Supplementary material to paper "Fear of COVID-19 changes economic preferences: Evidence from a repeated cross-sectional MTurk survey," by Abdelaziz Alsharawy, Sheryl Ball, Alec Smith, and Ross Spoon

Contents

1. Supplementary text

a. Generalized measure of the intensity of experiencing the COVID-19 pandemic (MTurk Sample)

As an alternative specification, we re-run the regression analyses for economic preferences in the main text, substituting a generalized measure that capture the overall intensity of experiencing the pandemic for fear of COVID-19 and beliefs about the negative consequences of the financial and health hardships of the pandemic (Tables S3-S7). To construct this variable, we compute the first principal component (1st PC) across a series of questions that capture both fear of the pandemic (question 60) as well as beliefs about the financial (questions 53 and 56-57) and health (questions 58-59) hardships. We again find a negative and significant association between the generalized measure of the intensity of experiencing the pandemic and risk tolerance, which was strongest in wave 1 (pooled sample: $\beta_{Experience\ intensity}$ =-0.057, p=0.036; wave 1: $\beta_{Experience\ intensity}$ =-0.111, p=0.004; wave 2: $\beta_{Experience\ intensity}$ =-0.021, p=0.625; wave 3: $\beta_{Experience\ intensity}$ =-0.046, p=0.199) (Table S3). Patience was also negatively and significantly associated with the generalized measure of the intensity of experiencing the pandemic (pooled sample: $\beta_{Experience\ intensity}$ =-0.062, p<0.001; wave 1: $\beta_{Experience\ intensity}$ =-0.065, p=0.002; wave 2: $\beta_{Experience\ intensity}$ =-0.066, p=0.003; wave 3: $\beta_{Experience\ intensity}$ =-0.060, p=0.005) (Table S4).

Similar to the strong association we report in the main manuscript between fear of the pandemic and altruism in the third wave, we find that the generalized measure of the intensity of experiencing the pandemic was also a strong predictor of altruism (wave 3: $\beta_{Experience\ intensity}$ =5.370, p=0.004) (Table S5). Though positive reciprocity was not significantly associated with our generalized measure or local death rate (Table S6), we find strong linkage, similar to our results in the main manuscript, between the intensity of the pandemic's experience and negative reciprocity (pooled sample: $\beta_{Experience\ intensity}$ =-0.027, p=0.013) that weakens across waves (wave 1: $\beta_{Experience\ intensity}$ =-0.052, p=0.001; wave 2: $\beta_{Experience\ intensity}$ =-0.036, p=0.038; wave 3: $\beta_{Experience\ intensity}$ =-0.006, p=0.754) (Table S7).

b. Methods for university sample

To examine the effects of the COVID-19 pandemic on a university population, we re-surveyed a sample of participants from a previous lab experiment that took place in October and November of 2019, prior to the pandemic's outbreak. In April 2020 we administered our COVID-19 survey to participants from that study. In the first experiment, 100 participants engaged in a 60 round prisoner's dilemma game with pre-play communication (data not reported here), before completing a survey that included 10 questions from the GPS, including measures of risk preference, time preference, trust, altruism, and reciprocity (positive and negative). Our COVID-19 survey was administered through Qualtrics on April 2nd, 2020, and participants were compensated with $20 for completion. This allows us to examine changes in responses before and after the pandemic's onset and to examine whether self-reported fear-level of COVID-19 systematically varies with changes in preferences. Our initial experiment (in Fall 2019) involved 100 participants, 57 males and 43 females (average age: 24, minimum:18, maximum:65). 90 participants from our initial sample completed our follow-up COVID-19 survey, 52 males and 38 females.

c. Results for the university sample

We first examine potential channels that may drive fear of the pandemic in the university sample, we regress self-reported fear level on individual characteristics reported in our COVID-19 survey along with variables that measure trust in government, media, and people (and their interaction with political affiliation) and beliefs of others engaging in social distancing (Table S8). This specification is like the one reported in the main manuscript (Table 1). Political affiliation, perception of financial and health hardships and trust in media did not significantly vary with fear. Stronger beliefs that other people engage in physical distancing was significantly and negatively associated with fear of the pandemic ($\beta_{People\ engage\ in\ physical\ distancing} = -0.5314$, p=0.004; Table S8e). Trust in government was only marginally significantly associated with fear of COVID-19 ($\beta_{trust\ in\ government} = -0.297$, p=0.079; Table S8e). We also find that females were more likely to report significantly greater fear of the pandemic ($\beta_{Female} = 0.582$, p=0.005; Table S8e), while LDR was not significant associated with reported fear ($\beta_{LDR} = 0.350$, p=0.105; Table S8e).

Table S9 provides a descriptive summary of the responses to our preference measures before and after the pandemic. Note that contrary to measures reported for MTurk sample, one question was used for each of risk, altruism, positive reciprocity, and trust as the other questions were not asked in the baseline survey. We also use the average of the three measures for negative reciprocity without standardization, as the dependent measure of interest is the change from baseline and the list of Likert questions differed across surveys.

For risk-taking, we find no significant distributional differences across pre- and post- pandemic surveys for our behavioral measures (paired t-test, p>0.100; Wilcoxon signed-rank test, p>0.100). Similarly, we find no significant differences for measures of time preference, positive reciprocity. On the other hand, we find that altruism (marginally) increased ($Mean_{difference} = 0.511$, paired t-test, p=0.025; Wilcoxon signed-rank test, p=0.087) while negative reciprocity decreased ($Mean_{difference} = -0.504$, paired t-test, p=0.047; Wilcoxon signed-rank test, p=0.015) in our follow-up survey providing evidence for altered preferences over time.

