Rally around your Fellows: Information and Social Trust in a Real-World Experiment during the Corona Crisis

Maximilian Filsinger*, Markus Freitag, Julian Erhardt & Steffen Wamsler
University of Bern

*Corresponding author
University of Bern
Institute of Political Science
Fabrikstrasse 8
CH-3012 Bern
Switzerland
maximilian.filsinger@ipw.unibe.ch

Abstract:

In this paper, we claim that information about social cohesion during a crisis influences social trust. We maintain that it is key to distinguish between positive and negative information about social cohesion during the crisis as well as between different forms of social trust, namely particularized trust, identity-based trust, and trust in strangers. Using a real-world survey experiment, we show that positive information on social cohesion has the potential to promote identity-based trust in times of crisis, thus triggering a rally-around-the-fellows effect. This seems to be prevalent for respondents with a lower socio-economic status. Consequently, receiving positive news about social cohesion may trigger identity-based trust in social strata where it is less likely to occur. However, among people ranking lower on the social ladder, negative information undermines their already fragile trust in strangers. Our results have important implications by showing how different information about the impact of a crisis affects the glue that holds society together.

Introduction

It is a truism that especially in times of uncertainty the formation of social trust is crucial. However, it is also a truism that it is anything but easy to build social trust, particularly in times of uncertainty. One crucial element for the formation of trust is information. Even more so, in times of crisis information plays a vital role. This paper sets out to answer the question of how information influences different forms of social trust in times of crisis and whether the trust decisions of all groups are affected in the same way by information about the consequences of a crisis. As the Corona crisis "stands unprecedented in living memory" (Weible et al., 2020, p. 2) and threatens not only human lives but also social cohesion (Aassve et al., 2020; Esaiasson et al., 2020; Pitas & Ehmer, 2020), it provides an excellent opportunity to study the effects of information on social trust.

Against this background, we claim that information about social cohesion during crises influences social trust. We argue that crises, in general, evoke feelings of threat, uncertainty, and urgency (Boin et al., 2005). Information about the negative consequences of the crises with regard to social cohesion should enhance these feelings, while news referring to positive developments during the crisis should dampen these . In addition, we maintain that it is key to distinguish between different forms of social trust, namely particularized trust (trust in people belonging to our immediate social surroundings), trust in strangers (trust in people met for the first time), and identity-based trust (trust primarily based on identification and

categorization) (Freitag & Bauer, 2013).[1] Finally, we discuss whether information triggers forms of social trust in social strata where it is less likely to occur.

We test our proposition with a survey experiment undertaken during the peak phase of the first coronavirus wave in German-speaking Switzerland between 26 March and 6 April 2020 referring to aspects of social cohesion. Respondents were randomly assigned to three different conditions including two different real-world scenarios (frames) and one control condition without a frame. The frames covered different information. The first frame presented information about the negative effects of the current coronavirus pandemic on social cohesion (isolation and depression) while the second frame offered information on increasing social cohesion (increasing solidarity and help amongst the population). The information given in the frames stems from real-world examples (newspaper articles and official governmental information) and is not artificially constructed, thereby reflecting peoples' typical experiences of the crisis. Consequently, our study is designed to identify the influence of information about the state of social cohesion during the crisis on the formation of trust in others.

Our analyses demonstrate that positive information on social cohesion has the potential to promote identity-based trust in times of crisis, thus triggering a rally-around-the-fellows effect. This seems to be prevalent for respondents with a lower socio-economic status. However, negative information seems to undermine trust in strangers and this particularly among people ranking lower on the social ladder.

---

[1] Some scholars refer to identity-based trust as depersonalized in-group trust. We use the term identity-based trust instead of depersonalized in-group trust to avoid confusions with particularized trust. Moreover, in the context of identity-based trust, the in-group throughout our paper is based on the categorization of identity-based trust, i.e. we refer to the in-group based on same nationality and language.

Particularized trust is unaffected by information about positive and negative consequences of a crisis. Our results have important implications by showing how different information about the impact of a crisis affects the glue that holds society together.

We contribute to the literature in several important ways. First, we show that positive and negative information have distinct effects on various forms of social trust even in times when information density is particularly high and exposure to news and competing narratives is abundant. Second, we go beyond previous research by scrutinizing three forms of social trust, namely particularized trust, identity-based trust, and trust in strangers. We show that information affects these forms of trust differently which offers a more fine-grained picture of the relationship between information and trust in times of crisis. Third, while existing studies already use experimental frames to investigate the role of individuals' perceptions of crises (Navarro-Carrillo et al., 2018), we go beyond these studies by focusing not only on pessimistic but also potential optimistic information about social cohesion during a crisis. Fourth, we use a real-world survey experiment (Bechtel et al., 2015). While most contributions on social trust have expanded our understanding of the effects of issue frames in artificial lab-experiment settings, we currently have little systematic evidence on the impact of information on building social trust in a real-world context (Bechtel et al., 2015, p. 693). Our frames are based on real-world information, thereby reflecting typical experiences in times of crisis.

