L'enfer c'est les autres?
The effects of COVID-19 virus on interpersonal trust

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Abstract

Does the COVID-19 pandemic affect interpersonal trust? Most evidence shows that natural disasters reinforce trust and cooperation, but the COVID-19 virus differs from other calamities since it spreads through contact with people, potentially increasing suspicion and distrust. We investigate the link between exposure to COVID-19 and trust in strangers in a representative sample of adults in Italy, one of the countries hardest struck by the pandemic. Contrary to intuitive expectations, by conducting a panel study with an embedded survey experiment we find that those who report COVID-19 symptoms trust strangers substantially more than those who do not. Panel data analysis shows that trust increases within individuals who catch COVID-19, although the effect seems to decline once people recover. In addition, our experimental findings reveal that priming people on the risk that the COVID-19 pandemic poses to their health, leads to a substantial increase in trust in strangers, which lasts over time. Priming in terms of job loss and economic recession too leads to a smaller increase in trust in strangers, while solidarity appeals and knowledge of people with COVID-19 symptoms in one's network has no effects on trust. These findings could be explained partly by people observing altruistic behavior and increasing their estimate of other people's trustworthiness and partly by conjecturing that when caught in catastrophes people become more dependent on other people's support and prone to "outward exposure", consistently with the "emancipation theory of trust".

Keywords

COVID-19; Trust; Natural threats

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Thus far most people on the planet have not been infected by the COVID-19 virus¹ and an unknown share of those who have been do not necessarily know whether they were for they experienced little or no symptoms.² Most people, however, have been experiencing the pandemic as a threat – to their health and livelihood, as well as to those of their families and friends. This global phenomenon offers an unprecedented opportunity to study how a natural threat of this nature and scale affects interpersonal relations.

Most of the evidence shows that experiencing natural disasters – tsunami, earthquakes, typhoons, volcanic eruptions – reinforces trust and cooperation (1–7). Yet, the COVID-19 pandemic differs from other calamities. While these are geographically circumscribed,³ the virus has gone global in just a few months. Furthermore, unlike most other cataclysms the pandemic is not a one-off event, but creeps on and at the time of writing we do not know for how long mankind will have to put up with it and with which level of lethality. Above all, crucially for our concern, it spreads by contact with *other people*, and how dangerous every person ends up being depends on how considerate and mindful of other people's health she is, and how closely she respects certain rules – social distancing, hand washing, wearing masks, isolating when ill or after being in contact with infected people.

How should we then expect people to respond to the fact that, in a viral sense, *l'enfer c'est les autres*, as Jean Paul Sartre remarked? Does the response to the pandemic differ from that elicited by other natural disasters, and leads to a lowering of interpersonal trust? One can think of arguments going

¹ We follow the WHO guidance for the name: [www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-\(covid-2019\)-and-the-virus-that-causes-it](http://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/naming-the-coronavirus-disease-(covid-2019)-and-the-virus-that-causes-it)

² A study by the Office of National Statistics in the UK found that, among those who tested positive to COVID-19, “only 33% (95% confidence interval: 25% to 43%) reported any evidence of symptoms at the time of their swab test or at either the preceding or subsequent swab test.” (49).

³ A notable exception was the 1883 eruption of Krakatoa in Indonesia so large to affect world climate.

in both directions. On the one hand, infection travels in a way that turns every person into a threat. On the other hand, the pandemic could make us feel “in the same boat” with others, intensifying our sense of solidarity and shared humanity. We could feel more in need of other people’s support and consideration and be put in a position to test their generosity.

If we search in the past for enlightenment, we find that both the Black Death of the 14th century (8, 9) and the 1918-19 devastating Spanish flu (10) seem to have weighed negatively on social relations. The evidence on the present pandemic is as yet inconclusive: a survey experiment indicates that priming people about the pandemic *reduces social trust* in four European countries, including Italy (11), while longitudinal evidence suggests that social trust declined after the first wave of the pandemic in the Netherlands compared to the pre-pandemic period (12). By contrast, three longitudinal studies find that interpersonal *trust increased* during the first phase of the COVID-19 crisis in 2020 in Sweden (13), Korea (14), and the United States (15), while survey evidence indicates that exposure to COVID-19 increased pro-social behavior in Italy and the United States (16). A cross-sectional survey that started in Italy in December 2016, and has been repeated at regular intervals, found that in April 2020 the share of respondents who believe that most people can be trusted was the highest since the study began (17).

To answer the question of whether the pandemic is enhancing or eroding trust in our fellow humans we study the Italian case. One of the worst affected countries in the world, as of July 20, 2021 Italy had 127,874 deaths. This amounts to 2,118 deaths per million population, worse than all other Western European countries, except Belgium.⁴

⁴ Source: worldometers.info (data retrieved on July 20, 2021).

We address our question deploying a combination of methods – a three-wave panel survey with a representative sample of the Italian adult population, an experiment embedded in the first wave of the survey, and secondary data on excess deaths by municipalities. Through the experiment we seek to find out whether being primed about Covid 19 – by reminding subjects of the risk to their health, welfare, or of the heightened pressure to show solidarity – causes variations in the trust that subjects have for strangers. Through the survey we investigate whether exposure to the infection either personally experienced or via one's personal network, correlates with an individual's trust in strangers. We then measure community level exposure by matching subjects in the survey with the measure of excess deaths recorded in their municipality of residence and checking whether it correlates with trust in strangers. Finally, by surveying the same respondents three times over a period of nearly a year, we probe whether the effects of exposure on interpersonal trust persist as the pandemic unfolds.

In what follows, we begin by explaining our measures and methods, then present the results of the survey experiment, followed by panel data analysis. We conclude by discussing the mechanisms that may account for our results.

Measures and design

Between April 30 and May 19, 2020, that is between the second and the third month of the lockdown imposed by Italian authorities, we surveyed a representative sample of Italian adults (N=1163). We then recontacted the same respondents between October 23 and November 4, after a period of low spread of the virus (Wave 2) and again between February 5 and 19, 2021, after a period of high spread of the virus (Wave 3). The attrition was low, with 1065 and 1052 respondents taking part in Wave 2 and Wave 3 respectively. In total, 1003 respondents participated in all the three waves of the panel.

Measuring trust. Wary of the fact that the standard question on generalized trust suffers from several limitations (18–23), we chose the simpler, more direct measure relying on the so-called “wallet question”, which we repeated in all three waves of the panel. Originally designed by Soroka, Helliwell, and Johnston (24), and inspired by an earlier field experiment (25), the question asks respondents how much, should they lose their wallet, they trust a neighbor, a police officer or a stranger to return it.⁵ This question refers to a specific behavior (returning a wallet) and to specific categories of individuals, thus increasing our confidence that all the respondents interpret the question in the same way. Moreover, the wallet question has a distinctive advantage precisely by being narrow: the standard ‘generalized trust’ question employs explicit words such as ‘trust’ or ‘careful’ and is thus likely to elicit a greater confounding turbulence in respondents’ minds.⁶

In each wave, however, we include for comparability also the standard question on generalized trust.⁷ In addition, in Waves 2 and 3, we include a question on “trust in Italians” that is routinely used by the survey company that fielded our study.⁸ The analysis indicates that trust in strangers in the wallet question is weakly correlated with both the standard measure of generalized trust and the question on trust in Italians (see Table A2).

⁵ The respondents could choose among four possible answers: “Very likely”, “Quite likely”, “Slightly likely”, “Not at all likely”. We rescale the answers from 0 (“Not at all likely”) to 1 (“Very likely”) and treat the variable as a continuous variable. The version we use is that used by the Italian National Institute of Statistics (ISTAT).

⁶ Dag Wollebæk, (Institute for Social Research, Oslo), in a presentation given at a workshop on COVID-19 and trust in June 2021 at Collegio Carlo Alberto (Turin, Italy), argued with supporting evidence that the standard trust question may lead some people to confuse trust with caution, a confusion likely to be more pronounced in the pandemic context (50).

⁷ The question reads typically as follows: “Generally speaking, do you think most of the people can be trusted, or we need to be very careful?”

⁸ The question asks how much trust the respondent has in Italians, with four possible answers (“No trust”, “Little trust”, “Quite some trust”, “Very much trust”), and a residual option for “Prefer not to reply”.

Virus exposure. If we exclude the small minority of “denialists” who claim it is all a hoax, everyone else who knew about the virus must have perceived it as a threat to some degree; in this sense, everyone in our sample was ‘treated’ relative to the period before the pandemic. To capture whether the degree of exposure to the COVID-19 virus correlates with differences in trust, we had therefore to measure the *intensity* of exposure, which we did in two ways. First, in each wave we asked respondents whether at some point since the pandemic started, they had suffered from COVID-19 symptoms – such as fever, dry cough, or loss of smell and taste. In Wave 1, 13 percent replied “Yes”, a figure identical to that found by a survey in the UK⁹ – incidentally, both these figure suggest that official statistics reporting confirmed cases of COVID-19 largely underreported the spread of the virus in the population.¹⁰ In the following waves, seven percent of the respondents reported having had symptoms between June and October 2020 (Wave 2), while nine percent reported experiencing symptoms between November 2020 and February 2021 (Wave 3). Furthermore, we asked all those who reported symptoms whether they had had them confirmed by a diagnostic test. Within these groups of respondents, 37 percent (Wave 1),¹¹ 48 percent (Wave 2), and 62 percent (Wave 3) obtained diagnostic confirmation of COVID-19.

Next, in order to obtain a measure of vicarious exposure to the coronavirus for each respondent, we asked how many of their close peers had suffered from COVID-19. In Wave 1, 17 percent of our

⁹ Replies to the question “Have you experienced symptoms that could be caused by coronavirus (COVID-19) since the last time you completed this survey?” in the UK Understanding Society COVID-19 Study (51). Interviews were conducted between April 24 and May 1, 2020.

¹⁰ According to the Italian Ministry of Health, on 1st May 2020 the total number of confirmed cases of COVID-19 in Italy was 207,428, which corresponds to 0.34 percent of the population.

¹¹ For the first period of the pandemic, we asked the question about the diagnostic test retrospectively in Wave 2. Our estimate of the share of people with confirmed COVID-19 symptoms in Wave 1 is conservative, because thirteen respondents with COVID-19 symptoms in Wave 1 did not participate in Wave 2.

sample knew of at least one family member, cohabitant or relative, 40 percent knew of at least one friend or acquaintance, and 19 percent knew of at least one colleague who suffered from COVID-19. These shares increase in the subsequent waves, reflecting the spread of the virus (for summary statistics, see Table A1). In the main analysis, we use three separate items to test whether knowing a family member, a friend or colleague on a scale from 0 (“not knowing anyone”) to 3 (“knowing 3 or more people”) is associated with a change in trust.

