150.6	144,648.4	143,879.5

Tables OA6 and OA7 report full model details for two-way fixed effects regression models, regressing condemning norm breakers and blaming laypeople, respectively, on psychological predictors. Table OA8 in turn reports the average (SD) and maximum (Max) change in the residualised predictors, that is, zooming in on within-individual differences over and above broad national changes and how much these independent variables vary. The table then reports the effect size estimates scaled to these average or maximum within-individual changes.

Table OA6: Two-way Fixed Effects Models on Condemning Norm-breakers

<i>Dependent variable:</i>						
Condemning norm-breakers						
	(1)	(2)	(3)	(4)	(5)	(6)
Beh.change	0.03*** (0.004)					0.02*** (0.004)
Pers.conc.		0.04*** (0.004)				0.04*** (0.004)
Soc.conc			0.02*** (0.004)			0.01* (0.004)
Inst. trst				0.02** (0.01)		0.02*** (0.01)
Soc. trst					-0.02*** (0.004)	-0.03*** (0.004)
Observations	39,225	39,225	39,225	39,225	39,225	39,225
Adjusted R ²	0.57	0.57	0.57	0.57	0.57	0.57

Note:

*p<0.05; **p<0.01; ***p<0.001

Table OA7: Two-way Fixed Effects Models on Blaming Laypeople

	<i>Dependent variable:</i>					
	Blaming laypeople					
	(1)	(2)	(3)	(4)	(5)	(6)
Beh.change	0.03*** (0.01)					0.03*** (0.01)
Pers.conc.		0.05*** (0.01)				0.03*** (0.01)
Soc.conc			0.03*** (0.01)			0.02* (0.01)
Inst. trst				-0.002 (0.01)		0.01 (0.01)
Soc. trst					-0.03*** (0.01)	-0.03** (0.01)
Observations	39,907	39,907	39,907	39,907	39,907	39,907
Adjusted R ²	0.37	0.37	0.37	0.37	0.37	0.37

Note:

*p<0.05; **p<0.01; ***p<0.001

Table OA8: Scaled Two-way Fixed Effects Effect Size Estimates

Variable	SD	Max	Condemn average	Condemn max	Blame average	Blame max
Beh.change	0.26	1.49	0.05	0.30	0.06	0.33
Pers.conc.	0.23	1.75	0.07	0.51	0.07	0.55
Soc.conc	0.24	1.89	0.04	0.32	0.06	0.43
Inst. trst	0.16	1.30	0.02	0.16	0	-0.02
Soc. trst	0.22	1.45	-0.04	-0.25	-0.05	-0.31

C.2 Additional Analyses

C.2.1 Main Results without Weights

Table OA9 demonstrates that adding post-stratification weights to correct for sampling bias does not drive any of our results. Models 1 and 3 reproduce our main results from varying slopes models using the pooled sample. Meanwhile, models 2 and 4 report the same models but omit post-stratification weights. Across models 1-2 and 3-4, the partial regression coefficients are almost identical.

Table OA9: Rerunning Main Multilevel Regression Models without Weights

	<i>Dependent variable:</i>			
	Condemning norm-breakers		Blaming laypeople	
	Weights	No weights	Weights	No weights
	(1)	(2)	(3)	(4)
Age	0.1 (0.002)	0.1 (0.002)	0.01 (0.003)	0.001 (0.003)
Female	-0.01 (0.002)	-0.01 (0.002)	0.000 (0.003)	0.01 (0.003)
Higher ed.	-0.002 (0.002)	-0.003 (0.002)	0.01 (0.003)	0.01 (0.003)
Party:Left	0.01 (0.002)	0.02 (0.002)	0.02 (0.004)	0.02 (0.004)
Party:Right	0.02 (0.002)	0.02 (0.002)	-0.02 (0.004)	-0.02 (0.004)
Pers.conc.	0.1 (0.01)	0.1 (0.01)	0.1 (0.01)	0.1 (0.01)
Soc.conc	0.01 (0.01)	0.004 (0.01)	0.004 (0.01)	-0.002 (0.01)
Beh.change	0.1 (0.01)	0.1 (0.01)	0.1 (0.01)	0.1 (0.01)
Inst. trst	0.1 (0.02)	0.1 (0.02)	0.05 (0.03)	0.05 (0.03)
Soc. trst	-0.1 (0.01)	-0.1 (0.02)	-0.1 (0.02)	-0.1 (0.02)
Constant	0.7 (0.02)	0.7 (0.02)	0.5 (0.03)	0.5 (0.03)
Observations	91,464	91,464	93,166	93,166
Akaike Inf. Crit.	26,079.5	11,760.7	143,879.5	128,248.4