Even though there are no average changes across the pandemic's outbreak for risk taking, we find that many participants provided a different response for risk taking across surveys. Only 22 out of 90 participants, for example, gave the same answer for the risk-taking measure in both surveys. This observation extends to our other measures as well (Table S10). Thus, in our subsequent analyses, we examine if fear of COVID-19 systematically varies with changes in self-reported preferences. We run Ordinary Least Squares (OLS) regressions with the change in each of the preference measures regressed on self-reported fear level of the pandemic along with additional individual characteristics as regressors (Table S11). For the change in risk taking, the coefficient for of fear of COVID-19 was negative and significant (β_{Afraid} =-0.348, p=0.046). Again, the link between self-reported fear was in a similar direction to that observed across the repeated cross-sectional data of the MTurk sample. Particularly, participants who reported being more afraid of the pandemic were more likely to report increased risk aversion. There was no significant relationship, however, between self-reported fear of COVID-19 and the change in time preference, altruism, positive and negative reciprocity.

2. Supplementary Tables

Table S1: Summary Statistics (MTurk sample)

	All	Wave 1	Wave 2	Wave 3	wave1vs2	wave1vs3	wave2vs3
Variables / survey question in supplementary material)	Mean (sd)				p-values: ttests for difference *** p<.01, ** p<.05, * p<.1		
Female, % / q1	46.5	48.8	48.1	42.7	0.832	0.054*	0.085*
Age / q2	40.762	41.404	41.242	39.650	0.823	0.015**	0.028**
	(11.369)	(11.152)	(11.455)	(11.434)			
ZIP code / q3							
NY, %	6.90	4.90	5.20	10.50	0.834	0.001***	0.002***
CA, %	9.10	10.90	11.00	5.40	0.935	0.002***	0.001***
US Citizen, % /q4	99.30	99.40	99.20	99.40	0.727	0.982	0.709
Hispanic, % / q5	5.80	7.20	5.40	4.80	0.255	0.122	0.677
Ethnicity: Caucasian, % /q6	84.40	84.00	84.20	85.10	0.948	0.635	0.680
Attend religious services, % / q7	17.8	15.6	14.0	23.7	0.495	0.001***	<0.001***
Relative Household Income: /q8							
Significantly lower, %	10.40	12.10	11.80	7.20	0.897	0.010***	0.014**
Somewhat lower, %	28.20	30.70	31.10	22.70	0.912	0.005***	0.003***
About the same, %	43.70	38.90	42.10	49.90	0.314	0.001***	0.013**
Somewhat higher, %	16.90	17.80	14.20	18.70	0.123	0.720	0.057*
Significantly higher, %	0.90	0.40	0.80	1.40	0.429	0.100*	0.360
Smoker, % / q10	17.6	18.2	19.2	15.3	0.687	0.216	0.100*
Work status /q11							
Do not have a job, %	12.50	11.90	12.80	12.70	0.654	0.706	0.944
Work full time, %	75.30	73.80	74.70	77.50	0.725	0.177	0.316
Work part time, %	12.20	14.30	12.40	9.90	0.376	0.031**	0.199
Number of years in college / q12	3.258	3.150	3.210	3.412	0.618	0.029**	0.098*
	(1.914)	(1.883)	(1.952)	(1.900)			
Education / q15							
High school, %	12.50	13.30	14.00	10.10	0.746	0.111	0.055*
Some college, %	29.80	31.60	29.70	28.20	0.518	0.246	0.604
Bachelor's/equivalent, %	45.20	44.30	44.90	46.50	0.843	0.485	0.615
Master's or above, %	12.50	10.90	11.40	15.30	0.779	0.039**	0.073*
Mother Education / q17							
Some high school/less, %	6.60	7.40	7.00	5.40	0.826	0.213	0.302
High School, %	36.90	38.30	34.90	37.60	0.261	0.823	0.366
Some college, %	22.20	22.30	23.00	21.30	0.790	0.702	0.515
Bachelor's/equivalent, %	24.10	22.50	23.60	26.20	0.680	0.187	0.360
Master's or above, %	10.00	9.40	11.40	9.30	0.305	0.927	0.262
Do not know, %	0.10	0.00	0.00	0.20	-	0.322	0.317