Lastly, in order to obtain an ecological measure of the strength of the contagion in each respondent’s wider community we calculate excess deaths by municipality of residence, that is the difference between the number of deaths in the two months preceding each survey and the average number of deaths in that location in the same period in the previous five years.¹² We calculated this ratio for each of the 621 municipalities where our respondents live.

Excess death has the advantage of ruling out geographical discrepancies in the number of reported cases of COVID-19 due to differences in testing frequencies. Furthermore, it overcomes the problem of underreporting COVID-19 related deaths (26). The measure however is sensitive to population size: in small municipalities, small variations in deaths in 2020 compared to previous years translate into a large percentage variations. To alleviate this problem, we divide the measure into quintiles. In addition, we weighed the original measure by population size, assigning smaller weights to smaller municipalities.

¹² Specifically, we calculate excess deaths for the periods March-April 2020 (Wave 1), September-October 2020 (Wave 2), and December 2020-January 2021 (Wave 3). Data released by ISTAT and retrieved on April 15, 2021 from www.istat.it/it/archivio/240401.

Survey experiment. In Wave 1 our respondents were randomly divided in four groups, each assigned to one of three treatments or to a control condition. The treated groups were asked to read a text of approximately 110 words. Each text highlights one of three dimensions of the pandemic: risk to health, risk to livelihood, and as an enhancement of solidarity. The texts were derived from reliable and publicly available sources. After reading them, the respondents replied to the questions on trust. In the control condition they moved directly to the outcome questions.

In the “risk to health” condition we highlighted the uncertainties related to the diffusion of the virus, including, for example, the fact that (at the time of Wave 1) we did not know when a vaccine would become available and whether there would be a second wave of the pandemic. In the “risk to livelihood” condition we illustrated how the pandemic will hit the economy based on projections mostly by the IMF and the ILO. We mentioned that the pandemic will lead to a global economic recession with serious consequences for the labor market. In the “solidarity” condition we mentioned the need for global cooperation and solidarity to contain the pandemic and prevent future ones – we essentially presented the respondents with the rhetoric of “we are all in the same boat” voiced by the UN Secretary General, among many others. (See SI Appendix G for the texts of the treatments.) Balance checks indicate that there are no statistically significant differences between control and treatment groups regarding almost all the socio-demographic measures included in the survey (see Tables B1-B3).

In the next sections we present the results in three parts: we start from the survey experiment, followed by panel data analysis, in which we investigate the effects of exposure to COVID-19 within respondents. In the third part we present over-time effects.

Experimental results

Our survey experiment allows us to test whether being primed about Covid-19 affects interpersonal trust in the population as a whole regardless of their personal exposure to the virus. The experiment also helps us to identify which aspect of the pandemic – health, livelihood or solidarity concerns – could be the trigger of an effect on trust. This will be of importance when we discuss the mechanisms behind the difference.

Obviously, we could not use real stimuli, hence we substituted real ‘exposure’ with evocative texts that the respondents were asked to read before replying to the trust questions. Besides meeting the criteria for causal identification, our experiment allows us to calculate the *population* average treatment effect (PATE) of being exposed to the prime. In other words, we can discover the potential effects that just thinking about the threat the pandemic poses could have on trust among all Italians, rather than only on those who report COVID-19 symptoms.

We obtain three results (Figure 1): (i) the “solidarity” condition does not affect the willingness to trust strangers; (ii) the “risk to livelihood” condition, that is reminding respondents of how the pandemic might hit the economy and the labor market in the future, causes an increase in trust of 5 percentage points (0.21 SD); (iii) the “risk to health” condition has the largest effect: when reminded of the uncertainties for our health that could be brought about by COVID-19, respondents are more likely to say that they trust strangers by 8 percentage points relative to the control group, corresponding to

0.32 standard deviations. The effects are robust to alternative model specifications, controlling for socio-demographic covariates (see Table B4).¹³

Figure 1. Treatment effects on trust in strangers (Wave 1)

Note: Estimates based on OLS regression Model 1 in Table B4 relative to control group (equal to value of 0 on Y axis). Thin/thick vertical bars are 95/90% confidence intervals.

Although we did not repeat the experiment, we tested whether the effect of the “risk to health” condition in Wave 1 lasted over time, by using trust in strangers as reported by our respondents in Waves 2 and 3. Surprisingly, we find that five months later (Wave 2, November 2020), those who were primed with the risk of health in Wave 1 still trusted strangers approximately 8 percentage points (0.31 SD) more than those who did not receive any treatment (see Table B4). This long-lasting effect does not seem to depend on imbalances between treatment conditions in terms of socio-demographic covariates (see

¹³ Our “risk to health” treatment does not affect trust in neighbours and the police, but increases generalized trust by 6-7%, although the effect is significant at the 90% level (see Table B5).

Tables B1-B3), and does not depend on differential exposure to the virus at the individual level (see Table B6). Ten months after Wave 1 the effect of the treatment declines (Wave 3, February 2021) and is not statistically significant when we introduce covariates in the model (see Table B4).

Exposure to COVID-19

We now report the results of being exposed to the actual virus along three dimensions: as an individual, via one's personal network and via one's community. We exploit the panel structure of our data using a within-between random effects model (27), also known as the 'hybrid model' (25, p. 23-25; 26). This model allows us to detect whether those who have been exposed to COVID-19 during the period of the panel study trust strangers to a different extent from those who were not exposed (the between effect). Furthermore, it permits us to identify whether a change in the exposure during the same period for specific individuals is associated with a change in trust (the within effect). (See Method section for further description of the model).

If we first focus on differences between individuals, we find that those who reported symptoms trust strangers more than those with no symptoms. Specifically, those who suffered from COVID-19 once during the 10-month period of our study trust strangers 6.5 percentage points (0.26 SD) more than those who did not catch the virus. If we restrict the analysis only to those who had diagnostic confirmation of their perceived symptoms, this distance widens to 9.5 percentage points (0.37 SD) (see table C1).¹⁴

¹⁴ Cross-sectional analysis of each separate wave substantially confirms the results of panel data analysis, showing that those who suffered from COVID-19 trust strangers more than those who did not suffer, and the effect is substantially driven by those who repeatedly reported COVID-19 symptoms over time (see Tables A3-A5).

Vicarious exposure, that is knowing a family member, a friend or a colleague who suffered from COVID-19 symptoms does not influence trust during the panel. The association between excess death in the respondents' municipality of residence and trust varies by wave. If we consider the entire panel, excess deaths does not correlate with trust in strangers. However, those living in the most affected municipalities (fifth quintile) during the first phase of the pandemic in spring 2020 (Wave 1) are 14 percentage points (0.55 SD) more likely to trust strangers than those who live in the least affected municipalities (first quintile) (see Tables A3).

These results tally with the results of our experiment and point forcefully towards a positive effect that experiencing the virus personally has on trusting strangers. While the experiment allows us to claim that the effect of priming on risk of health is causal, the correlational results cannot guarantee that it is the exposure to the coronavirus that *leads* to higher trust. Inverse causation – that is, from trust to exposure – is conceivable as people who are more trusting may be less guarded in their behavior and catch the virus more frequently.

To address this possibility, we resort to the within-individual component of our panel-data model, which allows us to detect whether a change in exposure to the virus of specific individuals leads to a change in trust for those individuals, keeping all time-invariant individual characteristics fixed. If we observe that developing COVID-19 symptoms during the panel is associated with an increase in trust, we can be fairly confident that it is the former causing the latter, and not the reverse.

We find that catching the virus during the period of the panel *leads* to an increase in the belief that a stranger would return a wallet. This *within-effect* indicates that the same persons increase their trust in strangers if they catch the virus during the period of our study. Specifically, an individual change from no symptoms to having COVID-19 symptoms is associated with an increase in trust in strangers of 9 percentage points (0.32 SD) (Figure 2, orange line). The size of the effect is close if we consider only

the respondents who received diagnostic confirmation of their symptoms (an increase of 7 percentage points, 0.27 SD, Figure 2, red line).

Figure 2. Individual change in exposure to COVID-19 and trust in strangers (panel data analysis)

Note: Estimates from panel data analysis (within-between random effects model), controlling for individual socio-demographics, municipality-level controls, treatment groups and geographical area of residence (Model 2 in Table C1). Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely). Vertical bars are 95% confidence intervals.

To further address causality, in supplementary analysis we use cross-lagged models (30, 31), in which we regress our measure of trust in strangers in Wave 2 (or Wave 3) on exposure to COVID-19 *and* trust in strangers in previous waves. We find that those who suffered from COVID-19 in Wave 1 are 9 percentage points more likely to trust strangers in Wave 2, controlling for previous level of trust in Wave 1. Suffering from COVID-19 in Wave 2, however, does not influence trust in Wave 3 once we control for previous levels of trust (see Table C4).

In sum, panel data analysis provides robust evidence that direct exposure to COVID-19 leads people to increase their trust in strangers.¹⁵ There is also indirect evidence that compliance with social distancing and “stay-at-home” guidelines is stronger in areas with high social capital and high trust in Europe and the U.S. (32–35) thus suggesting that inverse causality could rest on a conceivable but ultimately wrong assumption.

Effects over time

Does catching the virus lead to *persisting* higher levels of trust? We know that the mere priming we did in the experiment does have some lasting power, but does that follow real exposure too? To address this question, we analyze the trend of trust in strangers during the period of the panel across different categories of individuals.¹⁶ Specifically, we investigate whether those who caught the virus at different points in time differ in their level of trust compared to those who at no point suffer from COVID-19. Furthermore, we distinguish between those who caught the virus once and recovered from those who continued to suffer from COVID-19 symptoms at different points in time.

First, we find that trust remains substantially stable among those who did not suffer from COVID-19 during the panel (the blue lines in Figure 3). Second, in line with cross-sectional analysis, we find that those who suffer from COVID-19 in Wave 1 (Figure 3, left-hand panel) and in Wave 2 (Figure 3, right-hand panel) trust strangers more than those who did not catch the virus. However, once

¹⁵ If we use alternative measures of trust, we do not find an effect of catching the virus during the panel on the standard measure of trust (see Table C2), while we do find that those who catch the virus between Wave 2 and Wave 3 increase their level of trust in Italians (see Table C3).