C.2.2 Lumping “concern about hospitals” item with social concern items

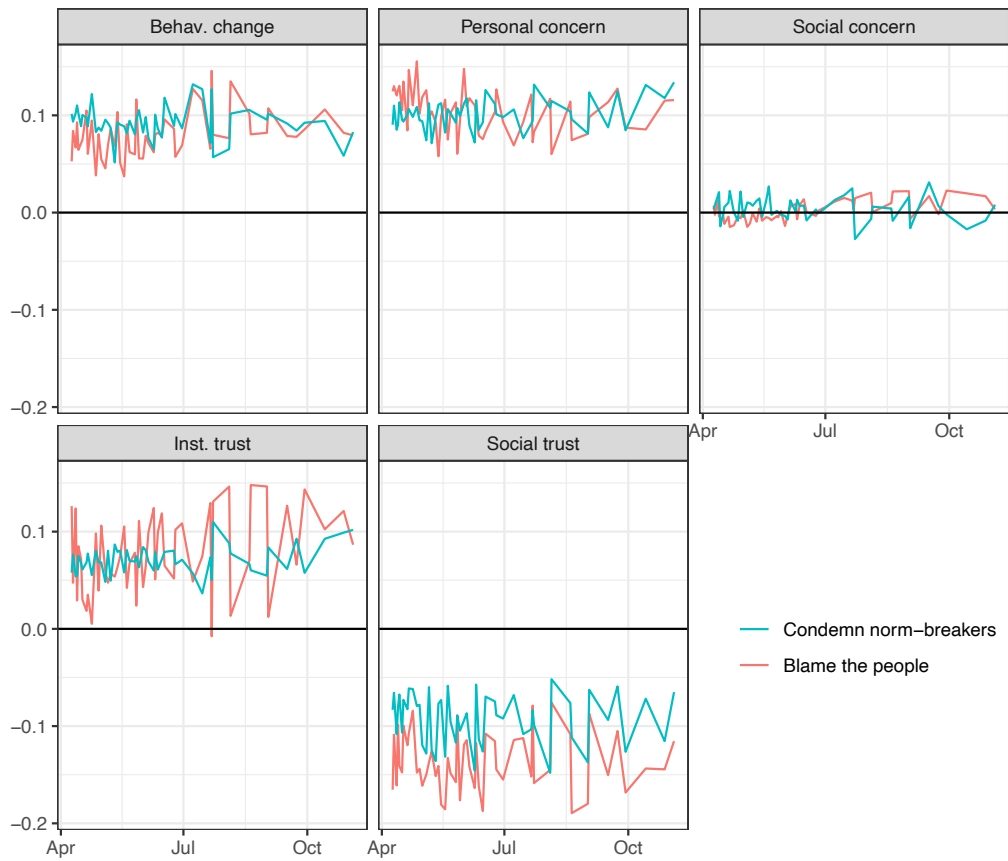
Table OA10 demonstrates that our main theoretical finding – that personal concerns matter more than social concerns for moralization – hold even if we lump the item about “hospitals’ ability to help the sick” with the other 3 social concern items. Columns 1 and 3 report the original estimates, columns 2 and 4 report the estimates with hospitalizations lumped with social concern. Although the estimates for social concern are no longer so close to 0, they remain 1.5-2 times smaller than the estimates for personal concern.