Father Education / q19							
Some high school/less, %	9.40	10.20	9.00	8.90	0.514	0.457	0.927
High School, %	33.30	35.00	33.50	31.40	0.603	0.224	0.484
Some college, %	19.40	18.00	20.60	19.50	0.300	0.551	0.658
Bachelor's/equivalent, %	23.70	23.00	21.20	27.00	0.518	0.146	0.035**
Master's or above, %	13.00	12.50	13.60	12.90	0.600	0.859	0.727
Do not know, %	1.20	1.20	2.00	0.40	0.336	0.148	0.021**
Political views: liberal (z-scored) / q21	-0.032	-0.013	0.030	-0.114	0.485	0.111	0.022**
	(0.987)	(0.965)	(0.958)	(1.032)			
Self-reported math ability (z-scored) / q30	-0.123	-0.132	-0.137	-0.123	0.938	0.600	0.552
	(0.965)	(0.954)	(0.997)	(0.965)			
Willingness to take risks (z-scored) / q22	-0.706	-0.785	-0.680	-0.656	0.042**	0.014**	0.629
	(0.814)	(0.827)	(0.785)	(0.827)			
Unincentivized risky lottery / q32	2.530	2.523	2.525	2.541	0.977	0.828	0.848
	(1.348)	(1.373)	(1.343)	(1.332)			
Willingness to give up a benefit today for greater future benefit (z-scored) / q23	0.285	0.254	0.264	0.337	0.812	0.044**	0.077*
	(0.650)	(0.651)	(0.662)	(0.635)			
Willingness to give to good causes (z-scored) / q26	0.362	0.367	0.342	0.378	0.591	0.820	0.453
	(0.733)	(0.715)	(0.724)	(0.760)			
Unincentivized dictator game: donation / q33	108.325	98.971	100.315	125.553	0.897	0.029**	0.043**
	(184.337)	(156.453)	(169.575)	(219.646)			
Willingness to return favor (z-scored) / q27	0.857	0.853	0.855	0.864	0.944	0.736	0.788
	(0.495)	(0.494)	(0.493)	(0.499)			
Gift to stranger who offered help (z-scored) / q34	32.668	32.910	33.066	32.032	0.898	0.481	0.400
	(19.381)	(19.378)	(19.086)	(19.698)			
Willingness to punish who unfairly treats you (z-scored) / q24	-0.713	-0.721	-0.708	-0.709	0.807	0.819	0.987
	(0.832)	(0.822)	(0.842)	(0.832)			
Willingness to punish who unfairly treats others (z-scored) / q25	-0.501	-0.553	-0.471	-0.481	0.095*	0.150	0.842
	(0.781)	(0.748)	(0.783)	(0.810)			
Willingness to take (costly) revenge when treated unjustly (z-scored) / q27	-1.172	-1.206	-1.178	-1.132	0.614	0.173	0.413
	(0.871)	(0.847)	(0.908)	(0.857)			
Expect job loss / q56	26.575	30.086	24.960	24.751	0.006***	0.003***	0.902
	(28.132)	(30.388)	(27.540)	(26.074)			
Expect Income loss / q57	41.488	46.671	39.465	38.431	0.001***	<0.001***	0.616
	(33.573)	(35.006)	(32.953)	(32.197)			
Agree: COVID-19 cause financial stress (z-scored) /q53	-0.281	-0.154	-0.302	-0.385	0.030**	0.001***	0.229
	(1.080)	(1.036)	(1.108)	(1.084)			

Expect develop COVID-19 / q58	32.433	36.455	30.553	30.370	<0.001***	<0.001***	0.908
	(25.782)	(27.029)	(25.090)	(24.786)			
Expect die from COVID-19 / q59	10.561	12.223	9.887	9.606	0.027**	0.010**	0.770
	(15.946)	(17.245)	(15.822)	(14.590)			
Afraid of COVID-19 (z-scored) / q60	-0.078	0.059	-0.125	-0.164	0.002***	<0.001***	0.511
	(0.934)	(0.885)	(0.941)	(0.959)			
Agree: people have best intentions (z-scored) / q29	-0.357	-0.473	-0.358	-0.241	0.042**	<0.001***	0.037**
	(0.885)	(0.885)	(0.899)	(0.856)			
Agree: people can be trusted (z-scored) / q35	-0.195	-0.276	-0.197	-0.115	0.137	0.002***	0.120
	(0.835)	(0.831)	(0.842)	(0.824)			
Agree: government can be trusted (z-scored) / q40	-0.777	-0.809	-0.825	-0.696	0.748	0.028**	0.011**
	(0.805)	(0.804)	(0.801)	(0.805)			
Agree: media can be trusted (z-scored) / q41	-0.715	-0.755	-0.733	-0.657	0.689	0.075*	0.163
	(0.854)	(0.845)	(0.846)	(0.869)			
Agree: people physically distance (z-scored) / q47	0.613	0.543	0.655	0.638	0.002***	0.011**	0.642
	(0.577)	(0.586)	(0.555)	(0.584)			
Agree: cannot rely on people (z-scored) / q36	-0.782	-0.770	-0.765	-0.811	0.936	0.525	0.468
	(1.019)	(1.046)	(1.038)	(0.972)			
Agree: careful before trusting strangers (z-scored) / q37	0.098	0.165	0.101	0.028	0.237	0.012**	0.180
	(0.856)	(0.854)	(0.857)	(0.853)			
Agree: people try to be helpful (binary), % / q38	64.0	60.7	64.7	66.6	0.186	0.053*	0.535
	(48.0)	(48.9)	(47.8)	(47.2)			
Agree: most people try to be fair (binary), % / q39	64.8	62.3	65.3	66.6	0.322	0.158	0.673
	(47.8)	(48.5)	(47.6)	(47.2)			
Local (county) Death Rate (LDR)	11.343	1.743	9.160	22.961	<0.001***	<0.001***	<0.001***
	(26.811)	(4.826)	(19.900)	(38.705)			
Sample used in Analysis	1484	488	499	497			
Number of correct check questions (out of 5)							
4 correct	32	6	8	18			
5 correct	1452	482	491	479			
Exclusions							
Unmatched ZIP code	4	3	0	1			
>=2 wrong check questions	3	0	1	2			
Total number of responses (no exclusions)	1491	491	500	500			

**** p<.01, ** p<.05, * p<.1*

Table S2: Regression Results (Trust in people across waves)

Dependent variable: Trust in people	
Local death rate (LDR)	-.001
	(.0015)
Female	.1281
	(.1841)
Good at math	.0585
	(.0547)
Liberal	.185***
	(.0623)
Wave 2	.2098**
	(.0835)
Wave 3	.3899***
	(.1035)
Constant	-1.3156
	(.7947)
Observations	1484
State fixed effects and additional controls	Yes
R-squared (within)	.081