The remainder of our paper is structured as follows: First, we present our theoretical arguments. Second, we introduce our survey experiment and elaborate on our

empirical approach. Third, we move on to the results of our analysis. Lastly, we discuss the implications and limitations of our results and conclude with an outlook on future research.

Conceptualization of Social Trust

Trust can be defined as the expectation that others will contribute to the well-being of a person or group, or will at least refrain from harmful actions (Offe, 1999). Referring to social trust, studies have shown that it is a multidimensional concept that cannot be seen as a single entity (Bauer & Freitag, 2018; Delhey et al., 2011; Freitag & Bauer, 2013; Newton & Zmerli, 2011). The most common distinction is between personalized or particularized trust (referring to people that one interacts with on a daily basis and has an existing relationship with, e.g. family, friends, or co-workers) and depersonalized trust, i.e. trust in strangers (Delhey et al., 2011; Freitag & Traunmüller, 2009; Uslaner, 2002). Scholars have suggested that there is an additional dimension that captures people who are not known personally but who share certain characteristics with the trustor such as nationality, religion, language, or social class. This dimension is referred to as identity-based trust (Freitag & Bauer, 2013; Kenworthy & Jones, 2009). Drawing on the social identity theory developed by Tajfel (1974) and Tajfel and Turner (1979), this conception of trust mainly rests on identification and categorization. Shared identity may include behavioral similarities, geographical proximities, and the notion of a common fate, ethnicity, mores or traditions (Stolle, 2002, p. 401). The assumption here is that people who share a common identity are more likely to trust each other (even if they do not know each

other personally). In sum, this leaves us with a three-dimensional structure of social trust with particularized trust (such as trust in family and friends), identity-based trust (people unknown but who share the same traits), and trust in strangers (unknown people).

Theory and Hypotheses: How Information about the Social Consequences of Crises Impact Three Forms of Social Trust

According to Rosenthal et al. (1989, p. 10), a crisis can be defined as "a serious threat to the basic structures or the fundamental values and norms of a system, which under time pressure and highly uncertain circumstances necessitates making vital decisions." Following this definition, crises can be characterized by three key components according to Boin et al. (2005), i.e. threat, uncertainty, and urgency (see also Rosenthal et al., 1989). In the case of the Corona pandemic, the health and well-being of citizens, economic stability, social structure, and cohesion are under threat. Moreover, the current situation includes urgency as marked by the relatively short time in which the Coronavirus has spread across the globe and induced governmental responses. This sense of threat and urgency is accompanied by a high degree of uncertainty as to the duration of the crisis, its economic and societal consequences and the effectiveness of the measures that are aimed to prevent the spread of the virus, thereby challenging trust decisions (Taylor, 2019). Overall, the Coronavirus pandemic offers an excellent opportunity to study the influence of information on different forms of social trust.

Regarding the foundation of social trust, two competing arguments have been made (Freitag & Traunmüller, 2009). On the one hand, scholars argue that trust is dependent

on personal predispositions, i.e. the trustfulness of the trustor (Uslaner, 2002). Thus, it is argued that trust – especially in strangers – is formed by predispositions such as optimism and not based on experiences (Freitag & Bauer, 2016). Freitag and Bauer (2016) find that the impact of personality traits on trust in strangers is stronger than on trust in friends. Following this perspective, differences in trust between individuals are based on personality traits developed early on in life. Information and experiences during a crisis would not affect trust decisions as these are already cemented due to psychological and pre-dispositional factors (Uslaner, 2002). On the other hand, it is argued that in order to judge the trustworthiness of another person, information is crucial (Coleman, 1988). This information is mainly about the reputation of the person and/or his/her previous behavior. For example, A grants B a favor if A trusts B to return the favor at a later point. Besides the trustworthiness of other actors, A will also evaluate their past experiences with B as only actors that behaved reciprocally will be granted a favor (Coleman, 1988).

Yet, recently other scholars have pointed out that a too rigid conceptualization might not be useful as "there is no doubt that prior first or second-hand experiences with strangers will influence one's current expectations of them" (Freitag & Traunmüller, 2009, p. 789). Empirical analyses seem to support the view that trust is shaped by predispositions as well as experiences. Thus, trust decisions are partly influenced by psychological dispositions but also by experiences and information about the behavior of others, known or unknown (Freitag & Traunmüller, 2009). Following this line of literature, we expect that negative and positive information about social cohesion in times of crisis affects trust decisions.