Table OA10: Re-running main models with alternative split of concern items

	<i>Dependent variable:</i>			
	Condemning norm-breakers		Blame ppl	
	Original	Alternative	Original	Alternative
	(1)	(2)	(3)	(4)
Personal concern	0.11 (0.01)		0.09 (0.01)	
Social concern	0.01 (0.01)		0.004 (0.01)	
Personal concern		0.08 (0.01)		0.06 (0.01)
Social concern		0.04 (0.01)		0.04 (0.01)
Observations	91,464	91,464	93,166	93,166
Akaike Inf. Crit.	26,079.54	26,169.60	143,879.50	143,949.90

C.2.3 Temporal Dynamics

Figure OA1: We find no meaningful time trends in the relationship btw the outcomes and the psychological predictors



C.2.4 Two-way fixed effects robustness checks

Table OA11: Robustness test for parallel trends assumption in 2FE models

	<i>Dependent variable:</i>					
	Main	Moralize		Main	Blaming laypeople	
		Lead IV	Unit-spec time		Lead IV	Unit-spec time
	(1)	(2)	(3)	(4)	(5)	(6)
Beh.change	0.02*** (0.004)	0.02*** (0.01)	0.02*** (0.01)	0.03*** (0.01)	0.02 (0.01)	0.02 (0.01)
Pers.conc.	0.04*** (0.004)	0.04*** (0.01)	0.03*** (0.01)	0.03*** (0.01)	0.03 (0.02)	0.06*** (0.01)
Soc.conc.	0.01* (0.004)	0.01 (0.01)	0.01 (0.01)	0.02* (0.01)	0.01 (0.02)	-0.02 (0.01)
Inst. trst	0.02*** (0.01)	0.03** (0.01)	0.01 (0.01)	0.01 (0.01)	-0.03 (0.02)	0.03 (0.02)
Soc. trst	-0.03*** (0.004)	-0.02*** (0.01)	-0.02** (0.01)	-0.03** (0.01)	-0.04* (0.02)	-0.03* (0.02)
Beh.change (lead)		0.01 (0.01)			0.01 (0.01)	
Pers.conc.(lead)		0.01 (0.01)			-0.01 (0.02)	
Soc.conc. (lead)		0.01 (0.01)			0.05** (0.02)	
Inst. trst (lead)		0.01 (0.01)			-0.03 (0.02)	
Soc. trst (lead)		-0.01 (0.01)			0.01 (0.02)	
Leaded Independent variables		✓			✓	
Unit-specific time trends			✓			✓
Observations	39,225	15,625	39,225	39,907	15,874	39,907
Adjusted R ²	0.57	0.60	0.60	0.37	0.38	0.40

Note:

*p<0.05; **p<0.01; ***p<0.001

D Study 2 Supplementary Results

D.1 Sample Demographics with and without Weighting

	Unweighted	Weighted
Female	0.52	0.52
Age		
18-24	0.11	0.11
25-39	0.26	0.25
40-49	0.16	0.16
50-65	0.24	0.24
65+	0.23	0.23
Education		
Low	0.56	0.57
High	0.40	0.39
NA	0.04	0.04
Party		
Conservative	0.32	0.32
Labour	0.30	0.29
Liberal Democrat	0.12	0.12
SNP	0.04	0.04
Plaid Cymru	0.00	0.00
Brexit Party	0.02	0.02
Green	0.03	0.03
Other	0.04	0.04
NA	0.15	0.16

D.2 Full Model Details

	Moralize vaccination	Moralize compliance	Condemn (non)vaccination	Condemn (non)compliance
Personal concerns	0.28*** (0.03)	0.35*** (0.02)	0.41*** (0.03)	0.47*** (0.03)
Social concerns	-0.03 (0.04)	-0.02 (0.03)	0.01 (0.04)	-0.06 (0.04)
Behavior change	0.21*** (0.03)	0.28*** (0.02)	0.14*** (0.03)	0.25*** (0.03)
Institutional trust	0.16*** (0.02)	0.13*** (0.02)	0.21*** (0.03)	0.19*** (0.02)
Social trust	-0.00 (0.03)	-0.02 (0.02)	-0.07** (0.03)	-0.09*** (0.02)
Male	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Female	-0.07*** (0.01)	-0.00 (0.01)	-0.07*** (0.01)	-0.04*** (0.01)
Age: 18-24	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Age: 25-39	-0.07*** (0.02)	-0.04* (0.02)	-0.08** (0.03)	-0.03 (0.02)
Age: 40-49	-0.06** (0.02)	-0.03 (0.02)	-0.08** (0.03)	-0.04 (0.02)
Age: 50-65	-0.04 (0.02)	-0.02 (0.02)	-0.06* (0.03)	-0.03 (0.02)
Age: 66+	0.03 (0.02)	0.01 (0.02)	0.02 (0.03)	0.01 (0.02)
Education: Low	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Education: High	0.02 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)
Education: Don't know	0.03 (0.03)	-0.04 (0.02)	0.05 (0.03)	-0.02 (0.03)
Conservatives	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Labour	0.03 (0.02)	0.05*** (0.01)	0.05* (0.02)	0.04* (0.02)