Standard errors (clustered at the state level) in parentheses. The dependent variable, trust in people, is computed as the first principal component across survey questions 29 and 35-39. Experience intensity is the first principal component across a series of questions that capture both an individual's fear of the pandemic (question 60) as well as beliefs about the financial (questions 53 and 56-57) and health (questions 58-59) hardships. Additional controls included age, age-squared, and indicators for race (Caucasian), origin (Hispanic), self-reported household income relative to others in community, working full time, education level, smoking behavior, frequency of attending religious services, and parent(s) receiving a bachelor's degree. All Likert scale measures are standardized at the individual level (z-scored). **** p<.01, ** p<.05, * p<.1*

Table S3: Regression Results (Risk and experience intensity - 1st PC)

Dependent variable: **Risk tolerance**				
	(a)	(b)	(c)	(d)
	Pooled	Wave1	Wave2	Wave3
Experience intensity (1st PC1)	-.0573**	-.1112***	-.021	-.0464
	(.0266)	(.037)	(.0426)	(.0357)
Local death rate (LDR)	.0017	-.0063	-.0002	.0022
	(.0016)	(.0054)	(.0023)	(.0018)
Female	-.4643***	-.5022***	-.3603***	-.59***
	(.0923)	(.1316)	(.1235)	(.0926)
Good at math	.0839*	.0463	.1137*	.1066*
	(.0483)	(.0747)	(.063)	(.0593)
Liberal	-.0157	.0085	-.0069	-.0136
	(.0368)	(.0548)	(.0459)	(.0588)
Wave 2	.0534	-	-	-
	(.0539)			
Wave 3	.0308	-	-	-
	(.0724)			
Constant	-.322	-.6988	-.2669	-.4152
	(.4509)	(.5926)	(.577)	(.5314)
Observations	1484	488	499	497
State fixed effects and additional controls	Yes	Yes	Yes	Yes
R-squared (within)	.1075	.1362	.0999	.1431

Standard errors (clustered at the state level) in parentheses. The dependent variable, risk tolerance, is computed as the first principal component across questions 22 (willingness to take risks) and 32 (Lottery choice). Experience intensity is the first principal component across a series of questions that capture both an individual's fear of the pandemic (question 60) as well as beliefs about the financial (questions 53 and 56-57) and health (questions 58-59) hardships. Additional controls included age, age-squared, and indicators for race (Caucasian), origin (Hispanic), self-reported household income relative to others in community, working full time, education level, smoking behavior, frequency of attending religious services, and parent(s) receiving a bachelor's degree. All Likert scale measures are standardized at the individual level (z-scored). **** p<.01, ** p<.05, * p<.1 (shaded cells indicate significant coefficient upon computing sharpened q-values accounting for multiple tests on Afraid of COVID-19 and LDR: q<.05)*

Table S4: Regression Results (Time preference and experience intensity - 1st PC) (MTurk sample)

Dependent variable: **Patience**				
	(a)	(b)	(c)	(d)
	Pooled	Wave1	Wave2	Wave3
Experience intensity (1st PC1)	-.0621***	-.0652***	-.0656***	-.0596***
	(.0111)	(.0194)	(.0208)	(.0201)
Local death rate (LDR)	.0011***	.0017	.0001	.0011*
	(.0004)	(.0073)	(.001)	(.0005)
Female	-.0574	-.0874	-.0994	-.0372
	(.0455)	(.0761)	(.0614)	(.049)
Good at math	.052***	.05	.0462	.0516**
	(.0177)	(.0419)	(.0316)	(.0239)
Liberal	-.0147	.0035	.0162	-.0791**
	(.0214)	(.0465)	(.0342)	(.0321)
Wave 2	-.0268	-	-	-
	(.0355)			
Wave 3	.0141	-	-	-
	(.0358)			
Constant	.5613**	.3493	.2541	.915***
	(.2241)	(.3991)	(.3894)	(.3198)
Observations	1484	488	499	497
State fixed effects and additional controls	Yes	Yes	Yes	Yes
R-squared (within)	.0724	.0759	.0881	.0971

Standard errors (clustered at the state level) in parentheses. The dependent variable, Patience, is measured in question 23 (Willingness to give up something that is beneficial for you today in order to benefit more from that in the future). Experience intensity is the first principal component across a series of questions that capture both an individual's fear of the pandemic (question 60) as well as beliefs about the financial (questions 53 and 56-57) and health (questions 58-59) hardships. Additional controls included age, age-squared, and indicators for race (Caucasian), origin (Hispanic), self-reported household income relative to others in community, working full time, education level, smoking behavior, frequency of attending religious services, and parent(s) receiving a bachelor's degree. All Likert scale measures are standardized at the individual level (z-scored). **** p<.01, ** p<.05, * p<.1 (shaded cells indicate significant coefficient upon computing sharpened q-values accounting for multiple tests on Afraid of COVID-19 and LDR: q<.05)*

Table S5: Regression Results (Altruism and experience intensity - 1st PC) (MTurk sample)