In general, the literature on the effects of crises on social trust has shown that crises-related information and experiences matter for trust decisions. Yet, these studies provide mixed results depending on the type of crisis. Studies on the effects of civil war, for example, argue that the experience of violence and the socio-structural consequences present people with clear evidence of the untrustworthiness, uncooperativeness, and hostility of others, thus reducing social trust (De Luca & Verpoorten, 2015; Kijewski & Freitag, 2018; Rohner et al., 2013). In a similar vein, Geys and Qari (2017) investigate the causal effect of terror events on trust but only find a short-term effect, questioning the longevity of such effects on social trust. With regard to economic crises, Uslaner (2010) finds that the financial crisis of 2008 reduced generalized trust, while Navarro-Carrillo et al. (2018) reveal that the perceived personal impact of such a crisis undermines generalized trust, but also leads to increased personalized and in-group trust. Martini (2016) also finds a negative effect of personal affectedness on generalized trust. Referring to natural disasters, Toya and Skidmore (2014) argue that storms in particular strengthen generalized trust. Conversely, Carlin et al. (2014) do not find such a positive effect, arguing that state capacity moderates the relationship between natural disasters and social trust. With respect to the effects of a pandemic, Aassve et al. (2020) just recently found that Spanish Flu mortality rates significantly reduced social trust for descendants of survivors of the pandemic and that this effect is especially strong for countries that were neutral during World War I.

Information on negative social consequences of the crisis

As social trust is based not only on psychological foundations but also on an evaluation of the social environment (Freitag & Traunmüller, 2009; Uslaner, 2018), we argue that information grounded in concrete experiences of the social fabric during a crisis has divergent effects on different forms of social trust. In expressing their trust decisions, individuals follow either a memory-based or an online process model. That is, individuals make judgments about other people either based on information easily available and retrievable from their memory or right away when the information is encountered (Matthes, 2007; Scheufele, 2000).

Information on negative social consequences surrounding the crisis (dissolving social relations, increased competition, negative encounters with others, etc.) should increase feelings of uncertainty, threat, and urgency among exposed individuals. Being confronted with negative information about social togetherness provides evidence of the fragility of social cohesion in times of crisis. In this regard, negative information should negatively affect trust decisions. Yet, such information affects the various dimensions of trust in different ways. Particularized trust, for example, might be unaffected by such information as family members and friends offer support to each other based on reciprocal norms and expectations. Thus, exposure to information about the negative social consequences of the crisis should not affect particularized trust (trust in family and friends).

Conversely, being confronted with negative information about the social fabric should incline people to look for support. Trusting members of your in-group can function as a safety net in times of crisis (Hogg et al., 2010; Navarro-Carrillo et al., 2018). Identity-based trust is founded on common in-group membership and shared identity,

thereby offering cues and information that are available about the trustee (Kenworthy & Jones, 2009). Moreover, following Durkheim's idea of mechanical solidarity, people will trust and help those that are similar to them, e.g. same nationality, language, or social class (Durkheim, 1893/1964; Münch, 2015). Referring to financial hardship, Navarro-Carrillo et al. (2018) find a positive effect on trust in people who share important identity traits. Being confronted with social isolation, people turn to those with a similar identity for (virtual) company.

Lastly, trust in strangers is regarded as a low-information decision as there are no first or second-hand experiences (Carlin & Love, 2013). In times of threat and uncertainty, trust in strangers in particular should decline, as there is no firm evidence about their behavior in times of scarce resources. People may not trust strangers to protect limited resources and avoid vulnerability and risk (Martini, 2016; Navarro-Carrillo et al., 2018) as crises often produce negative social experiences such as the dissolution of social relations and increased competition that make trust decisions more difficult. In other words: in times of competition and vulnerability, trusting strangers poses an additional risk to already challenged resources. Based on the arguments above, we formulate three distinct hypotheses for the different forms of trust:

Hypothesis 1a: Information about negative social consequences of the crisis does not affect particularized trust.

Hypothesis 1b: Information about negative social consequences of the crisis increases identity-based trust.

Hypothesis 1c: Information about negative social consequences of the crisis decreases trust in strangers.

Information on positive social consequences of the crises

In contrast, information on positive social consequences of the crisis should reduce these feelings of uncertainty, threat, and urgency among the individuals affected which generally leads to a higher level of trust. Yet, particularized trust as a thick form of trust might again be unaffected by such information as family members and friends offer support to each other based on norms, irrespective of the information about the general situation or the actions of others. For the other forms of trust, information about positive consequences of togetherness should indeed be beneficial. For example, positive information on the current crisis might strengthen identification with the (national) in-group and trust, especially when people have the impression that the positive news about societal solidarity is based on the actions of their own in-group even if these members are not personally known. This should increase pride in their own in-group and strengthen the already present information that members of the in-group can and should be trusted.

Positive information about a resilient social fabric could extend the radius of trust even to unknown people. Being confronted with information about the positive actions of others provides information about the trustworthiness and cooperativeness of the entire social community, thereby mitigating the risk of trusting a stranger. Furthermore, such positive information about the cooperative behavior of others should generally lead to a more optimistic view on the current situation. Research on natural disasters has shown that crises can lead to an increase in social trust as people try to help each other in times of need, thus forming bonds of solidarity and reciprocity (Carlin et al., 2014; Kang & Skidmore, 2018; Toya & Skidmore, 2014). From these

assessments above, we formulated three distinct hypotheses for the different forms of trust:

Hypothesis 2a: Information about positive social consequences of the crisis does not affect particularized trust.