¹⁶ We stacked the datasets of each panel wave into a single dataset, including a “time” variable corresponding to each wave. We then interacted our time variable with different categories of individuals, depending on whether and when during the panel they suffered from COVID-19. We cluster the standard error at the respondent level.

people *recover* from COVID-19, their level of trust declines to a level that is not statistically different from the level of those who did not catch the virus, as the red lines in Figure 3 indicate. On the other hand, trust declines less sharply if the respondents continued to suffer from COVID-19 in Wave 2 (the green line in the left-hand plot) or does *not* decline if the respondents continued to suffer in Wave 3 (the green line in the right-hand plot). Among the latter group of people, trust remains steadily higher in Wave 3 compared to those who did not suffer.

Figure 3. Trust in strangers over time

Note: Average levels of trust based on OLS regression model interacting categories of individuals with COVID-19 symptoms with a wave variable, controlling for gender, age, education level and geographical area of residence. Standard errors clustered at the respondent level. Thin/thick vertical bars are 95%/90% confidence intervals. For complete regression models, see Table D1.

These results suggest that the increase in trust due to COVID-19 might persist but only as long as people believe they are infected by the virus. Once free from it, people slip back to trusting strangers as much as those who were not individually exposed to the virus.

Mechanisms

Why does the pandemic seem to have the same positive effect on people's trust as shown by other natural disasters? Ruling out the possibility that trust is fostered by "longer interactions during reconstruction [phases]" (2, p. 91), since the pandemic does not destroy physical capital, we identify three possible explanatory mechanisms.

A first mechanism that might promote trust in strangers could result from an increase in empathy. COVID-19 could enhance our sense of *empathy* towards fellow humans – driven by the idea that we are all facing the same invisible threat, we are all "in the same boat". Some general evidence indicates that empathic concerns towards vulnerable others promote prosocial behavior (36, 37), while some evidence specific to the COVID-19 pandemic (38) suggests that greater empathy stimulates compliance with social distancing and hygienic rules. Observing these effects might induce more trust in strangers. Our evidence however does not seem to support this conjecture. Our "solidarity" treatment condition, in which we remind respondents of the duty to show solidarity towards the most vulnerable does not lead to an increase in trust in strangers regardless of the respondents' exposure to the virus. Even if empathy has increased, this does not seem to spill over and make individuals readier to rely on unknown others.

Second, we conjecture that those who received help during the pandemic may have learnt that strangers are "better" than what they thought and revise their trust upward. Anecdotal and survey evidence indicate that in several European countries including Italy there was a surge in the number of

people volunteering to help others in need (39–41). To test this mechanism, we asked our respondents whether they received help by strangers or volunteers before the pandemic, during the first lockdown (spring 2020), and between the second and third wave of the panel, from November 2020 until February 2021. The results show that those who suffered from COVID-19 *and* received help by strangers or volunteers during the pandemic (controlling for receiving help before the pandemic), trust strangers substantially more than those who were affected by the virus but did not receive help (Figure 4, bottom-right plot). This finding suggests that exposure to COVID-19 increases trust in strangers even more if people benefit from volunteers' help.

The third mechanism that we consider has to do with the fear of succumbing to the pandemic. Cassar and her colleagues (2, p. 91) include among the mechanisms that might enhance trust after a natural disaster “an increase in the perceived probability that a similar event might occur in the future [which] increases the potential for needing help from others in the future”. In a pandemic which unlike an earthquake is not a one-off event but rolls on for an indefinite length of time, the future takes a particular form as it is seamlessly connected to the present and the need of others may indeed present itself at any time. Either experiencing the actual symptoms of the virus or just the realistic fear that we may be struck by it could make us feel more needy, more dependent on the support of others.

This conjecture is strengthened by being closely linked to a well-tested theory that argues that trust is higher when people have strong reasons to identify strangers on whom they can rely, and in that quest they seek “outward exposure”. Known as the “emancipation theory of trust”, it was proposed by Toshio Yamagishi and his colleagues (42–44) in a completely different context to a pandemic, namely to explain why US citizens, members of a highly mobile society, were found to be more trusting of strangers than the Japanese, who belong to a more traditional and committed society that relies on family and groups. The theoretical argument maintains that the less encompassing traditional or

institutional ties are, the more people feel encouraged to be open to and actively look for strangers on whom they can count. The pandemic would be a sharply different source – transient and dramatic rather than structural and habitual – but that could still boost the propensity to outward exposure.¹⁷ Perceiving their health at risk could induce people to be more open towards others, more eager to learn whether they could rely on them in case; or even just feel more optimistic about others’ trustworthiness through wishful thinking – when in dire need any hand looks like a helping hand. In fact, the short-lived nature of the effect suggests more an emotional mechanism, than a rational one.

An implication of this conjecture is that people in weaker positions, whether social or financial should react more strongly when developing the symptoms of the infection, and trust strangers more than similar people in stronger social and financial positions. Kye and Hwang, for example, find that during the lockdown in the spring 2020 in Korea, “trust improved more among the lower class than among the upper class” (13, p. 4). To test these implications, we analyze a series of interactions between individual exposure to COVID-19 and different socio-demographic indicators within our panel model.

First, we consider two measures of social isolation, whether the respondents (i) had any close relative alive at the beginning of the pandemic in February 2020 and (ii) lived alone (Figure 4, top row). In line with the expectations, trust in strangers increases among those who suffered from COVID-19 and either did not have a family or lived alone. Those who lived alone in particular trust strangers significantly more than those who caught the virus but lived with other people.

Next, we look at economic conditions (Figure 4, bottom-left plot) using a self-reported measure recoded in two categories: those who state that their income allows them to live comfortably (good

¹⁷ Three studies found supporting evidence for the emancipation theory by looking at the effects on trust of the strength of family ties (52–54).

condition), and those who perceive some difficulties or struggle to reach the end of the month (not good condition). In line with the expectations, and the finding of the Korean study, we find that among those who reported symptoms, trust in strangers is higher if they perceive some economic difficulties compared to those in a good economic situation.

Figure 4. Testing mechanisms (panel data, interaction models)

Note: Average marginal effects based on interactions between suffering from COVID-19 (equal to 1 if suffered at least once during the panel) and socio-demographic indicators. Panel data analysis (between effects). The models include the same set of covariates include in Figure 2. The value of 0 corresponds to those who did not have symptoms. Thin/thick vertical bars are 95/90% confidence intervals. Cross and star signs indicate that the interaction is statistically significant (+ = $p < 0.1$, * = $p < 0.05$). For complete regression models, see Tables C5-C6.

Discussion

Our key finding shows that among Italians the pandemic has increased trust. We measure trust with the wallet question with respect to strangers, but other measures of trust are broadly aligned, and in no case do we find a decrease in trust. We reach this finding through a variety of methods, whose outcomes converge on the same conclusion. It emerges for those primed in our experiment on the risks of the pandemic, especially risk to health, for those who live in the most affected communities (in the first Wave of our panel) and for those who report symptoms of the infection at any point in the span of time our study covers. Both the experiment and the within-effect analysis of panel data support the causal interpretation of the increase in trust and rule out the possibility of inverse causality.

As to the precise nature of the cause, our ex-post analysis has pinpointed two mechanisms that could plausibly explain the increase in trust: first, experiencing higher than expected helpfulness from strangers who mobilize during the pandemic could result in a change of beliefs about trustworthiness. Next, the heightened health risk could make the need for the support of others become more salient and stimulate putting greater trust in them. Both mechanisms could have a rational source, adjusting one's beliefs to new information in the former mechanism or wanting to learn about others trustworthiness in the latter; or they could be driven by an emotional response, sympathy for generous fellow humans in the former case or wishful thinking in the latter case – when in dire need any hand looks like a helping hand. In fact, the short-lived nature of the effect makes an emotional source more plausible than a rational one.

Our finding seems *prima facie* aligned with the predominant finding in the literature on the positive effects of natural disasters on trust. However, there are certain differences that make the comparison imperfect. Our research is in the unique position of being carried out *during* a protracted

pandemic, rather than in the aftermath as commonly the case with most other natural disasters. This suggests that the effect of exposure to COVID-19 on trust which seems to wane once people recover from the virus may be more ephemeral than that produced by other natural disasters.

We may, in conclusion, wonder how representative the case of Italy is of the effects on trust the pandemic is having in other countries. With respect to the size of the effect it is at present difficult to say for there are no studies that are closely comparable to ours. With respect to the direction of the effect, our results are in line with the majority of the research, published and unpublished, showing that interpersonal trust has been increasing in several countries (13-16). However, we make no strong claims of generalizability. The effect may be contingent on factors that vary by country, such as the pre-pandemic levels of trust and the accuracy of the expectations on which that level is based.

Materials and Methods

In Wave 1, we surveyed a quota sample matching the adult Italian population on gender, age and geographical area of residence (N=1163).¹⁸ Ninety-two percent of the initial sample completed also Wave 2, while 90 percent completed also Wave 3. In order to obtain a representative sample, in cross-sectional analysis we weighed each sample by level of education and political preferences as expressed in the vote in the 2019 European elections.

In the cross-sectional analysis, we analyze the data using standard regressions models. In each model we include individual-level and municipality-level covariates to control for confounding factors.

¹⁸ We included our questions in an omnibus study conducted by the survey company SWG. The questions were vetted by SWG and the respondents provided informed consent to participate in the study. Due to space limitation, we included a first set of questions and the experiment in a first round between April 30 and May 4, 2020, and then re-interviewed the same participants with an additional set of questions between May 14-19. (For further details on data collection, see SI Appendix E.)

At individual level, we control for factors that have been shown to correlate with the spread of COVID-19, such as respondents' gender (45), age (46), and household condition, i.e., whether respondents live by themselves or with other people (47).¹⁹ In addition, we control for respondents' education level, the employment situation during the lockdown (separating those who worked from home from those who continued working outside home), and perceived economic condition.

At municipality level we control for a number of indicators provided by ISTAT for the year 2018, which might correlate with the spread of the virus, including the number of inhabitants (logged), the population density (logged), the ratio of males over females (deciles), and the share of people aged above 65 (deciles). In addition, we control for the employment rate in 2018 (deciles).²⁰ Lastly, in each model we include an indicator for the geographical area of residence (North-West, North-East, Centre, South, and Islands). (See summary statistics in Table A1). Since including covariates might artificially inflate statistical significance (48), we also run naïve regression models in which we control only for geographical areas and basic socio-demographic factors (gender, age, and education), obtaining substantially similar results.