Dependent variable: **Altruism**				
	(a)	(b)	(c)	(d)
	Pooled	Wave1	Wave2	Wave3
Experience intensity (1st PC1)	1.0025	.7924	-2.4461	5.3695***
	(1.1289)	(1.6528)	(1.4756)	(1.7569)
Local death rate (LDR)	.0919**	-.3109	.2065*	.012
	(.0345)	(.3182)	(.1214)	(.0669)
Female	2.0868	-2.7662	-1.0176	11.9481
	(4.0548)	(4.3168)	(6.5724)	(7.6607)
Good at math	-2.6752	-4.3376	.5413	-2.307
	(2.1788)	(3.2988)	(2.7961)	(3.9864)
Liberal	-.8688	-1.9373	2.6004	-5.6976
	(2.1326)	(3.132)	(3.0437)	(4.1637)
Wave 2	1.2303	-	-	-
	(3.1554)			
Wave 3	5.4193	-	-	-
	(3.6096)			
Constant	19.9899	78.7444*	-5.2765	-30.0245
	(24.4472)	(46.5184)	(40.3174)	(36.8461)
Observations	1484	488	499	497
State fixed effects and additional controls	Yes	Yes	Yes	Yes
R-squared (within)	.0489	.064	.0671	.0609

Standard errors (clustered at the state level) in parentheses. The dependent variable, altruism, is computed as the linear combination of questions 26 (willingness to give to good causes without expecting return) and question 33 (dictator game) (weights from Falk et al. (2018, 2016)) Experience intensity is the first principal component across a series of questions that capture both an individual's fear of the pandemic (question 60) as well as beliefs about the financial (questions 53 and 56-57) and health (questions 58-59) hardships. Additional controls included age, age-squared, and indicators for race (Caucasian), origin (Hispanic), self-reported household income relative to others in community, working full time, education level, smoking behavior, frequency of attending religious services, and parent(s) receiving a bachelor's degree. All Likert scale measures are standardized at the individual level (z-scored). ****p<.01, **p<.05, *p<.1 (shaded cells indicate significant coefficient upon computing sharpened q-values accounting for multiple tests on Afraid of COVID-19 and LDR: q<.05)*

Table S6: Regression Results (Positive reciprocity and experience intensity - 1st PC) (MTurk sample)

Dependent variable: **Positive reciprocity**				
	(a)	(b)	(c)	(d)
	Pooled	Wave1	Wave2	Wave3
Experience intensity (1st PC1)	-.12	.1551	-.5169	-.0664
	(.1979)	(.3536)	(.3224)	(.3004)
Local death rate (LDR)	-.0036	.0044	.0249	-.0095
	(.0066)	(.0625)	(.0513)	(.0122)
Female	.2194	-.2137	-.4192	1.7394*
	(.6181)	(.8212)	(.9093)	(1.0314)
Good at math	-.2312	-.5832	-.7476*	.5574
	(.2801)	(.4923)	(.4153)	(.388)
Liberal	-.2478	-.6051	.4725	-.6481
	(.2801)	(.3726)	(.4449)	(.4499)
Wave 2	.2877	-	-	-
	(.5224)			
Wave 3	-.0099	-	-	-
	(.6621)			
Constant	10.0896**	17.3911**	16.6914***	.8231
	(3.9819)	(7.1443)	(5.2388)	(5.5687)
Observations	1484	488	499	497
State fixed effects and additional controls	Yes	Yes	Yes	Yes
R-squared (within)	.0508	.0669	.0757	.086

Standard errors (clustered at the state level) in parentheses. The dependent variable, positive reciprocity, is computed as the linear combination of questions 27 (Willingness to return favor) and question 34 (gift exchange) (weights from Falk et al. (2018,2016)). Experience intensity is the first principal component across a series of questions that capture both an individual's fear of the pandemic (question 60) as well as beliefs about the financial (questions 53 and 56-57) and health (questions 58-59) hardships. Additional controls included age, age-squared, and indicators for race (Caucasian), origin (Hispanic), self-reported household income relative to others in community, working full time, education level, smoking behavior, frequency of attending religious services, and parent(s) receiving a bachelor's degree. All Likert scale measures are standardized at the individual level (z-scored). ****p<.01, **p<.05, *p<.1*

Table S7: Regression Results (Negative reciprocity and experience intensity - 1st PC) (MTurk sample)

Dependent variable: **Negative reciprocity**				
	(a)	(b)	(c)	(d)
	Pooled	Wave1	Wave2	Wave3
Experience intensity (1st PC1)	-.0274**	-.0521***	-.036**	-.0058
	(.0106)	(.0153)	(.0169)	(.0184)
Local death rate (LDR)	-.0001	.0135***	.0016	0
	(.0004)	(.0036)	(.0013)	(.0006)
Female	-.1604***	-.1072*	-.1017	-.2884***
	(.0493)	(.0594)	(.0794)	(.0731)
Good at math	-.0592***	-.0278	-.0344	-.1045***
	(.017)	(.0331)	(.0295)	(.0254)
Liberal	-.1409***	-.1616***	-.1509***	-.1145***
	(.0171)	(.0252)	(.0264)	(.0295)
Wave 2	.0158	-	-	-
	(.0348)			
Wave 3	.0017	-	-	-
	(.0478)			
Constant	-.0089	.1317	-.28	-.0623
	(.2363)	(.5053)	(.3343)	(.3316)
Observations	1484	488	499	497
State fixed effects and additional controls	Yes	Yes	Yes	Yes
R-squared (within)	.1377	.1873	.1448	.1583

Standard errors (clustered at the state level) in parentheses. The dependent variable, negative reciprocity, is computed as the linear combination of questions 24 (Willingness to punish who treats you unfairly), question 25 (treat others unfairly), and question 28 (taking (costly) revenge when treated unjustly) (weights from Falk et al. (2018,2016)). Experience intensity is the first principal component across a series of questions that capture both an individual's fear of the pandemic (question 60) as well as beliefs about the financial (questions 53 and 56-57) and health (questions 58-59) hardships. Additional controls included age, age-squared, and indicators for race (Caucasian), origin (Hispanic), self-reported household income relative to others in community, working full time, education level, smoking behavior, frequency of attending religious services, and parent(s) receiving a bachelor's degree. All Likert scale measures are standardized at the individual level (z-scored). **** p<.01, ** p<.05, * p<.1 (shaded cells indicate significant coefficient upon computing sharpened q-values accounting for multiple tests on Afraid of COVID-19 and LDR: q<.05)*