Hypothesis 2b: Information about positive social consequences of the crisis increases identity-based trust.

Hypothesis 2c: Information about positive social consequences of the crisis increases trust in strangers.

Group-specific effects

So far we have considered uniform relations between our treatment and the different forms of social trust but have ignored inequalities in the formation of trust. Rather, taking into account that people differ in their inclination to express trust in others, our treatment might affect the trust decisions of respondents differently depending on their socio-economic status. Studies have consistently shown that lower levels of socio-economic status are associated with lower levels of trust (Borgonovi, 2012; Brandt et al., 2015; Gesthuizen et al., 2008; Lount & Pettit, 2012). However, we argue that not all forms of trust are likely to be affected by such a moderation. For particularized trust we do not expect a moderation due to its particular focus on concrete first-hand experiences and the arising norms of reciprocity that dominate this form of trust. For identity-based trust and trust in strangers the link to socio-economic status depends on the type of information. On the one hand, negative information could decrease the levels of trust for the socio-economically deprived respondents as this social strata particularly believes that others have negative intentions toward them (Lount & Pettit,

2012). On the other hand, one could argue that positive information about social cohesion offers cues about the trustworthiness of others. Such information can strengthen the belief that the community cares for all, including those at the margins of society. Positive and optimistic information should therefore at least increase the identity-based trust of the socio-economically deprived, as they are most likely to benefit from the encouragement of others. In the following, we will test heterogeneous treatment effects for identity-based trust and trust in strangers by interacting our treatment with two indicators of socio-economic status: education and income.

Research Design

In the following, the relationships presented above will be put to an empirical test. To understand the effect of information about the consequences of the crisis on the development of social trust we conducted a survey experiment during the peak phase of the crisis in the German-speaking part of Switzerland between 26 March and 6 April 2020. The data was collected by LeeWas GmbH[2] through an online survey with over 1,800 respondents with probability sampling in the German-speaking part of Switzerland (see table S1). Respondents were offered the chance to win one of 10 vouchers (value of 100 CHF) for different online retail shops. The overall response rate was 19.4 percent (RR5/6, The American Association for Public Opinion Research, 2016). The mean age in the sample is 49 years which is slightly above the average age in Switzerland of around 42 years (Bundesamt für Statistik, 2020). 56 percent of the respondents are female, a little more than the Swiss average (50.4%)

---

[2] For more information see: https://www.leewas.ch.

(Bundesamt für Statistik, 2020). Regarding education, we encounter that highly educated individuals are slightly overrepresented while respondents with below secondary education are underrepresented (9% compared to 11%), a well-known problem of online surveys (Organization for Economy and Development [OECD], 2020). In general, however, our sample matches the demographics of Switzerland except for the share of the respective language regions as we only focus on the German-speaking part of the country. All descriptive statistics are presented in table S4 in the supplemental material. Our analysis is based on approximately 1,200 respondents consisting of two experimental conditions (each N= 300) and a control condition (N= around 600).[3]

At the time we conducted the survey, Switzerland was one of the coronavirus hotspots with about 1,000 new cases per day (Bundesamt für Gesundheit, 2020; Johns Hopkins University, 2021). The number of cases rose sharply from around 14,000 to almost 24,000. Moreover, the number of deaths more than doubled in this period from 230 to over 700 (Bundesamt für Gesundheit, 2020; Johns Hopkins University, 2021). Given that Switzerland has only 8.5 million inhabitants, these numbers are substantial if put in a comparative perspective. We decided to focus on the German-speaking part of Switzerland, as we wanted to hold certain institutional and cultural characteristics constant (see also Bornschier et al., 2021).

For the survey, respondents were randomly assigned to three different conditions, including two different frames and a control condition without any frame (see table

---

[3] Since our survey covered different facets of the Coronavirus crisis, the full experiment included four treatment conditions and one control condition. The conditions were randomised and are thus fully independent of each other. In this paper, we focus on the condition treating mechanisms related to the social consequences of the crisis.

S2).[4] Our control condition did not provide any information, just an introduction with the request to fill out the survey. The frames covered different information including negative or positive information about social cohesion during the first wave of the corona pandemic. Although the negative consequences are dominant in the current situation, one can observe several positive developments. One can perceive an increased number of people who offer their help, e.g. grocery shopping for people who belong to at-risk groups or volunteering for the health administration. In addition, many governments provide social support to mitigate the negative consequences of the pandemic. Therefore, it is also important to study how more "positive" frames focusing on societal efforts to overcome the negative impacts of the crisis affect trust decisions. This might shed some light on how reporting on positive events during a crisis might affect social cohesion. Consequently, we investigate positive as well as negative frames of the crisis (for the exact translation see supplemental material).