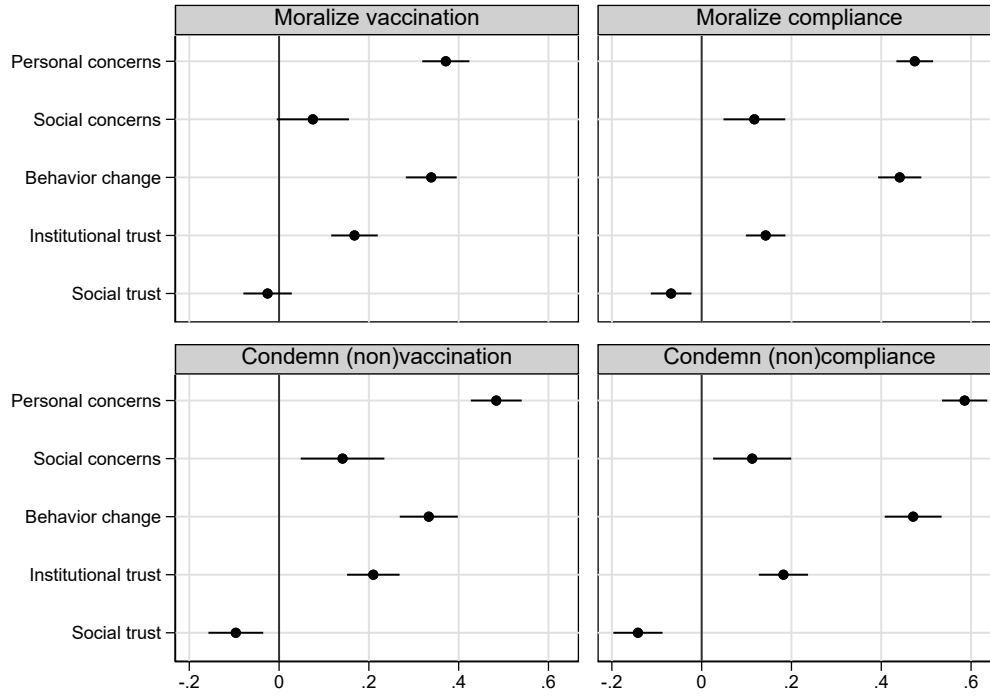
Liberal Democrats	0.06** (0.02)	0.07*** (0.01)	0.07** (0.02)	0.05* (0.02)
SNP	0.03 (0.03)	0.06** (0.02)	0.05 (0.04)	0.03 (0.03)
Plaid Cymru	0.13 (0.13)	0.12* (0.06)	0.21 (0.11)	0.18 (0.10)
Brexit Party	0.03 (0.05)	0.06 (0.04)	0.08 (0.06)	0.07 (0.05)
Green	0.07 (0.04)	0.06** (0.02)	0.06 (0.04)	0.05 (0.03)
Other	-0.01 (0.03)	0.03 (0.02)	0.01 (0.03)	-0.00 (0.03)
Don't know	0.00 (0.02)	0.03* (0.01)	0.02 (0.02)	0.01 (0.02)
Constant	0.29*** (0.04)	0.27*** (0.03)	0.21*** (0.05)	0.23*** (0.04)
N	1532	1532	1532	1532
adj. R^2	0.242	0.481	0.262	0.411