Table S8: Regression results for fear of Covid-19 (University Sample)

Dependent variable: **Are you afraid of the COVID-19 pandemic? (question 60)**					
	(a)	(b)	(c)	(d)	(e)
Local death rate (LDR)	.203	.281	.2496	.2603	.35
	(.2475)	(.2485)	(.2184)	(.2335)	(.2129)
Female	.4463**	.4907**	.4395**	.4549**	.5819***
	(.2058)	(.2095)	(.2)	(.2006)	(.2003)
Good at math	-.1142	-.1037	-.1017	-.0833	-.1213
	(.1173)	(.1172)	(.1227)	(.1276)	(.1167)
Liberal	-.0653	-.051	-.0814	-.1511	-.2362
	(.1334)	(.1315)	(.1271)	(.2806)	(.248)
Expect financial hardship (1st PC)	-	.0798	.089	.0886	.0337
		(.0824)	(.0865)	(.0884)	(.0849)
Expect health hardship (1st PC)	-	.1101	.0675	.0497	.0445
		(.0961)	(.0944)	(.0935)	(.0844)
Trust in government	-	-	-.2328	-.2172	-.2975*
			(.1646)	(.1725)	(.1669)
Trust in media	-	-	-.1259	-.1116	-.0648
			(.1597)	(.1611)	(.1458)
Trust in people (1st PC)	-	-	-.0762	-.0886	-.0739
				(.0697)	(.0651)
Liberal × Trust in government	-	-	-	-.1489	-.0873
				(.2116)	(.2013)
Liberal × Trust in media	-	-	-	.0686	.0256
				(.1791)	(.1686)
Liberal × Trust in people (1st PC)	-	-	-	.0945	.096
					(.089)
People engage in physical distancing	-	-	-	-	-.5314***
					(.1766)
Liberal × people engage in physical distancing	-	-	-	-	-.2001
					(.1602)
Constant	-1.2111	-1.3319	-1.6929	-1.7532	-1.7273
	(1.4205)	(1.4242)	(1.4996)	(1.4839)	(1.5314)
Observations	90	90	90	90	90
Additional control	Yes	Yes	Yes	Yes	Yes
R-squared	.1216	.1559	.2382	.2503	.3578

Standard errors are in parentheses. Robust standard errors estimated. The dependent variable, fear of Covid-19, is measured in question 60 (Are you afraid of the COVID-19 pandemic?) All Likert scale measures are standardized at the individual level (z-scored). Additional controls included age, age-squared, an indicator for race (Caucasian) and number of years in college. *** p<.01, ** p<.05, * p<.1

Table S9: Summary Statistics for key measures of interest (University Sample)

	Mean (sd)		Median	
Survey Measure	Oct./Nov. 2019	April 2nd 2020	Oct./Nov. 2019	April 2nd 2020
Risk (q22)	6.29 (2.05)	6.35 (2.02)	6	7
Time Preference (q23)	7.18 (1.85)	7.42 (1.75)	7	8
Altruism (q26)	6.84 (2.27)	7.36 (1.84)	7	7
Positive Reciprocity (q27)	8.48 (1.90)	8.81 (1.27)	9	9
Negative Reciprocity (average across q24, q25 and q28)	4.69 (2.07)	4.19 (1.99)	4.83	4.33

"q" refers to survey question number

Table S10: Change in responses across waves (University Sample)

	Number of participants		
Survey Measure	Negative change	No change	Positive change
Risk (q22)	36	22	32
Time Preference (q23)	27	31	32
Altruism (q26)	25	31	34
Positive Reciprocity (q27)	26	37	27
Negative Reciprocity: unfair to you (q24)	49	12	29
Negative Reciprocity: unfair to others (q25)	41	20	29
Negative Reciprocity: take revenge (q28)	42	18	30

"q" refers to survey question number

Table S11: Regression results for change in responses (University Sample)

Dependent variables:	(a) Δ Risk (q22)	(b) Δ Time Preference (q23)	(c) Δ Altruism (q26)	(d) Δ Positive Reciprocity (q27)	(e) Δ Negative Reciprocity (q24,q25,q28)
Afraid of COVID-19	-.3484**	-.2852	-.0521	-.0199	.0621
	(.1716)	(.2198)	(.265)	(.2366)	(.0705)
Local death rate (LDR)	-.0177	.4233	.2959	.316	-.2173*
	(.3922)	(.4148)	(.4648)	(.4229)	(.1289)
Expect financial hardship (1st PC)	-.0702	-.0614	.0895	.1513	-.095**
	(.1415)	(.1887)	(.1574)	(.1557)	(.0398)
Expect health hardship (1st PC)	.0605	-.0004	-.2341	-.2202	.0109
	(.1331)	(.1988)	(.2028)	(.1742)	(.0567)
Female	-.0074	.3522	.139	.1969	-.2062
	(.4271)	(.4067)	(.5699)	(.5167)	(.1429)
Good at math	-.2412	-.4483	.2602	.0843	-.0713
	(.2231)	(.2842)	(.3409)	(.2984)	(.0603)
Liberal	-.5495**	-.1059	-.025	-.1778	.0524
	(.247)	(.2137)	(.286)	(.2555)	(.0795)
Constant	2.8841	-.5442	-4.0494	.6499	-.0792
	(2.2169)	(3.1511)	(3.1591)	(4.1686)	(.8931)
Observations	90	90	90	90	90
Additional controls	Yes	Yes	Yes	Yes	Yes
R-squared	.163	.0976	.1067	.1438	.178