On the one hand, we have a negative social frame that describes the consequences of social distancing measures, including increasing numbers of people who are isolated from others. The frame features a statement from a Swiss telephone counselling organization, which reported an increasing number of calls concerning psychological problems, violence, and isolation. On the other hand, the positive social frame includes a report from Swiss national television, which reported on increasing solidarity within Switzerland. Despite social distancing, people offer to help others, especially at-risk-groups with groceries. This should produce a feeling of unity across Switzerland, echoed by a letter from President Sommaruga, who stated that Switzerland is one

---

[4] We conducted balance tests and of the t-tests, four are significant at the 10-% level, which is lower than the mean expected value of 10%. The table is presented in the supplemental material Table S3.

nation and that the people stand together. In general, our frames aim to present real-world examples of how the current crisis has produced social consequences in Switzerland. Moreover, our treatment consists of the combined social experiences that people had during the acute phase of the crisis. We do not attempt to isolate effects and thus focus on the so-called compound treatment effect (Hernán & VanderWeele, 2011).

After the frames, respondents completed a short survey including questions on various forms of social trust. To measure the dimensions of our dependent variable we use five indicators for our three dimensions of social trust. For particularized trust we use trust in (1) family and (2) friends. For identity-based trust we use trust in (1) people who are not known personally but who have the same nationality and (2) people who are not known personally but who speak the same language. Lastly, for trust in strangers we use trust in people met for the first time. The respective dimensions were randomized to avoid biases from the order of the items. The answers range from (1) "do not trust at all" to (5) "trust completely". We do not use the generalized trust question as recent research has shown that this question does not unequivocally mean that people think about strangers (Bauer & Freitag, 2018; Delhey et al., 2011). Moreover, Miller and Mitamura (2003) and Robbins (2019) remind us to be cautious with the classical generalized trust question due to a lack of measurement validity.

We include several control variables in our models. This has two advantages, the first of which is that the inclusion increases the accuracy of our estimates. The inclusion of these control variables should not affect the substantiality of the estimated effects but rather should increase the precision in the estimation of the standard errors (Angrist

& Pischke, 2009). Second, it also allows us to control for random baseline differences in these included covariates. We use classic socio-demographic variables such as age (squared), sex, occupation, civil status, household type, and type of community. Socio-demographics have been shown to be important predictors of social trust and thus an inclusion is justified to increase accuracy (Filsinger & Freitag, 2020). Moreover, socio-economic variables such as income and education are often named as important predictors of social trust (Borgonovi, 2012; Gesthuizen et al., 2008). We include a question on self-reported health, an important control variable in times of a pandemic. We also incorporate the Big Five personality traits in our analysis. Trust is partly shaped by psychological predisposition and it is therefore important to control for these dispositions (Freitag & Bauer, 2016; Weinschenk, 2017). Lastly, we include a series of dummy variables for the day the respondents completed the survey to account for external events as well as the time respondents spent on the experimental condition. Summary statistics for all variables can be found in table S4 in the supplemental material. We use survey weights adjusting for age, sex, education, canton, type of community, and party vote choice to obtain adequate estimates.

We conduct linear regression models using heteroscedasticity-robust standard errors to test our hypothesis. Our dependent variables are the three different forms of social trust as mentioned above and the main independent variable is a categorical variable indicating which social frame (positive or negative) a respondent has received. We use the data from all respondents that have no missing values but estimate robustness checks based on the time respondents spent reading the frame. The first robustness model excludes the fastest five percent of respondents receiving the frames, i.e. respondents who spent less than five seconds reading the frame. The second model

excludes the fastest and slowest five per cent, i.e. respondents who spent less than five or more than 59 seconds reading the frame. This was done to exclude inattentive respondents.

Results

We start with the question of whether positive or negative information about the state of social cohesion during the Corona crisis affects the different forms of social trust. Figure 1 shows the coefficients of our linear regression model for the different dimensions of social trust, without and with control variables. The estimates are based on all respondents. Starting with particularized trust, the results in the left panel of figure 1 show that negative information regarding the social fabric does not significantly affect particularized trust. The coefficient does not reach conventional levels of statistical significance, irrespective of whether control variables are included or not, and is also very small. Moreover, we also do not find a significant coefficient for the positive social frame, indicating that respondents confronted with positive information are not more or less trusting towards family and friends. This supports our hypotheses 1a and 2a. It seems that for trust in people that one interacts with on a daily basis and has a lot of first-hand experiences with, information about the social consequences of a crisis does not matter. While this contradicts some findings on financial crises (Navarro-Carrillo et al., 2018), it could be explained by the structure of close relationships, as family members and friends offer support to each other based on reciprocal norms and expectations (Putnam, 2000).