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

D.3 Regressing the outcomes on the five predictors one-by-one

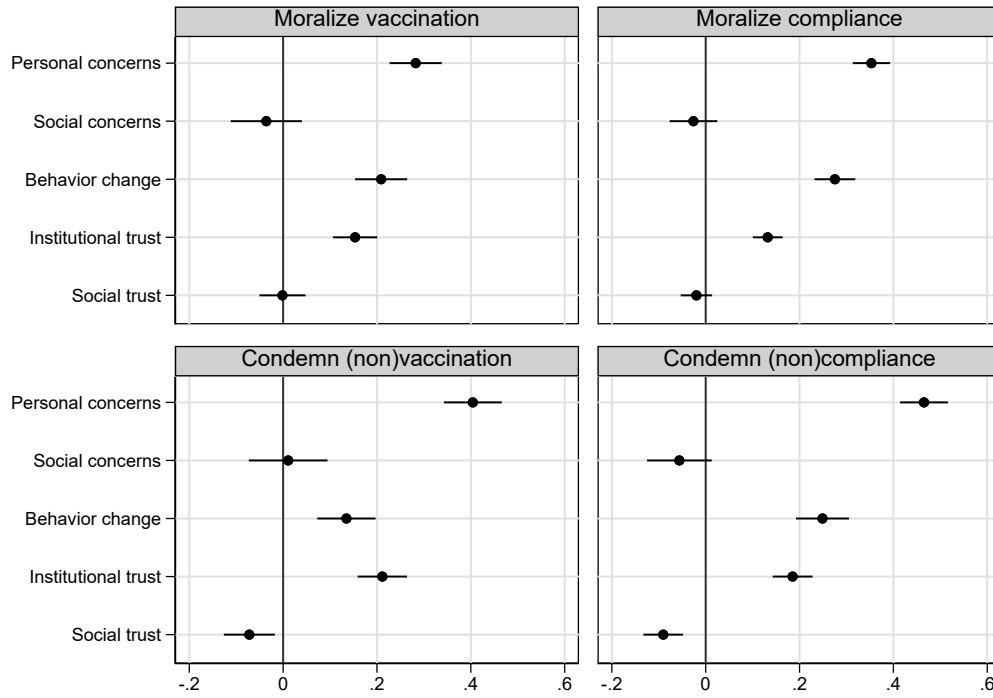
Figure OA2: Study 2 results replicate when we factor in each of the main correlates subsequently



Note: Black filled circles are unstandardized regression coefficients. Error bars denote 95% confidence intervals.

D.4 Main Results without Weights

Figure OA3: Study 2 results replicate when we exclude the post-stratification weights



Note: Black filled circles are unstandardized regression coefficients. Error bars denote 95% confidence intervals.

D.5 Excluding participants with missing data on vote and education

	Moralize vaccination	Moralize compliance	Condemn (non)vaccination	Condemn (non)compliance
Personal concerns	0.26*** (0.03)	0.33*** (0.02)	0.37*** (0.04)	0.42*** (0.03)
Social concerns	-0.05 (0.04)	-0.06* (0.03)	0.03 (0.05)	-0.06 (0.04)
Behavior change	0.21*** (0.03)	0.28*** (0.03)	0.14*** (0.04)	0.27*** (0.03)
Institutional trust	0.17*** (0.03)	0.14*** (0.02)	0.21*** (0.03)	0.20*** (0.02)
Social trust	-0.02 (0.03)	-0.03 (0.02)	-0.11*** (0.03)	-0.10*** (0.02)
Male	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Female	-0.06*** (0.01)	-0.01 (0.01)	-0.07*** (0.01)	-0.04*** (0.01)
Age: 18-24	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Age: 25-39	-0.05 (0.03)	-0.04* (0.02)	-0.07* (0.03)	-0.03 (0.03)
Age: 40-49	-0.04 (0.03)	-0.03 (0.02)	-0.06 (0.03)	-0.04 (0.03)
Age: 50-65	-0.03 (0.03)	-0.02 (0.02)	-0.05 (0.03)	-0.03 (0.03)
Age: 66+	0.05 (0.03)	0.01 (0.02)	0.03 (0.03)	0.00 (0.03)
Education: Low	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Education: High	0.02 (0.01)	0.01 (0.01)	0.01 (0.02)	0.01 (0.01)
Conservatives	0.00 (.)	0.00 (.)	0.00 (.)	0.00 (.)
Labour	0.03 (0.02)	0.05*** (0.01)	0.04* (0.02)	0.04* (0.02)
Liberal Democrats	0.06** (0.02)	0.07*** (0.01)	0.07** (0.02)	0.05* (0.02)