Standard errors are in parentheses. Robust standard errors estimated. Dependent variables ("q" refers to survey question number) are the changes of reported preference from pre-pandemic survey to post-pandemic survey. Likert scale independent variables are standardized at the individual level for the COVID-19 survey (z-scored within participant and survey period). Additional controls included age, age-squared, an indicator for race (Caucasian), frequency of attending religious services, and number of years in college. *** p<.01, ** p<.05, * p<.1

3. Administered survey questions

The following questions will be completed on the computer, and will not be handed out physically.
Section 1:

Section 1.1 (block1)

1. Gender:
    a. Male
    b. Female

2. Age (numeric field)

3. What is your current zip code?

4. Are you
    a. American citizen
    b. Non-American citizen: please specify country

5. Are you Hispanic or Latino?
    a. Yes
    b. No

6. How would you describe yourself?
    a. American Indian or Alaska Native
    b. Asian
    c. Black or African American
    d. Native Hawaiian or Other Pacific Islander
    e. White
    f. Other

7. Do you regularly attend religious services?
    a. Yes
    b. No

8. What is your household income relative to others in your county/city?
    a. Significantly higher
    b. Somewhat higher
    c. About the same
    d. Somewhat lower
    e. Significantly lower

9. What is your height? (numeric field)

10. Are you a smoker?
    a. Yes
    b. No

Section 1.2 (block 2)

11. Do you:
    a) Work at a full-time job

b) Work at a part-time job?
c) Do not have a job

12. If you are in (went to) college, how many years of formal education had you completed?
    a. Not applicable
    b. 1 year of college (or equivalent)
    c. 2 years of college (or equivalent)
    d. 3 years of college (or equivalent)
    e. 4 years of college (or equivalent)
    f. 5 years of college (or equivalent)
    g. 6 years of college (or equivalent)
    h. More than 6

13. If you are (were) in college, what is (was) your Major/College? (if more than one pick what you consider to be your primary Major or College).
    a. Economics
    b. Architecture and Urban Studies
    c. Agriculture and Life Science
    d. Business other than Economics
    e. Engineering
    f. Liberal Arts and Human Sciences
    g. Natural Resources and Environment
    h. Science other than Economics
    i. Other major/college
    j. Not applicable

14. How many Economics classes have you taken at the university level?
    a. None
    b. One
    c. Two
    d. Three
    e. Four or more

15. Please indicate the highest level of education YOU completed:
    a. Some high school
    b. High school diploma or equivalent
    c. Some college or associate degree
    d. B.A.
    e. M.A./M.S./M.B.A.
    f. M.D./J.D./PhD
    g. Other

16. What is YOUR current occupation? If you are retired, please list your most recent occupation. (text field)

17. Please indicate the highest level of education your MOTHER completed:
    a. Some high school
    b. High school diploma or equivalent
    c. Some college or associate degree
    d. B.A.
    e. M.A./M.S./M.B.A.

f. M.D./J.D./PhD
g. Other

18. What is your MOTHER's current occupation? If she is retired or deceased, please list her most recent occupation. (text field)

19. Please indicate the highest level of education your FATHER completed:
    a. Some high school
    b. High school diploma or equivalent
    c. Some college or associate degree
    d. B.A.
    e. M.A./M.S./M.B.A.
    f. M.D./J.D./PhD
    g. Other

20. What is your FATHER's current occupation? If he is retired or deceased, please list his most recent occupation. (text field)

Section 2:

Section 2.1 (block3)

21. Please describe your political orientation in general, using a scale from 0 to 10, where 0 means you are "complete conservative" and 10 means you are "complete liberal."

22. How willing or unwilling you are to take risks, using a scale from 0 to 10, where 0 means you are "completely unwilling" and 10 means you are "very willing."

23. How willing or unwilling are you to give up something that is beneficial for you today in order to benefit more from that in the future, using a scale from 0 to 10, where 0 means you are "completely unwilling" and 10 means you are "very willing."

24. How willing or unwilling are you to punish someone who treats YOU unfairly, even if there may be costs for you, using a scale from 0 to 10, where 0 means you are "completely unwilling" and 10 means you are "very willing."

25. How willing or unwilling are you to punish someone who treats OTHERS unfairly, even if there may be costs for you, using a scale from 0 to 10, where 0 means you are "completely unwilling" and 10 means you are "very willing."

26. How willing or unwilling are you to give to good causes without expecting anything in return, using a scale from 0 to 10, where 0 means you are "completely unwilling" and 10 means you are "very willing."

How well do the following statements describe you as a person, using a scale from 0 to 10, where 0 means "does not describe me at all," and 10 means "describes me perfectly."

27. When someone does me a favor, I am willing to return it.

28. If I am treated very unjustly, I will take revenge at the first occasion, even if there is a cost to do so.

29. I assume that people have only the best intentions.

30. I am good at math.

31. I tend to postpone tasks even if I know it would be better to do them right away.

Section 2.2 (block 4)

32. For the gambles on each line of the following table, think about the chance of getting each prize being determined by the flip of a coin, for example, for Gamble 3 you would get 32 if the coin comes up "heads" and 8 if it comes up "tails."

    Please choose your favorite gamble below.