The middle panel in figure 2 shows the results for identity-based trust. Starting with the negative social frame, we again do not find any significant effects. Information

18

about the negative social consequences of the crisis does not seem to trigger or undermine identity-based trust. This contradicts hypothesis 1b. While previous research on economic crises showed that negative information increase identity-based trust (e.g. Navarro-Carrillo et al., 2018), it does not seem that this holds true for information about negative social externalities. Potentially, this difference can be explained by the fact that negative social information is not connected with the in-group but rather with strangers in particular as the nation as in-group is rather big to be regarded as a safety net.

Conversely, for positive information about togetherness, we find a significant and positive effect on identity-based trust. The coefficient is statistically significant (p<.05), irrespective of whether control variables are included or not. The size of the coefficient is around a fifth of a standard deviation of identity-based trust. It seems that information on positive social trends in the current crisis strengthens identification with and trust in the national in-group, especially when people have the impression that the positive news about societal solidarity is based on the actions of their own in-group. This should increase pride in their own national in-group and strengthen the already present information that members of this in-group can and should be trusted. This finding supports hypothesis 2b. Put differently, people who read about volunteering and altruistic behavior of others are more likely to put their trust in members of their national in-group, albeit they do not know them personally. This points towards a rally-effect around the in-group.

Lastly, the right panel of figure 2 shows the results for trust in strangers. For information about the negative social consequences of the crisis we find a negative

effect on trust in strangers. It seems that information about the negative social consequences of the crisis decreases trust in strangers. However, this effect is only statistically significant when we include the control variables and should thus be interpreted cautiously. The significance of the result is likely based on the fact that including control variables increases the precision in the estimation of the standard errors thereby tightening the error margin (Angrist & Pischke, 2009). Thus, we interpret this finding with caution and not as full support for hypothesis 1c. Furthermore, the analyses do not indicate a statistically significant effect of information about the positive social consequences of the crisis on trust in strangers. It seems that being confronted with information about the trustworthiness and cooperativeness of the entire social community does not extend the radius of trust to unknown others. In other words, people who read about the increasing solidarity during the crisis are not more inclined to trust strangers, thus contradicting hypothesis 2c. In sum, it seems that positive information is attributed to the actions of the in-group (increase in identity-based trust) while negative information negatively affects trust in strangers.

The results remain robust when we exclude respondents with response times that are too short to allow for exposure to the treatment; that is, respondents who spent less than five seconds reading the frame (see Table S7 & S9). The same holds when we additionally excluded the slowest 5% (see Table S8 & S10).

Figure 1 Regression coefficients of the effect of frames on different forms of social trust
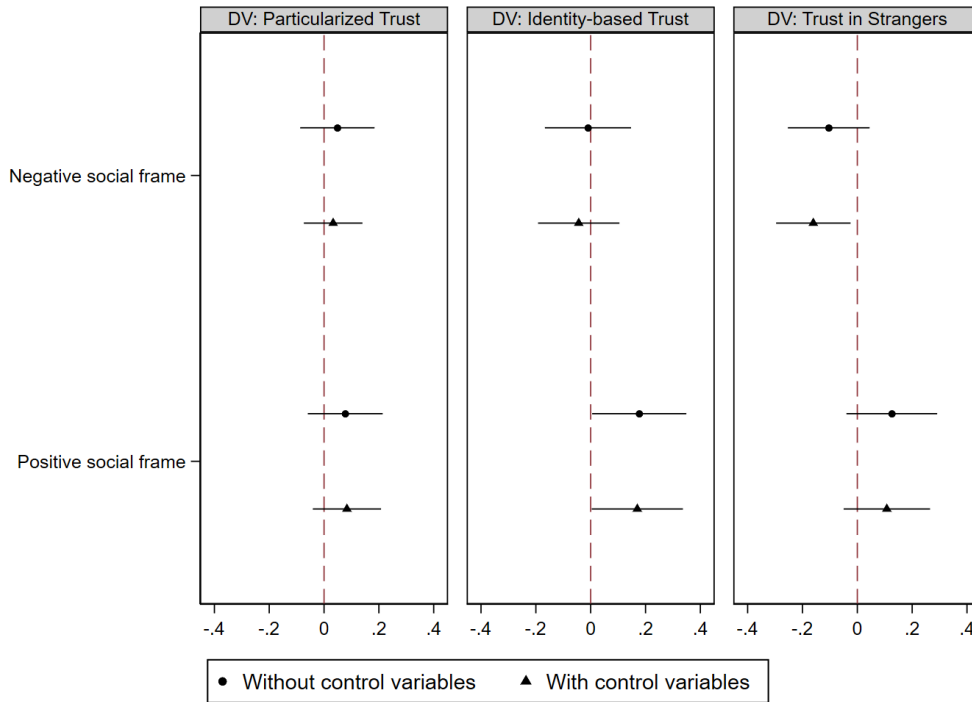
Notes: Displayed are linear regression coefficients with 95% confidence intervals. Estimates are based on tables S5 & S6. Reference category for the frames is the control group (no frame).

Group-specific effects

Starting with particularized trust, our analyses show that there are no significant interaction effects between our treatments and education and income when explaining particularized trust as we expected due to its particular focus on concrete first-hand experiences and the arising norms of reciprocity that dominate this form of trust (see table S11).