In panel data analysis, we use a within-between random effects model (27), also known as the 'hybrid model' (25, p. 23-25; 26). This model allows us to address the problem of the correlation between covariates and residuals in random-effects models, while permitting to estimate variation both within and between individuals. The model can be described by the following equation:

$$y_{it} = \beta_0 + \beta_1(x_{it} - \bar{x}_i) + \beta_2\bar{x}_i + \beta_3z_i + v_i + \varepsilon_{it}$$

¹⁹ But see recent evidence from Arpino and colleagues casting doubt on the link between intergenerational relationships and lethality of COVID-19 (55).

²⁰ Data by *Il Sole 24 Ore* retrieved on 8 June 2020, from www.infodata.ilssole24ore.com/2019/04/16/39185/.

in which y is the dependent variable (trust) for individual i at time t , x corresponds to our time-varying independent variables (exposure to COVID-19), and z corresponds to a series of time-constant independent variables that vary only across individuals. The coefficient β_1 represents within-individual effects, while the coefficients β_2 and β_3 correspond to between-individual effects. In our case, this model allows us to estimate at the same time whether both a) average differences in exposure to COVID-19 (the ‘between’ component), and b) individual changes in individual COVID-19 exposure (the ‘within’ component) correlate with changes in trust.

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***L'enfer c'est les autres?* The effects of COVID-19 virus on interpersonal trust**

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A. Cross-sectional analysis

Table A1. Summary statistics

	Count	Mean	SD	Min	Max
Wave 1					
Trust neighbors (wallet question) W1	1163	0.64	0.29	0	1
Trust police officers (wallet question) W1	1163	0.76	0.25	0	1
Trust strangers (wallet question) W1	1163	0.42	0.25	0	1
Generalized trust (standard question) W1	1163	0.32	0.47	0	1
Suffered from COVID-19 W1	1163	0.11	0.31	0	1
Know family members with COVID-19 W1	1163	0.25	0.65	0	3
Know friends/acquaintances with COVID-19 W1	1163	0.62	0.99	0	3
Know work colleagues with COVID-19 W1	1163	0.25	0.69	0	3
Excess deaths March-April 2020 (weighted)	1163	24.58	37.50	-20	260
Females	1163	0.52	0.50	0	1
Age	1162	50.11	16.71	18	90
Education: Below high school	1163	0.25	0.43	0	1
Education: High school diploma	1163	0.48	0.50	0	1
Education: Some college/Bachelor degree	1163	0.16	0.36	0	1
Education: Advanced degree	1163	0.12	0.32	0	1
Live alone W1	1163	0.11	0.31	0	1
Employment: Worked outside home	1163	0.17	0.38	0	1
Employment: Worked at home	1163	0.25	0.43	0	1
Employment: Did not work	1163	0.11	0.31	0	1
Employment: Pensioner	1163	0.18	0.39	0	1
Employment: Housemaker	1163	0.10	0.31	0	1
Employment: Student	1163	0.07	0.25	0	1
Employment: Unemployed	1163	0.12	0.32	0	1
Not good (vs good) economic condition W1	1156	0.62	0.49	0	1
Area of residence: North-West	1163	0.27	0.44	0	1
Area of residence: North-East	1163	0.19	0.39	0	1
Area of residence: Center	1163	0.20	0.40	0	1
Area of residence: South	1163	0.23	0.42	0	1
Area of residence: Islands	1163	0.11	0.32	0	1
Population (logged)	1163	10.92	20.76	5.40	14.86
Population density (logged)	1163	6.70	1.41	2.69	9.37
Ratio of males over females	1163	0.94	0.04	0.85	1.15
Share of aged 65+	1163	0.22	0.04	0.09	0.35
Employment rate	1160	62.02	9.68	37.7	100
Wave 2					
Trust neighbors (wallet question) W2	1065	0.68	0.29	0	1
Trust police officers (wallet question) W2	1065	0.76	0.27	0	1
Trust strangers (wallet question) W2	1065	0.38	0.26	0	1
Generalized trust (standard question) W2	1065	0.33	0.47	0	1
Trust Italians W2	1049	0.49	0.24	0	1
Suffered from COVID-19 W2	1065	0.06	0.24	0	1
Know family members with COVID-19 W2	1065	0.19	0.564	0	3

Know friends/acquaintances with COVID-19 W2	1065	0.87	1.16	0	3
Know work colleagues with COVID-19 W2	1065	0.34	0.79	0	3
Excess deaths Sept.-Oct. 2020 (weighted)	1065	8.35	11.84	-27.47	146.67
Live alone W2	1065	0.12	0.32	0	1
Not good (vs good) economic condition W2	1065	0.57	0.49	0	1
Wave 3					
Trust neighbors (wallet question) W3	1052	0.674	0.29	0	1
Trust police officers (wallet question) W3	1052	0.75	0.26	0	1
Trust strangers (wallet question) W3	1052	0.39	0.25	0	1
Generalized trust (standard question) W3	1052	0.33	0.47	0	1
Trust Italians W3	1035	0.47	0.24	0	1
Suffered from COVID-19 W3	1052	0.08	0.27	0	1
Know family members with COVID-19 W3	1052	0.54	0.96	0	3
Know friends/acquaintances with COVID-19 W3	1052	1.69	1.28	0	3
Know work colleagues with COVID-19 W3	1052	0.60	1.02	0	3
Excess deaths December 20-Jan. 21 (weighted)	1052	9.15	13.88	-39.91	80
Live alone W3	1052	0.12	0.32	0	1
Not good (vs good) economic condition W3	1052	0.59	0.49	0	1

Table A2. Correlations between measures of trust (Pearson's correlations)

Wave 1					
	Standard question 1	Trust in neighbors	Trust in police	Trust in strangers	
Standard question 1	1				
Trust in neighbors	0.19	1			
Trust in police	0.15	0.45	1		
Trust in strangers	0.25	0.27	0.19	1	
Wave 2					
	Standard question 1	Trust in neighbors	Trust in police	Trust in strangers	Trust in Italians
Standard question 1	1				
Trust in neighbors	0.31	1			
Trust in police	0.19	0.50	1		
Trust in strangers	0.36	0.40	0.27	1	
Trust in Italians	0.38	0.28	0.29	0.33	1
Wave 3					
	Standard question 1	Trust in neighbors	Trust in police	Trust in strangers	Trust in Italians
Standard question 1	1				
Trust in neighbors	0.32	1			
Trust in police	0.22	0.51	1		
Trust in strangers	0.36	0.37	0.29	1	
Trust in Italians	0.38	0.24	0.30	0.32	1

Note: All correlations are statistically significant ($p < 0.001$).

Table A3. Exposure to COVID-19 and trust in strangers (Wave 1)

	<i>Trust in strangers (wallet question) - Wave 1</i>			
	(1)		(2)	
Suffered from COVID-19 (W1)	0.111**	(0.037)	0.100**	(0.036)
<i>Coefficient on standardized DV</i>	<i>0.437</i>	<i>(0.147)</i>	<i>0.393</i>	<i>(0.142)</i>
Know...				
... family members with COVID-19 (from 0 to 3) W1	0.022	(0.018)	0.022	(0.018)
... friends/acquaintances with COVID-19 (from 0 to 3) W1	-0.005	(0.011)	-0.004	(0.011)
... work colleagues with COVID-19 (from 0 to 3) W1	-0.002	(0.013)	-0.008	(0.013)
Excess deaths March-April 2020 (r.c. = 1 st quintile)				
- 2 nd quintile	-0.007	(0.027)	0.020	(0.030)
- 3 rd quintile	0.006	(0.029)	0.006	(0.030)
- 4 th quintile	0.071*	(0.030)	0.079*	(0.031)
- 5 th quintile	0.119**	(0.041)	0.139**	(0.046)
Females	-0.004	(0.018)	-0.000	(0.019)
Age	0.001*	(0.001)	0.002*	(0.001)
Education (r.c. = High school diploma)				
- Below high school	-0.009	(0.025)	-0.008	(0.025)
- Some college/Bachelor degree	0.034	(0.026)	0.032	(0.026)
- Advanced degree	-0.003	(0.025)	-0.005	(0.025)
Area of residence (r.c. = North-West)				
- North-East	0.087**	(0.032)	0.102**	(0.039)
- Center	0.044	(0.034)	0.068+	(0.037)
- South	0.068+	(0.038)	0.097*	(0.046)
- Islands	-0.037	(0.040)	-0.004	(0.050)
Treatment group	Yes		Yes	
Live alone W1			0.050	(0.033)
Employment (r.c. = worked at home)				
- Worked outside home			0.049+	(0.027)
- Did not work			-0.029	(0.034)
- Pensioner			-0.028	(0.029)
- Housemaker			-0.013	(0.037)
- Student			0.002	(0.043)
- Unemployed			0.032	(0.038)
Not good (vs good) economic condition W1			-0.013	(0.019)
Population (logged)			-0.006	(0.008)
Population density (logged)			0.008	(0.012)
Ratio of males over females (deciles)			0.005	(0.006)
Share of aged 65+ (deciles)			0.012*	(0.005)
Employment rate (deciles)			-0.003	(0.007)
Constant	0.226***	(0.053)	0.111	(0.136)
R ²	.097		.122	
N	1162		1152	

Note: OLS regression coefficients with standard errors in parentheses. Weighted estimates. Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely).

+ p<.1, * p<.05, ** p<.01, *** p<.001

Table A4. Exposure to COVID-19 and trust in strangers (Wave 2)

	<i>Trust in strangers (wallet question) - Wave 2</i>			
	(1)		(2)	
Suffered from COVID-19 (W2)				
- New symptoms	-0.032	(0.050)	-0.018	(0.053)
- Repeated symptoms	0.200**	(0.066)	0.188**	(0.066)
Know...				
... family members with COVID-19 (from 0 to 3) W2	0.025	(0.018)	0.023	(0.018)
... friends/acquaintances with COVID-19 (from 0 to 3) W2	0.012	(0.009)	0.016+	(0.009)
... work colleagues with COVID-19 (from 0 to 3) W2	-0.011	(0.014)	-0.022	(0.014)
Excess deaths September-Oct. 2020 (r.c. = 1 st quintile)				
- 2 nd quintile	-0.059+	(0.034)	-0.055+	(0.032)
- 3 rd quintile	-0.054	(0.035)	-0.012	(0.040)
- 4 th quintile	-0.046	(0.035)	-0.038	(0.034)
- 5 th quintile	-0.056+	(0.033)	-0.054+	(0.032)
Treatment group	Yes		Yes	
Socio-demographics (gender, age, education, area of residence)	Yes		Yes	
Live alone W2, Economic condition W2	No		Yes	
Municipality-level controls	No		Yes	
R ²	.093		.119	
N	1064		4062	

Note: OLS regression coefficients with standard errors in parentheses. Weighted estimates. Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely). The models include the same set of covariates included in Table A3. All covariates measured in Wave 1 apart from live alone and perceived economic conditions that were measured again in Wave 2.