SNP	0.03 (0.04)	0.06** (0.02)	0.04 (0.04)	0.03 (0.03)
Plaid Cymru	0.14 (0.13)	0.13* (0.06)	0.21* (0.11)	0.19* (0.09)
Brexit Party	0.05 (0.05)	0.07 (0.04)	0.10 (0.06)	0.08 (0.05)
Green	0.07 (0.04)	0.06** (0.02)	0.06 (0.04)	0.05 (0.03)
Constant	0.30*** (0.05)	0.30*** (0.03)	0.22*** (0.05)	0.24*** (0.05)
N	1202	1202	1202	1202
adj. R^2	0.224	0.467	0.247	0.400

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

CONFIDENTIAL - FOR PEER-REVIEW ONLY
Moralizing Physical Distancing during the COVID-19 Pandemic (#70070)

Created: 07/07/2021 02:57 AM (PT)

This is an anonymized copy (without author names) of the pre-registration. It was created by the author(s) to use during peer-review. A non-anonymized version (containing author names) should be made available by the authors when the work it supports is made public.

1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

2) What's the main question being asked or hypothesis being tested in this study?

(1) Personal concern is more strongly positively correlated than social concern (a) with moralization of vaccination against COVID-19; (b) with moralization of compliance with guidelines against COVID-19, (c) with condemning (non)vaccination against COVID-19 and (d) with condemning (non)compliance with guidelines against COVID-19.

(2) Retrospective behavior change is positively correlated (a) with moralization of vaccination against COVID-19; (b) with moralization of compliance with guidelines against COVID-19, (c) with condemning (non)vaccination against COVID-19 and (d) with condemning (non)compliance with guidelines against COVID-19.

(3) Institutional trust is positively correlated (a) with moralization of vaccination against COVID-19; (b) with moralization of compliance with guidelines against COVID-19, (c) with condemning (non)vaccination against COVID-19 and (d) with condemning (non)compliance with guidelines against COVID-19.

(4) Social trust is negatively correlated (a) with moralization of vaccination against COVID-19; (b) with moralization of compliance with guidelines against COVID-19, (c) with condemning (non)vaccination against COVID-19 and (d) with condemning (non)compliance with guidelines against COVID-19.

3) Describe the key dependent variable(s) specifying how they will be measured.

We measure 4 dependent variables (measurement specified below) corresponding to our 4 hypotheses. For each of the dependent variables, we average across all items to form indices.

(A) Moralization of vaccination

To what extent do you agree or disagree with the following statements?

- (1) Refusing to take up a coronavirus vaccine is disrespectful.
- (2) Accepting a coronavirus vaccine is a moral virtue.
- (3) Rejecting a coronavirus vaccine is a moral failing.
- (4) Refusing to take up a coronavirus vaccine is a sign of personal weakness.
- (5) Taking or not taking a coronavirus vaccine is NOT a moral issue.
- (6) If a person is allowed to take up a coronavirus vaccine, they should take it.
- (7) Even if it was culturally acceptable to refuse a coronavirus vaccine, it would still be wrong.
- (8) Refusing to take a coronavirus vaccine would be wrong even if refusal had no negative health effects.

(B) Moralization of compliance

To what extent do you agree or disagree with the following statements?

- (1) Complying with the official guidelines regarding COVID-19 decreases suffering in others.
- (2) Following the instructions from the authorities protects others'.
- (3) By taking action against the coronavirus, I can feel good about myself.
- (4) Wearing facemasks in public is morally good.
- (5) Engaging in close physical contact while having flu-like symptoms is morally wrong.
- (6) It is morally wrong to socialize if one has come in close contact with someone infected with coronavirus.
- (7) Refusing to wear a facemask in public is morally wrong.
- (8) Socially isolating with a sore throat and low fever is morally good.