For identity-based trust as the dependent variable, figure 2 visualizes the respective interactions (see table S12). The upper left panel reveals that there is no significant interaction between the negative social frame and education. This finding is replicated with income as the moderator, where we also find no significant interaction. Thus, we

21

can conclude that there is no interaction between negative information about social cohesion and socio-economic status. Turning to the interaction between positive information and socio-economic status, we discover no interaction with education (lower left panel). For income, however, we find tentative evidence for an interaction. Although the coefficient for the interaction term is not significant at the 5% level, the graphical exploration reveals that respondents with lower levels of income (between 3000 and 7000 CHF) experience a positive effect of positive information (lower right panel).
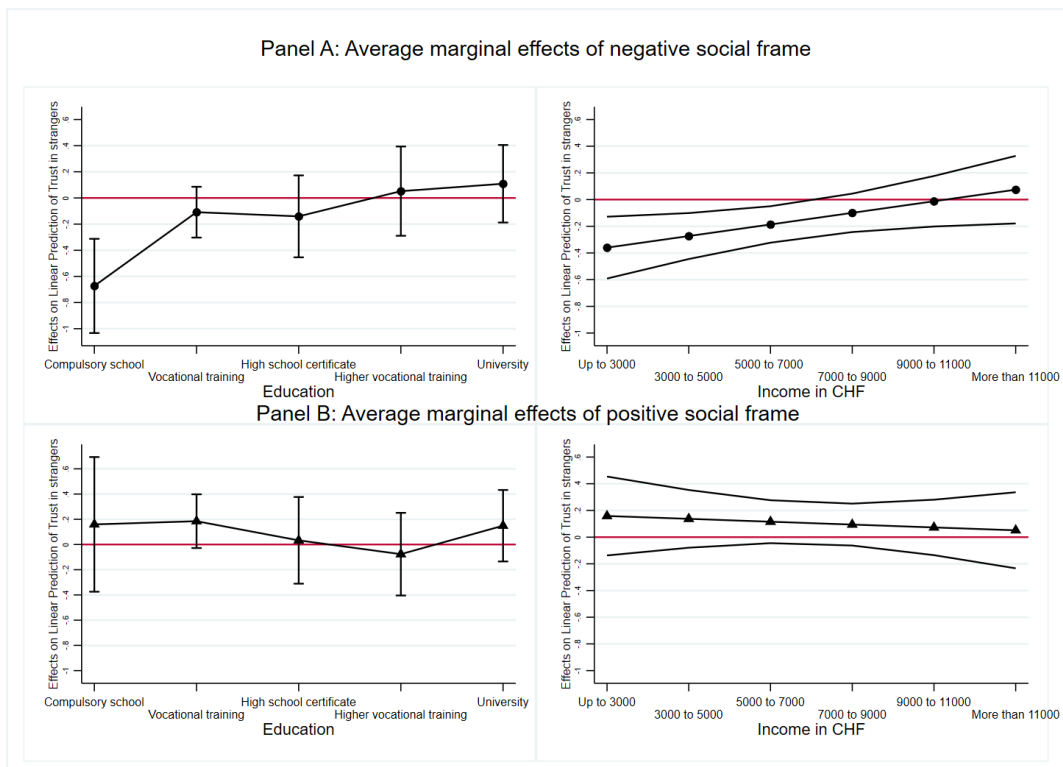
Figure 2 Average marginal effects (with 95% confidence intervals) of information on identity-based trust
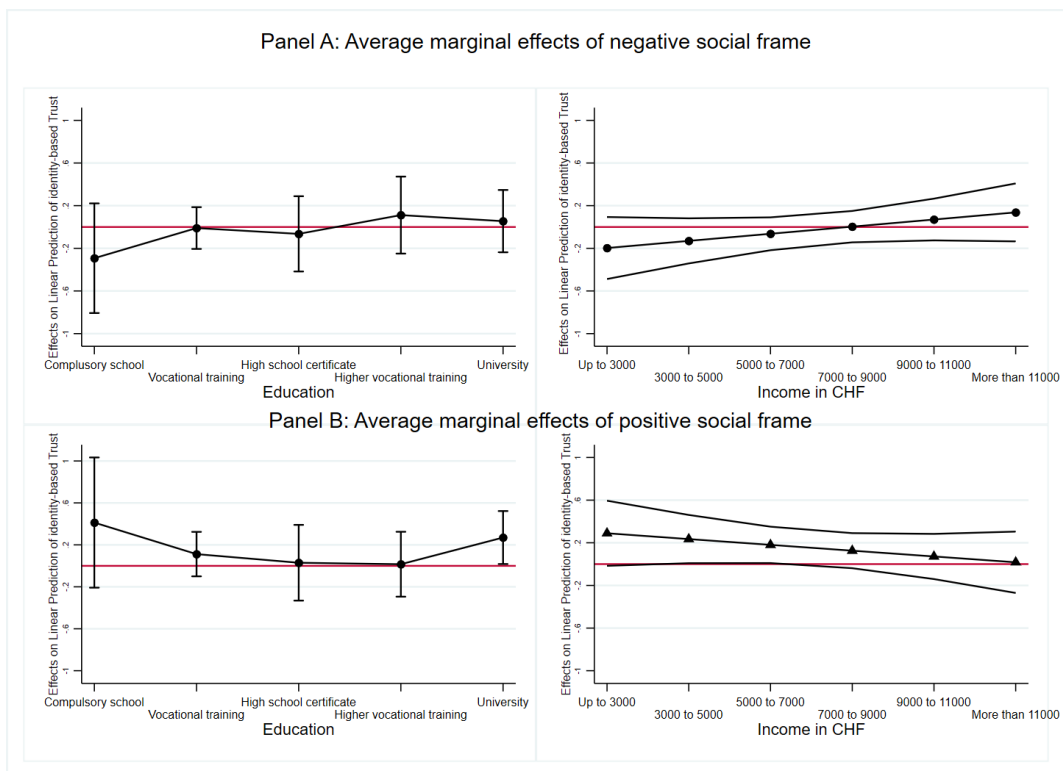
Notes: Displayed are average marginal effects of our treatment with 95% confidence intervals dependent on different levels of education and income. Panel A uses the effect of information about negative consequences of the crisis and Panel B uses the effect of information about positive consequences of the crisis. Estimates are based on table S12.