+ p<.1, * p<.05, ** p<.01, *** p<.001

Table A5. Exposure to COVID-19 and trust in strangers (Wave 3)

	<i>Trust in strangers (wallet question) - Wave 3</i>			
	(1)		(2)	
Suffered from COVID-19 (W3)				
- New symptoms	-0.061	(0.054)	-0.056	(0.056)
- Repeated symptoms	0.108+	(0.058)	0.111+	(0.060)
Know...				
... family members with COVID-19 (from 0 to 3) W3	0.016	(0.012)	0.018	(0.012)
... friends/acquaintances with COVID-19 (from 0 to 3) W3	-0.005	(0.009)	-0.003	(0.009)
... work colleagues with COVID-19 (from 0 to 3) W3	0.007	(0.011)	-0.001	(0.011)
Excess deaths Dec. 20-Jan. 21 (r.c. = 1 st quintile)				
- 2 nd quintile	-0.030	(0.032)	-0.005	(0.036)
- 3 rd quintile	-0.023	(0.035)	-0.023	(0.036)
- 4 th quintile	0.007	(0.032)	0.001	(0.032)
- 5 th quintile	-0.041	(0.031)	-0.042	(0.032)
Treatment group	Yes		Yes	
Socio-demographics (gender, age, education, area of residence)	Yes		Yes	
Live alone W3, Economic condition W3	No		Yes	
Municipality-level controls	No		Yes	
R ²	.063		.082	
N	1051		1049	

Note: OLS regression coefficients with standard errors in parentheses. Weighted estimates. Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely). The models include the same set of covariates included in Table A3. All covariates measured in Wave 1 apart from live alone and perceived economic conditions that were measured again in Wave 3.

+ p<.1, * p<.05, ** p<.01, *** p<.001

B. Experiment analysis

Table B1. Balance checks (Wave 1)

	Group assignment (reference category = control group)					
	Risk to health (Group 2)		Risk to livelihood (Group 3)		Solidarity (Group 4)	
Suffered from COVID-19 (W1)	-0.267	(0.301)	0.371	(0.297)	0.027	(0.290)
Know...						
... family members with COVID-19 (from 0 to 3) (W1)	0.063	(0.144)	-0.322+	(0.171)	0.045	(0.144)
... friends/acquaintances with COVID-19 (from 0 to 3) (W1)	0.011	(0.094)	0.122	(0.096)	-0.118	(0.096)
... work colleagues with COVID-19 (from 0 to 3) (W1)	0.059	(0.130)	0.043	(0.138)	0.075	(0.132)
Excess deaths March-April 2020 (r.c. = 1 st quintile)						
- 2 nd quintile	0.021	(0.308)	0.105	(0.304)	0.352	(0.303)
- 3 rd quintile	0.401	(0.275)	-0.013	(0.285)	0.600*	(0.274)
- 4 th quintile	0.237	(0.296)	-0.084	(0.304)	0.412	(0.293)
- 5 th quintile	0.349	(0.367)	0.227	(0.375)	0.491	(0.366)
Females	-0.047	(0.181)	0.131	(0.188)	0.091	(0.179)
Age	-0.007	(0.008)	-0.006	(0.008)	-0.003	(0.008)
Education (r.c. = High school diploma)						
- Below high school	0.046	(0.253)	0.177	(0.257)	-0.180	(0.245)
- Some college/Bachelor degree	-0.032	(0.280)	-0.135	(0.292)	-0.152	(0.271)
- Advanced degree	0.063	(0.225)	-0.055	(0.237)	-0.422+	(0.229)
Live alone (W1)	0.029	(0.280)	0.252	(0.281)	0.061	(0.277)
Employment (r.c. = worked at home)						
- Worked outside home	0.177	(0.269)	0.464+	(0.280)	0.358	(0.266)
- Did not work	-0.257	(0.297)	0.265	(0.306)	-0.608+	(0.327)
- Pensioner	-0.085	(0.315)	0.137	(0.333)	0.061	(0.309)
- Housemaker	0.022	(0.374)	0.107	(0.396)	-0.004	(0.370)
- Student	-0.516	(0.423)	0.305	(0.421)	-0.370	(0.419)
- Unemployed	-0.389	(0.365)	-0.163	(0.388)	0.370	(0.322)
Not good economic condition (W1)	-0.039	(0.183)	-0.372+	(0.190)	-0.118	(0.181)
Area of residence (r.c. = North-West)						
- North-East	-0.324	(0.351)	0.084	(0.361)	-0.258	(0.344)
- Center	0.206	(0.372)	-0.080	(0.395)	0.074	(0.369)
- South	0.038	(0.421)	0.415	(0.430)	0.158	(0.409)
- Islands	0.915+	(0.488)	1.144*	(0.501)	0.495	(0.490)
Population (logged)	0.183*	(0.079)	-0.028	(0.079)	0.112	(0.078)
Population density (logged)	-0.187	(0.114)	-0.021	(0.116)	-0.122	(0.111)
Ratio of males over females (deciles)	0.089+	(0.053)	-0.019	(0.052)	0.077	(0.052)
Share of aged 65+ (deciles)	-0.004	(0.045)	0.032	(0.046)	0.033	(0.045)
Employment rate (deciles)	0.102	(0.064)	0.068	(0.067)	0.079	(0.063)
Constant	-1.558	(1.335)	-0.189	(1.335)	-1.391	(1.300)
Pseudo R ²				.034		
N				1152		

Note: Multinomial logistic regression of random assignment to treatment groups on socio-demographic and municipality-level covariates. Coefficients are log odds. Standard errors in parentheses. + p<.1, * p<.05, ** p<.01, *** p<.001

Table B2. Balance checks (Wave 2)

	Group assignment (reference category = control group)					
	Risk to health (Group 2)		Risk to livelihood (Group 3)		Solidarity (Group 4)	
Suffered from COVID-19 (W2)						
- New symptoms	-0.080	(0.534)	-0.210	(0.558)	0.193	(0.495)
- Repeated symptoms	0.724	(0.540)	0.506	(0.549)	0.662	(0.540)
Know...						
... family members with COVID-19 (from 0 to 3) (W2)	-0.207	(0.173)	0.117	(0.168)	-0.128	(0.169)
... friends/acquaintances with COVID-19 (from 0 to 3) (W2)	0.091	(0.084)	-0.080	(0.089)	0.004	(0.085)
... work colleagues with COVID-19 (from 0 to 3) (W2)	0.051	(0.127)	0.039	(0.135)	0.111	(0.128)
Excess deaths September-October 2020 (r.c. = 1 st quintile)						
- 2 nd quintile	-0.403	(0.290)	-0.416	(0.294)	-0.279	(0.284)
- 3 rd quintile	-0.271	(0.366)	-0.545	(0.387)	-0.684+	(0.380)
- 4 th quintile	0.266	(0.311)	0.230	(0.315)	0.067	(0.314)
- 5 th quintile	-0.316	(0.301)	-0.007	(0.295)	0.169	(0.290)
Females	-0.040	(0.190)	0.207	(0.196)	0.177	(0.188)
Age	-0.009	(0.008)	-0.008	(0.009)	-0.008	(0.008)
Education (r.c. = High school diploma)						
- Below high school	0.205	(0.270)	0.167	(0.273)	-0.235	(0.264)
- Some college/Bachelor degree	0.011	(0.295)	-0.129	(0.304)	-0.289	(0.288)
- Advanced degree	0.002	(0.232)	-0.000	(0.244)	-0.483*	(0.234)
Live alone (W2)	-0.214	(0.276)	0.074	(0.277)	-0.057	(0.267)
Employment (r.c. = worked at home)						
- Worked outside home	-0.002	(0.284)	0.614*	(0.289)	0.349	(0.279)
- Did not work	-0.148	(0.303)	0.188	(0.320)	-0.520	(0.337)
- Pensioner	0.066	(0.330)	0.211	(0.350)	0.308	(0.325)
- Housemaker	0.127	(0.391)	0.173	(0.409)	0.115	(0.385)
- Student	-0.487	(0.464)	0.579	(0.454)	-0.171	(0.459)
- Unemployed	-0.410	(0.387)	-0.164	(0.399)	0.401	(0.340)
Not good economic condition (W2)	-0.267	(0.187)	-0.295	(0.194)	-0.237	(0.186)
Area of residence (r.c. = North-West)						
- North-East	-0.357	(0.323)	-0.166	(0.328)	-0.246	(0.315)
- Center	0.241	(0.345)	-0.232	(0.363)	-0.005	(0.341)
- South	-0.003	(0.422)	0.104	(0.428)	-0.017	(0.413)
- Islands	0.884+	(0.502)	0.845+	(0.507)	0.194	(0.509)
Population (logged)	-0.129	(0.119)	0.012	(0.094)	-0.156	(0.116)
Population density (logged)	0.109*	(0.054)	-0.052	(0.120)	0.091+	(0.053)
Ratio of males over females (deciles)	0.010	(0.046)	-0.016	(0.052)	0.033	(0.046)
Share of aged 65+ (deciles)	0.113+	(0.065)	0.000	(0.047)	0.080	(0.064)
Employment rate (deciles)	-1.564	(1.407)	0.086	(0.067)		
Constant	-1.564	(1.407)	0.126	(1.387)	-2.002	(1.379)
Pseudo R ²				.034		
N				1062		

Note: Multinomial logistic regression of random assignment to treatment groups on socio-demographic and municipality-level covariates. Coefficients are log odds. Standard errors in parentheses. + p<.1, * p<.05, ** p<.01, *** p<.001

Table B3. Balance checks (Wave 3)