(C) Condemning (non)vaccination

To what extent do you agree or disagree with the following statements?

- (1) It is completely justified to condemn those who do not take up a coronavirus vaccine when offered.
- (2) When I hear about someone refusing to take a coronavirus vaccine, it makes me angry.
- (3) Those who refuse to take a coronavirus vaccine should be punished with a fee.
- (4) It is completely justified for public institutions and private businesses to refuse service to people who refuse getting a COVID-19 vaccine without a good medical reason.

(D) Condemning (non)compliance

To what extent do you agree or disagree with the following statements?

- (1) It is completely justified to condemn those who do not follow the official guidelines when it comes to the corona crisis.
- (2) When I hear about someone violating the health authorities' COVID-19 guidelines, it makes me angry.
- (3) Those who violate the official policies against the coronavirus should be punished with a fee.
- (4) It is completely justified for public institutions and private businesses to refuse service to people who refuse to comply with the health authorities' recommendations regarding COVID-19.

4) How many and which conditions will participants be assigned to?

For hypothesis (1) the independent variables are "personal concerns" and "social concerns". For both we average across all items to form indices.
Personal concerns

To what extent do you agree or disagree with the following statements?

- 1) Thinking about the coronavirus (COVID-19) makes me feel personally threatened.
- 2) I am afraid of catching the coronavirus (COVID-19).
- 3) I am not worried about catching the coronavirus (COVID-19).
- 4) I am worried that I or people I love will get sick from the coronavirus (COVID-19).
- 5) I am stressed around other people because I worry, I'll catch the coronavirus (COVID-19).
- 6) I have tried hard to avoid other people because I don't want to get sick.

Social concerns

To what extent do you agree or disagree with the following statements?

- (a) The pandemic made me concerned about hospitals' ability to help the sick.
- (b) The pandemic made me worry about society's ability to help the disadvantaged.
- (c) The pandemic made me concerned about social unrest and crime.
- (d) I was worried about the state of the British economy throughout the corona crisis.
- (e) The pandemic threatened the rights and freedoms of the British population as a whole.

For hypothesis (2) the independent variable is retrospective behavior change.

To what degree did you change your behaviour to avoid spreading infection throughout the coronavirus (COVID-19) pandemic? [To a high degree, To a certain degree, To a lesser degree, Not at all]

For hypothesis (3) the independent variable is institutional trust

Give your assessment on a scale from 0 to 10, where 0 indicates that you have no confidence in the government at all and 10 indicates that you have full confidence in the government. [0 - No confidence at all . . . 10 - Full confidence]

For hypothesis (4) the independent variable is social trust.

Do you think that most people by and large are to be trusted or that you cannot be too careful when it comes to other people? [0 - You cannot be too careful . . . 10 - Most people are to be trusted]

5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

We will use OLS regression to estimate the association between each of the dependent variables and our four independent variables. Models will include all four independent variables as well as a battery of covariates (sex, age, education, vote choice in the last national first order election). Models will also include post stratification weights that reweights the data to fit the population margins on age, gender, education and region. In these analyses, we scale all continuous variables 0-1, including the dependent and key independent variables. We will compute the unstandardized regression coefficients. We will test the hypotheses that personal concerns are more strongly correlated with our dependent variables than social concerns are by applying F-tests that compare the coefficients of our two key independent variables for each of the dependent variables. For the other three hypotheses we simply test if the coefficient is significantly different from 0 in the expected direction. We will use two-sided tests.

6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

We will retain all respondents who complete the entire survey. We will exclude "do not know" answers.

7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

Sample of United Kingdom residents, age 18+ and N=1500. To obtain the sample, quota-sampling on gender, age, geography and education will be used to achieve a sample that is nationally representative of the population on these dimensions.

8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

We will run robustness tests where instead of adding all four independent variables to a single model, we include them one-by-one, while adjusting for demographic covariates.