Gamble Choice	Probability	Payoff	Probability	Payoff
1	50%	16	50%	16
2	50%	24	50%	12
3	50%	32	50%	8
4	50%	40	50%	4
5	50%	48	50%	0

33. Imagine the following situation: Today you unexpectedly received 1,600 U.S. dollars. How much of this amount would you donate to a good cause? (Values between 0 and 1,600 are allowed)

34. Please think about what you would do in the following situation. You are in an area you are not familiar with, and you realize that you lost your way. You ask a stranger for directions. The stranger offers to take you to your destination.

    Helping you costs the stranger about 40 U.S. dollars in total. However, the stranger says he or she does not want any money from you. You have six presents with you. The cheapest present costs 10 U.S. dollars, the most expensive one costs 60 U.S. dollars. Do you give one of the presents to the stranger as a "thank you" gift?

    Which present do you give to the stranger?
    a. No, would not give a present
    b. The present worth 10 U.S. dollars
    c. The present worth 20 U.S. dollars
    d. The present worth 30 U.S. dollars
    e. The present worth 40 U.S. dollars
    f. The present worth 50 U.S. dollars
    g. The present worth 60 U.S. dollars

Section 3:

Section 3.1 (block 5)

How much do you agree with each of the following statements, using a scale from 0 to 10, where 0 means "do not agree at all," and 10 means "totally agree"?

35. People can generally be trusted
36. Nowadays one can't rely on anyone
37. If one is dealing with strangers, it is better to be careful before trusting them

38. Would you say that people usually…
    a. Try to be helpful
    b. only pursue their own interests

39. Do you believe that most people…
    a. Would exploit you if they had the opportunity
    b. Would try to be fair to you

Section 3.2 (block 6)

How much do you agree with each of the following statements?
Use a scale from 0 to 10, where 0 means "do not agree at all," and 10 means "totally agree"

40. Government can generally be trusted
41. Media can generally be trusted
42. Autonomous systems, for example, artificial intelligence devices can generally be trusted

43. Suppose there is a crisis and other people make a decision or provide information that makes matters worse. To what extent would you experience negative emotions (e.g. sadness or anger) as a result? Use a scale from 0 to 10, where 0 means "Not at all," and 10 means "A great deal."

44. Suppose there is a crisis and the Government makes a decision or provides information that makes matters worse. To what extent would you experience negative emotions (e.g. sadness or anger) as a result? Use a scale from 0 to 10, where 0 means "Not at all," and 10 means "A great deal."

45. Suppose there is a crisis and the Media makes a decision or provides information that makes matters worse. To what extent would you experience negative emotions (e.g. sadness or anger) as a result? Use a scale from 0 to 10, where 0 means "Not at all," and 10 means "A great deal."

46. Suppose there is a crisis and an autonomous system, for example, an artificial intelligence device, makes a decision or provides information that makes matters worse. To what extent would you experience negative emotions (e.g. sadness or anger) as a result? Use a scale from 0 to 10, where 0 means "Not at all," and 10 means "A great deal."

Section 4:

Section 4.1 (block 7)

For the following questions, physical distancing refers to limiting physical contact with people outside household as much as possible.

How much do you agree with each of the following statements, using a scale from 0 to 10, where 0 means "do not agree at all," and 10 means "totally agree"

47. Right now, people in my area engage in physical distancing
48. Right now, people in my area expect me to engage in physical distancing
49. Right now, people in my area expect others to engage in physical distancing
50. Right now, people in my area should engage in physical distancing
51. Physical distancing will slow the spread of a highly infectious disease.
52. I am willing to make personal sacrifices to prevent the spread of coronavirus disease (COVID-19)
53. The COVID-19 outbreak is causing financial stress to me and my family.

54. I have taken the following steps in response to the coronavirus disease (COVID-19). Check all that apply
    - Washed my hands more frequently than usual
    - Used hand sanitizer or disinfecting wipes more frequently than usual
    - Made more of an effort to avoid touching my eyes, nose, mouth
    - Cleaned and disinfected surfaces in my home more than usual
    - Worn a face mask
    - Started working from home
    - Engaged in physical distancing

Section 4.2 (block 8)

55. In the past week, I have purchased more household items and food than usual.
    a. Yes
    b. No

Now, we will ask you some questions about future, uncertain outcomes. In each case, try to think about the whole range of possible outcomes and think about how likely they are to occur during the next 12 months. In some of the questions, I will ask you about the PERCENT CHANCE of something happening. The percent chance must be a number between zero and one hundred. Numbers like 2 or 5 percent may be "almost no chance," 20 percent or so may mean "not much chance," a 45 or 55 percent chance may be a "pretty even chance," 80 percent or so may mean a "very good chance," and a 95 or 98 percent chance may be "almost certain." The percent chance can also be thought of as the NUMBER OF CHANCES OUT OF 100.

56. What do you think is the percent chance that you or another member of your household will lose a job or business due to COVID-19? (numeric field from 0 to 100)

57. What do you think is the percent chance that your total household income will decrease over the next 12 months? (numeric field from 0 to 100)

58. What do think is the percent chance that you, or someone you are close to, will develop COVID-19? (numeric field from 0 to 100)

59. What do think is the percent chance that you, or someone you are close to, will die from COVID-19? (numeric field from 0 to 100)

60. Are you afraid of the COVID-19 pandemic? Please indicate your answer using a scale from 0 to 10, where 0 means "not at all afraid," and 10 means "very afraid."

The following check questions added in between some of the survey questions:

1. There are 12 days in a week (True/False)
2. There are two L's in the word "Log" (True/False)
3. Dogs have wings (True/False)
4. Would you rather have $50 or $75?
5. Fish live in water (True/False)