	Group assignment (reference category = control group)					
	Risk to health (Group 2)		Risk to livelihood (Group 3)		Solidarity (Group 4)	
Suffered from COVID-19 (W3)						
- New symptoms	1.301*	(0.533)	0.289	(0.629)	0.074	(0.628)
- Repeated symptoms	0.528	(0.409)	-0.025	(0.455)	0.441	(0.412)
Know...						
... family members with COVID-19 (from 0 to 3) (W3)	0.079	(0.098)	0.050	(0.103)	-0.006	(0.099)
... friends/acquaintances with COVID-19 (from 0 to 3) (W3)	0.043	(0.078)	-0.065	(0.079)	-0.015	(0.075)
... work colleagues with COVID-19 (from 0 to 3) (W3)	0.023	(0.097)	0.055	(0.101)	0.001	(0.097)
Excess deaths December 20- January 21 (r.c. = 1 st quintile)						
- 2 nd quintile	0.071	(0.313)	0.194	(0.322)	0.223	(0.317)
- 3 rd quintile	0.283	(0.301)	0.313	(0.309)	0.304	(0.304)
- 4 th quintile	0.016	(0.298)	0.269	(0.300)	0.487+	(0.287)
- 5 th quintile	0.197	(0.296)	0.196	(0.301)	0.395	(0.292)
Females	-0.040	(0.191)	0.169	(0.197)	0.123	(0.187)
Age	-0.001	(0.008)	-0.005	(0.009)	0.000	(0.008)
Education (r.c. = High school diploma)						
- Below high school	0.124	(0.276)	0.363	(0.274)	-0.050	(0.261)
- Some college/Bachelor degree	0.198	(0.293)	-0.005	(0.304)	-0.168	(0.288)
- Advanced degree	0.216	(0.235)	0.144	(0.247)	-0.273	(0.237)
Live alone (W3)	-0.224	(0.283)	0.133	(0.279)	-0.041	(0.269)
Employment (r.c. = worked at home)						
- Worked outside home	0.103	(0.280)	0.441	(0.290)	0.345	(0.276)
- Did not work	-0.209	(0.314)	0.151	(0.325)	-0.630+	(0.345)
- Pensioner	-0.051	(0.337)	0.120	(0.354)	0.039	(0.330)
- Housemaker	0.020	(0.400)	0.064	(0.418)	0.016	(0.391)
- Student	-0.608	(0.460)	0.339	(0.450)	-0.191	(0.451)
- Unemployed	-0.550	(0.383)	-0.400	(0.401)	0.186	(0.334)
Not good economic condition (W3)	-0.069	(0.190)	-0.144	(0.197)	0.089	(0.187)
Area of residence (r.c. = North-West)						
- North-East	-0.545+	(0.326)	-0.077	(0.324)	-0.342	(0.309)
- Center	0.182	(0.341)	-0.176	(0.362)	-0.005	(0.338)
- South	0.027	(0.403)	0.265	(0.411)	0.090	(0.389)
- Islands	0.794+	(0.479)	1.001*	(0.488)	0.166	(0.486)
Population (logged)	0.159+	(0.085)	-0.048	(0.085)	0.106	(0.084)
Population density (logged)	-0.130	(0.120)	-0.004	(0.121)	-0.087	(0.116)
Ratio of males over females (deciles)	0.112*	(0.054)	-0.019	(0.052)	0.083	(0.052)
Share of aged 65+ (deciles)	0.016	(0.046)	0.017	(0.047)	0.018	(0.045)
Employment rate (deciles)	0.099	(0.064)	0.068	(0.067)	0.077	(0.062)
Constant	-2.281+	(1.380)	-0.153	(1.359)	-1.705	(1.329)
Pseudo R ²				.035		
N				1049		

Note: Multinomial logistic regression of random assignment to treatment groups on socio-demographic and municipality-level covariates. Coefficients are log odds. Standard errors in parentheses. + p<.1, * p<.05, ** p<.01, *** p<.001

Table B4. Treatment effects on trust in strangers

Trust in strangers (wallet question)						
Wave 1						
	(1)		(2)		(3)	
Treatment groups (r.c. = control)						
- Risk to health (Group 2)	0.080***	(0.021)	0.081***	(0.020)	0.079***	(0.021)
Coefficient on standardized DV	0.318***	(0.082)	0.322***	(0.080)	0.314***	(0.081)
- Risk to livelihood (Group 3)	0.052*	(0.022)	0.050*	(0.021)	0.045*	(0.021)
Coefficient on standardized DV	0.207*	(0.085)	0.198*	(0.083)	0.178*	(0.084)
- Solidarity (Group 4)	0.023	(0.021)	0.016	(0.020)	0.013	(0.020)
Coefficient on standardized DV	0.092	(0.081)	0.065	(0.079)	0.050	(0.080)
R ²	.015		.082		.094	
N	1163		1162		1152	
Wave 2						
	(4)		(5)		(6)	
Treatment groups (r.c. = control)						
- Risk to health (Group 2)	0.078***	(0.022)	0.076***	(0.021)	0.073***	(0.022)
- Risk to livelihood (Group 3)	0.006	(0.023)	0.000	(0.022)	-0.002	(0.022)
- Solidarity (Group 4)	0.006	(0.022)	-0.000	(0.021)	-0.002	(0.021)
R ²	.016		.097		.109	
N	1065		1064		1062	
Wave 3						
	(7)		(8)		(9)	
Treatment groups (r.c. = control)						
- Risk to health (Group 2)	0.044*	(0.022)	0.036	(0.022)	0.034	(0.022)
- Risk to livelihood (Group 3)	0.007	(0.023)	0.005	(0.022)	-0.001	(0.023)
- Solidarity (Group 4)	-0.018	(0.022)	-0.021	(0.021)	-0.021	(0.021)
R ²	.008		.077		.092	
N	1052		1051		1049	
Exposure to COVID-19	No		Yes		Yes	
Geographical area of residence	No		Yes		Yes	
Socio-demographics (gender, age, education)	No		Yes		Yes	
Live alone, employment situation, perceived economic condition	No		No		Yes	
Municipality-level controls	No		No		Yes	

Note: OLS regression coefficients with standard errors in parentheses. Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely). + p<.1, * p<.05, ** p<.01, *** p<.001

Table B5. Treatment effects on other measures of trust (Wave 1)

	Trust in neighbors (wallet question)		Trust in police officers (wallet question)		Generalized trust	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment groups (r.c. = control)						
- Risk to health (Group 2)	0.005 (0.023)	0.006 (0.023)	0.015 (0.020)	0.020 (0.021)	0.067+ (0.040)	0.062+ (0.039)
- Risk to livelihood (Group 3)	-0.040+ (0.024)	-0.049* (0.024)	-0.032 (0.021)	-0.037+ (0.021)	-0.028 (0.041)	-0.045 (0.039)
- Solidarity (Group 4)	-0.009 (0.023)	-0.012 (0.023)	0.010 (0.020)	0.011 (0.020)	-0.023 (0.039)	-0.024 (0.038)
Exposure to COVID-19	No	Yes	No	Yes	No	Yes
Geographical area of residence	No	Yes	No	Yes	No	Yes
Socio-demographics (gender, age, education)	No	Yes	No	Yes	No	Yes
Live alone, employment situation, perceived economic condition	No	Yes	No	Yes	No	Yes
Municipality-level controls	No	Yes	No	Yes	No	Yes
R ² / Pseudo R ²	.004	.060	.005	.062	.066	.076
N	1163	1152	1163	1152	1163	1152

Note: Columns 1-4: OLS regression coefficients with standard errors in parentheses. Dependent variables: likelihood that neighbors/police officers return lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely).

Columns 5-6: average marginal effects based on logistic regressions, with standard errors in parentheses. Dependent variable: respondents who believe that “most of the people can be trusted” (versus “we need to be very careful”).

+ p≤.1, * p<.05, ** p<.01, *** p<.001

Table B6. Heterogeneous treatment effects by individual exposure to COVID-19

Trust in strangers (wallet question)

	Wave 1		Wave 2		Wave 3	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment groups (r.c. = control)						
- Risk to health (Group 2)	0.074*** (0.022)	0.075*** (0.022)	0.062** (0.022)	0.064** (0.022)	0.042+ (0.023)	0.041+ (0.023)
- Risk to livelihood (Group 3)	0.042+ (0.023)	0.043+ (0.023)	-0.004 (0.023)	-0.007 (0.023)	0.003 (0.023)	-0.005 (0.023)
- Solidarity (Group 4)	0.022 (0.022)	0.015 (0.022)	0.007 (0.022)	0.004 (0.022)	-0.019 (0.022)	-0.021 (0.022)
Suffered from COVID-19	0.112* (0.047)	0.101* (0.047)	0.134* (0.068)	0.170* (0.069)	0.176** (0.065)	0.196** (0.065)
Risk to health X suffered from COVID-19	0.063 (0.065)	0.044 (0.066)	0.168+ (0.088)	0.109 (0.089)	-0.078 (0.078)	-0.099 (0.078)
Risk to livelihood X suffered from COVID-19	0.035 (0.063)	0.015 (0.063)	0.083 (0.090)	0.044 (0.090)	0.023 (0.090)	0.023 (0.090)
Solidarity X suffered from COVID-19	-0.008 (0.062)	-0.015 (0.062)	-0.067 (0.086)	-0.078 (0.085)	-0.030 (0.084)	-0.027 (0.083)
Exposure to COVID-19	No	Yes	No	Yes	No	Yes
Geographical area of residence	No	Yes	No	Yes	No	Yes
Socio-demographics (gender, age, education)	No	Yes	No	Yes	No	Yes
Live alone, employment situation, perceived economic condition	No	Yes	No	Yes	No	Yes
Municipality-level controls	No	Yes	No	Yes	No	Yes
R ² / Pseudo R ²	.004	.060	.005	.062	.066	.076
N	1163	1152	1163	1152	1163	1152

Note: OLS regression coefficients with standard errors in parentheses. Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely). + p<.1, * p<.05, ** p<.01, *** p<.001

C. Panel data analysis

Table C1. Panel data analysis (within-between random effects model)

Trust in strangers (wallet question) (Waves 1-3)								
	(1)				(2)			
	Within effects		Between effects		Within effects		Between effects	
Suffered from COVID-19	0.086***	(0.018)	0.065***	(0.010)	0.087***	(0.018)	0.065***	(0.010)
Coefficient on standardized DV	0.312***	(0.069)	0.257***	(0.041)	0.316***	(0.069)	0.257***	(0.041)
Suffered from COVID-19 (confirmed symptoms only) ¹	0.070**	(0.027)	0.096***	(0.013)	0.070**	(0.027)	0.095***	(0.013)
Coefficient on standardized DV ¹	0.264**	(0.105)	0.380***	(0.052)	0.267*	(0.105)	0.375***	(0.529)
Know...								
... family members with COVID-19 (from 0 to 3)	-0.007	(0.006)	0.016	(0.014)	-0.008	(0.006)	0.016	(0.014)
... friends/acquaintances with COVID-19 (from 0 to 3)	-0.005	(0.004)	0.011	(0.008)	-0.005	(0.004)	0.013+	(0.008)
... work colleagues with COVID-19 (from 0 to 3)	-0.004	(0.006)	-0.003	(0.010)	-0.004	(0.006)	-0.009	(0.011)
Excess deaths (weighted)	0.038	(0.031)	-0.060	(0.063)	0.039	(0.031)	-0.009	(0.073)
Treatment groups		Yes				Yes		
Geographical area of residence		Yes				Yes		
Socio-demographics (gender, age, education)		Yes				Yes		
Live alone, employment situation, perceived economic condition		No				Yes		
Municipality-level controls		No				Yes		
Overall R ²		.089				.088		
Observations / Individuals		3000/1000				3000/1000		

Note: Coefficients from within-between random effects models with standard errors in parentheses. Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely).

1. Coefficients from separate models using only those with confirmed COVID-19 symptoms.

+ p<.1, * p<0.05, ** p<0.01, *** p<0.001

Table C2. Panel data analysis using standard question on trust

Generalized trust (standard question) (Waves 1-3)								
	(1)				(2)			
	Within effects		Between effects		Within effects		Between effects	
Suffered from COVID-19	0.078	(0.282)	1.407***	(0.194)	0.071	(0.283)	1.414***	(0.194)
Know...								
... family members with COVID-19 (from 0 to 3)	-0.018	(0.102)	0.248	(0.242)	0.005	(0.103)	0.274	(0.243)
... friends/acquaintances with COVID-19 (from 0 to 3)	-0.024	(0.068)	0.354*	(0.144)	-0.031	(0.069)	0.374**	(0.145)
... work colleagues with COVID-19 (from 0 to 3)	0.109	(0.104)	-0.250	(0.184)	0.108	(0.104)	-0.365+	(0.198)
Excess deaths (weighted)	-1.023*	(0.517)	-0.175	(1.125)	-1.042*	(0.517)	-0.130	(1.303)
Treatment groups			Yes				Yes	
Geographical area of residence			Yes				Yes	
Socio-demographics (gender, age, education)			Yes				Yes	
Live alone, employment situation, perceived economic condition			No				Yes	
Municipality-level controls			No				Yes	
Observations / Individuals			3000/1000				3000/1000	

Note: Coefficients from within-between random effects models (logistic regression) with standard errors in parentheses. Dependent variable: respondents who believe that “most of the people can be trusted” (versus “we need to be very careful”). + p<.1, * p<0.05, ** p<0.01, *** p<0.001

Table C3. Panel data analysis using trust in Italians

Trust in Italians (Waves 2-3)								
	(1)				(2)			
	Within effects		Between effects		Within effects		Between effects	
Suffered from COVID-19	0.045*	(0.020)	0.059***	(0.010)	0.043*	(0.020)	0.058***	(0.010)
Know...								
... family members with COVID-19 (from 0 to 3)	-0.001	(0.006)	-0.020	(0.014)	-0.001	(0.006)	-0.017	(0.014)
... friends/acquaintances with COVID-19 (from 0 to 3)	-0.002	(0.004)	-0.005	(0.008)	-0.002	(0.004)	-0.006	(0.008)
... work colleagues with COVID-19 (from 0 to 3)	0.003	(0.006)	0.001	(0.010)	0.002	(0.006)	-0.002	(0.011)
Excess deaths (weighted)	-0.012	(0.037)	0.002	(0.064)	-0.014	(0.037)	0.007	(0.074)
Treatment groups			Yes				Yes	
Geographical area of residence			Yes				Yes	
Socio-demographics (gender, age, education)			Yes				Yes	
Live alone, employment situation, perceived economic condition			No				Yes	
Municipality-level controls			No				Yes	
Overall R ²			.053				.072	
Observations / Individuals			1996/998				1996/998	

Note: Coefficients from within-between random effects models with standard errors in parentheses. Dependent variable: trust in Italians; values rescaled from 0 (not trust) to 1 (very much). + p<.1, * p<0.05, ** p<0.01, *** p<0.001

Table C4. Cross-lagged panel model

	Trust in strangers (wallet question)			
	Wave 2		Wave3	
	(1)	(2)	(3)	(4)
Suffered from COVID-19 (W1)	0.083* (0.033)	0.087** (0.033)	-0.036 (0.026)	-0.034 (0.024)
Suffered from COVID-19 (W2)			0.062 (0.046)	0.059 (0.042)
Trust strangers (wallet question) W1	0.383*** (0.048)	0.388*** (0.049)	0.276*** (0.041)	0.269*** (0.039)
Trust strangers (wallet question) W2			0.432*** (0.045)	0.431*** (0.043)
Geographical area of residence	Yes	Yes	Yes	Yes
Socio-demographics (gender, age, education)	Yes	Yes	Yes	Yes
Live alone, employment situation, perceived economic condition	No	Yes	No	Yes
Municipality-level controls	No	Yes	No	Yes
R ²	0.190	0.202	0.399	0.421
N	1064	1055	1002	1000

Note: OLS regression coefficients with standard errors in parentheses. Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely).

+ p<.1, * p<.05, ** p<.01, *** p<.001

Table C5. Mechanisms, panel data analysis (basic controls)

	Trust in strangers (wallet question)			
	(1)	(2)	(3)	(4)
Suffered from COVID-19 (between individuals)	0.107* (0.045)	0.046* (0.019)	0.018 (0.030)	0.016 (0.022)
Suffered from COVID-19 X ...				
...having family alive	-0.048 (0.048)			
...living alone		0.105* (0.042)		
...not good economic condition			0.078* (0.035)	
...receiving help from volunteers / strangers (W1 and W3)				0.072+ (0.041)
Within-individual components	Yes	Yes	Yes	Yes
Constitutive terms	Yes	Yes	Yes	Yes
Geographical area of residence	Yes	Yes	Yes	Yes
Socio-demographics (gender, age, education)	Yes	Yes	Yes	Yes
Knowledge of people with COVID-19	Yes	Yes	Yes	Yes
Excess death at municipality of residence	Yes	Yes	Yes	Yes
Receiving help before the pandemic	No	No	No	Yes
Live alone, employment, economic condition	No	No	No	No
Municipality-level controls	No	No	No	No
N	3006	3006	3006	2004

Note: Coefficients from within-between random effects models with standard errors in parentheses, interacting individual exposure to COVID-19 (between individuals) with other socio-demographics. Dependent variable: likelihood that stranger returns lost wallet; values rescaled from 0 (not at all likely) to 1 (very likely).

Suffered from COVID-19, living alone, economic condition and receiving help recoded in two categories: 0 (never suffered from COVID-19 / not living alone / good economic condition / did not receive help), 1 (suffered from COVID-19 / lived alone / not good economic condition / received help at least once during the panel).

+ $p \leq .1$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table C6. Mechanisms, panel data analysis (full controls)

	<i>Trust in strangers (wallet question)</i>			
	(1)	(2)	(3)	(4)
Suffered from COVID-19 (between individuals)	0.098* (0.045)	0.050** (0.019)	0.020 (0.030)	0.018 (0.022)
Suffered from COVID-19 X ...				
...having family alive	-0.036 (0.048)			
...living alone		0.095* (0.042)		
...not good economic condition			0.072* (0.035)	
...receiving help from volunteers / strangers (W1 and W3)				0.068+ (0.041)
Within-individual components	Yes	Yes	Yes	Yes
Constitutive terms	Yes	Yes	Yes	Yes
Geographical area of residence	Yes	Yes	Yes	Yes
Socio-demographics (gender, age, education)	Yes	Yes	Yes	Yes
Knowledge of people with COVID-19	Yes	Yes	Yes	Yes
Excess death at municipality of residence	Yes	Yes	Yes	Yes
Receiving help before the pandemic	No	No	No	Yes
Live alone, employment, economic condition	Yes	Yes	Yes	Yes
Municipality-level controls	Yes	Yes	Yes	Yes
N	3000	3000	3000	2000

Note: See Table C5

D. Effects over time

We stacked the datasets of each panel wave into a single dataset, including a “time” variable corresponding to each wave. We then interacted the time variable with different groups of individuals, depending on whether and when during the panel they suffered from COVID-19, controlling for the same socio-demographic covariates and geographical controls included in previous analysis. We cluster the standard error at the respondent level.

Table D1. Effect of individual exposure to COVID-19 on trust over time

	<i>Trust in strangers (wallet question)</i>			
	(1)		(2)	
Group 1 (no symptoms) = ref. cat.				
Group 2 (symptoms in W1 only)				
Wave 1	0.079**	(0.030)	0.072*	(0.030)
Wave 2	0.014	(0.033)	0.011	(0.033)
Wave 3	-0.003	(0.026)	-0.002	(0.027)
Group 3 (symptoms in W1 & W2)				
Wave 1	0.185**	(0.067)	0.156*	(0.068)
Wave 2	0.112+	(0.062)	0.084	(0.062)
Wave 3	-0.022	(0.070)	-0.044	(0.068)
Group 4 (symptoms in W1 & W3)				
Wave 1	0.084	(0.075)	0.079	(0.073)
Wave 2	0.079	(0.066)	0.084	(0.064)
Wave 3	0.143*	(0.071)	0.151*	(0.070)
Group 5 (symptoms in W2 only)				
Wave 1	0.021	(0.047)	0.031	(0.049)
Wave 2	0.101+	(0.052)	0.106+	(0.054)
Wave 3	0.028	(0.059)	0.033	(0.061)
Group 6 (symptoms in W2 & W3)				
Wave 1	0.018	(0.064)	0.028	(0.067)
Wave 2	0.166*	(0.073)	0.182**	(0.069)
Wave 3	0.208**	(0.077)	0.218**	(0.074)
Group 7 (symptoms in W3 only)				
Wave 1	0.023	(0.045)	0.019	(0.044)
Wave 2	-0.005	(0.036)	-0.004	(0.035)
Wave 3	0.037	(0.042)	0.031	(0.040)
Group 8 (symptoms in each wave)				
Wave 1	0.267***	(0.054)	0.250***	(0.055)
Wave 2	0.352***	(0.058)	0.339***	(0.057)
Wave 3	0.318***	(0.057)	0.310***	(0.055)
Geographical area of residence	Yes		Yes	
Socio-demographics (gender, age, education)	Yes		Yes	
Knowledge of people with COVID-19	No		Yes	
Excess death at municipality of residence	No		Yes	
Live alone, employment, economic condition	No		Yes	
Municipality-level controls	No		Yes	
N	3006		2993	

Note: The coefficients are the difference in trust between each group and Group 1 (reference category) for each wave. Average marginal effects with standard errors in parentheses based on OLS regression models interacting categories of individual symptoms of COVID-19 with a wave indicator. Dependent variable: trust in strangers (wallet question), rescaled from 0 (“Not at all likely”) to 1 (“Very likely”). Standard errors clustered at the individual level
+ p<.1, * p<.05, ** p<.01, *** p<.001

E. Data collection, question wording and information stimuli

Data collection

Between April 30 and May 19, 2020 we included a set of questions in an omnibus study that is routinely conducted by the survey company SWG relying on a large online pool of respondents. The sample is a quota sample matching the adult Italian population on gender, age and geographical area of residence. In addition, we weighed the sample by level of education and political preferences as expressed in the vote in the 2019 European elections, in order to obtain a representative sample of Italian adults.

Due to space limitation, we could include only a limited set of questions in the omnibus study, thus we interviewed the respondents in two rounds. In the first round – conducted between April 30 and May 4 – we included the “wallet questions” on trust, the experiment, and all the socio-demographic questions. Between May 14-19, we re-interviewed the same respondents in a second round, in which we included the questions on individual COVID-19 symptoms, knowledge of people with COVID-19 and the standard question on trust. In total, 1163 respondents replied to our questions, with a drop out of 9% from the first to the second round.

We then recontacted the same respondents between October 23 and November 4, after a period of low spread of the virus (Wave 2) and again between February 5 and 19, 2021, after a period of high spread of the virus (Wave 3). The attrition was low, with 1065 and 1052 respondents taking part in Wave 2 and Wave 3 respectively. In total, 1003 respondents participated in all the three waves of the panel.

Question wording

(Original wording in Italian in italics)

Trust question (wallet question) (Waves 1-3)

Q: Imagine that you have lost your wallet. In your opinion, how likely it is that one of the following people will return the wallet to you?

- A) A neighbor
- B) A member of the police
- C) A stranger

A: Very likely / Quite likely / Slightly likely / Not at all likely

Q: Immagini di aver perso il portafoglio. Secondo lei, quanto è probabile che una delle seguenti persone glielo restituisca?

- A) Un vicino di casa*
- B) Un appartenente alle forze dell'ordine*
- C) Uno sconosciuto*

A: Molto probabile / Abbastanza probabile / Poco probabile / Per niente probabile

Trust question (standard question) (Waves 1-3)

Q: Generally speaking, do you think most of the people can be trusted, or we need to be very careful?

A: Most of the people can be trusted / We need to be very careful

Q: Lei generalmente pensa che ci si possa fidare della maggior parte della gente oppure bisogna stare molto attenti?

A: Gran parte della gente è degna di fiducia / Bisogna stare molto attenti

Trust in Italians (SWG question) (Waves 2 and 3)

Q: How much trust do you have in the following groups of people or institutions?

- A) Italians
- B) Work colleagues
- C) Friends
- D) The Government

A: No trust / Little trust / Quite some trust / Very much trust / Prefer not to reply

Q. Quanta fiducia ha nei seguenti gruppi di persone o istituzioni?

- 1) *Gli italiani*
- 2) *I colleghi di lavoro*
- 3) *Gli amici*
- 4) *Il Governo*

A: *Nessuna / poca / abbastanza / molta / preferisco non rispondere*

Individual COVID-19 symptoms

Wave 1

Q: Since the beginning of the year have you personally suffered from COVID-19 symptoms, such as fever, dry cough, or loss of smell and taste?

A: Yes / No

Q: Dall'inizio di quest'anno ad oggi, Lei personalmente ha sofferto dei sintomi del Covid-19, come, ad esempio, febbre, tosse secca, perdita del gusto o dell'olfatto?

A: *Sì / No*

[Note: question asked retrospectively in Wave 2]

Q: Did you receive diagnostic confirmation that these symptoms were actually due to COVID-19 through a COVID-19 test or a serological test?

A: Yes, I received confirmation that they were COVID-19 symptoms / No, I did not receive confirmation

Q: Ha avuto conferma che questi sintomi fossero realmente dovuti al Covid-19, ad esempio tramite tampone o test sierologico?

A: *Sì, ho avuto conferma che erano sintomi del Covid-19 / No, non ho avuto conferma*

Wave 2

Q: Since the beginning of June, have you personally suffered from COVID-19 symptoms such as fever, dry cough, or loss of smell and taste?

A: Yes / No

Q: Ora pensi al periodo da inizio di giugno di quest'anno, quando è terminato il confinamento (lockdown), fino ad oggi. Durante questo periodo, Lei personalmente ha sofferto dei sintomi del Covid-19, come, ad esempio, febbre, tosse secca, perdita del gusto o dell'olfatto?

A: *Sì / No*

Q: Did you receive diagnostic confirmation that these symptoms were actually due to COVID-19 through a COVID-19 test or a serological test?

A: Yes, I received confirmation that they were COVID-19 symptoms / No, I did not receive confirmation

Q: Ha avuto conferma che questi sintomi fossero realmente dovuti al Covid-19, ad esempio tramite tampone o test sierologico?

A: *Sì, ho avuto conferma che erano sintomi del Covid-19 / No, non ho avuto conferma*

Wave 3

Q: Since the beginning of November, have you personally suffered from COVID-19 symptoms such as fever, dry cough, or loss of smell and taste?

A: Yes / No

Q: Ora pensi al periodo da inizio di novembre dell'anno scorso fino ad oggi. Durante questo periodo, Lei personalmente ha sofferto dei sintomi del Covid-19, come, ad esempio, febbre, tosse secca, perdita del gusto o dell'olfatto?

A: Sì / No

Q: Did you receive diagnostic confirmation that these symptoms were actually due to COVID-19 through a COVID-19 test or a serological test?

A: Yes, I received confirmation that they were COVID-19 symptoms / No, I did not receive confirmation

Q: Ha avuto conferma che questi sintomi fossero realmente dovuti al Covid-19, ad esempio tramite tampone o test sierologico?

A: Sì, ho avuto conferma che erano sintomi del Covid-19 / No, non ho avuto conferma

Knowledge of people with COVID-19 symptoms (Wave 1-3)

Q: Among the people who are close to you, do you know anyone who has suffered from COVID-19 symptoms in the same period? If so, please indicate how many people using one of the following options.

A) Parents, co-habitants or relatives

B) Friends or acquaintances

C) Work colleagues

A: No, no one / Yes, 1 person / Yes, 2 people / Yes, 3 people / Yes, more than 3 people

Q: Conosce delle persone vicine a Lei che hanno sofferto dei sintomi del Covid-19 nello stesso periodo? Se sì, indichi anche quante persone, usando una delle opzioni seguenti.

A) Familiari, conviventi o parenti

B) Amici o conoscenti

C) Colleghi di lavoro

A: No, nessuna persona / Sì, 1 persona / Sì, 2 persone / Sì, 3 persone / Sì, più di 3 persone

Table E1. Information stimuli used in the experiment (Wave 1)

English translation	Original text in Italian
Group 2 (health)	
Before proceeding with the questions, we would like you to carefully consider the situation created by the pandemic.	<i>Prima di procedere con le domande, le chiediamo di considerare attentamente la situazione creata dalla pandemia.</i>
The Coronavirus has been causing the most serious health crisis of the last century. The uncertainties for our health are very high. At present, we are unable to identify everyone who has contracted the virus, nor how long they will be immune, and we don't even know when we will have a vaccine.	<i>Il coronavirus sta causando la più grave crisi sanitaria dell'ultimo secolo. Le incertezze per la nostra salute sono molto elevate. Per ora non siamo in grado di identificare tutti coloro che hanno contratto il virus, né per quanto tempo saranno immuni, e non sappiamo nemmeno quando avremo un vaccino.</i>
If Covid-19 resembles the flu, new waves of infection could occur and we may have to go back to quarantine. Furthermore, the exploitation of natural habitats and the ease with which we travel increase the risk of new viruses emerging, and it's likely that new pandemics will occur in the future.	<i>Se il Covid-19 assomigliasse all'influenza, potrebbero verificarsi nuove ondate di contagi e potremmo dover tornare in quarantena. Inoltre, lo sfruttamento degli habitat naturali e la facilità con cui si viaggia aumentano il rischio che emergano nuovi virus ed è probabile che in futuro avvengano nuove pandemie.</i>
Group 3 (economy)	
Before proceeding with the questions, we would like you to carefully consider the situation created by the pandemic.	<i>Prima di procedere con le domande, le chiediamo di considerare attentamente la situazione creata dalla pandemia.</i>
The Coronavirus has been causing the most severe economic damage since World War II, with devastating losses for workers and businesses. In 2020 a very heavy world recession is expected. Among the most affected countries, Italy risks a loss of 9 points of GDP and a public debt of over 2500 billion.	<i>Il coronavirus sta causando i danni economici più severi dalla seconda guerra mondiale, con perdite devastanti per lavoratori e imprese. Nel 2020 si prospetta una recessione mondiale molto pesante. Fra i paesi più colpiti, l'Italia rischia una perdita di 9 punti del PIL e un debito pubblico superiore ai 2500 miliardi.</i>
At least 17 million people in Europe and 26 million Americans have lost their jobs. In Italy, the unemployed should exceed three million by the end of 2020. The repercussions on the global economy will last long and it is impossible to predict when there will be a recovery.	<i>Almeno 17 milioni di persone in Europa e 26 milioni di americani hanno perso il lavoro. In Italia i disoccupati dovrebbero superare i tre milioni a fine 2020. Le ricadute sull'economia globale dureranno a lungo ed è impossibile prevedere quando ci sarà una ripresa.</i>
Group 4 (solidarity)	
Before proceeding with the questions, we would like you to carefully consider the situation created by the pandemic.	<i>Prima di procedere con le domande, le chiediamo di considerare attentamente la situazione creata dalla pandemia.</i>
The Coronavirus has been causing the most severe human and economic damage since World War II. The virus ignores borders and only an effort of solidarity and international cooperation can stem contagion and prevent future pandemics.	<i>Il coronavirus sta causando i danni umani ed economici più severi dalla seconda guerra mondiale. Il virus ignora i confini e soltanto uno sforzo di solidarietà e cooperazione internazionale potrà arginare il contagio e prevenire pandemie future.</i>

We are all vulnerable to infection, but not all equally. Protective networks must be created for the most vulnerable and for those in poverty. The Coronavirus crisis gives us the opportunity to demonstrate global solidarity and rediscover our common humanity beyond ethnicity, nationality and religion.

Siamo tutti vulnerabili all'infezione, ma non tutti allo stesso modo. È necessario creare delle reti di protezione per i più vulnerabili e per chi si trova in condizioni di povertà. La crisi del coronavirus ci dà l'opportunità di dimostrare una solidarietà globale e riscoprire la nostra comune umanità al di là di etnia, nazionalità e religione.