Regarding trust in strangers, figure 3 visualizes the respective interactions (see table S13). The upper left panel reveals that the negative social frame has a negative and significant effect on trust in strangers for those with only compulsory education. Thus, lesser educated respondents are affected by negative information which results in less trust in strangers. For the other levels of education, the negative information does not exert a significant effect. The upper right panel supports this finding and shows that for those with low levels of income, negative information reduces trust in strangers significantly (but not for those with higher incomes). From the lower panels of figure 3 it can be extracted that socio-economic status does not play a significant moderating role when it comes to the effect of positive information about the social fabric on trust in strangers.

Figure 3 Average marginal effects (with 95% confidence intervals) of information on trust in strangers

Notes: Displayed are average marginal effects of our treatment with 95% confidence intervals

dependent on different levels of education and income. Panel A uses the effect of information about negative consequences of the crisis and Panel B uses the effect of information about positive consequences of the crisis. Estimates are based on table S13.

In sum, we arrive at several important conclusions. First, particularized trust – that is trust in people who are close and with whom one interacts on a daily basis – is unaffected by information about positive and negative social consequences of a crisis. It seems that the norms of reciprocity and the concrete first-hand experiences that underpin this form of trust are more important than additional information about the environment. Second, we show that positive information about social cohesion during the Corona crisis has the potential to promote identity-based trust. Furthermore, there is some indication that this is prevalent for respondents with a lower socio-economic status signaling a catching up in levels of trust. Third, we find tentative evidence that negative information on the social fabric undermines trust in strangers. This is particularly true for respondents with a low socio-economic status. Thus, among respondents who are already associated with lower levels of trust and higher vulnerability to the negative externalities of crises, negative information undermines their already fragile trust in strangers.

Conclusion

Trust is an essential ingredient for collective decision-making in times of uncertainty and the current Corona crisis provides an excellent opportunity to study the effects of information on social trust. Accordingly, our paper evaluates the influence of information about the social consequences of the Corona crisis on the different

dimensions of social trust with a real-world survey experiment. Using information frames based on real-world scenarios of social cohesion, our analyses indicate that the type of information and the dimensionality of social trust is crucial. While we find no information effect for particularized trust, the results reveal that information about a resilient social fabric during the Corona crisis significantly increases identity-based trust, that is trust in people that, albeit unknown, share the same nationality or speak the same language. Information about the positive social consequences of the crises lends strength to the trust toward fellow citizens that holds societies together and this seems to be more prevalent for those in lower social strata. Furthermore, our analyses support the notion that trust in strangers is undermined by negative information. This holds particularly for those socio-economically deprived respondents with traditionally lower levels of trust and higher vulnerability to crises in general.

Importantly, it seems to matter which consequences people are confronted with. Negative events to some degree weaken social cohesion by increasing skepticism towards strangers, while positive information and experiences support the formation of trust in in-group members. Regarding the effect sizes, we note that they are mainly around a fifth of a standard deviation. Considering that we use real-world frames that are not artificially constructed and show typical experiences in the crisis that are not exaggerated, we regard these sizes as substantial. Moreover, in times of high information density, we regard such effects as relatively strong considering that respondents are already confronted with a wealth of information (Greenwald et al., 2015).

Nevertheless, our study bears several caveats that must be kept in mind when interpreting the results. First, our database must be critically discussed. We focus only on the German-speaking part of Switzerland and we cannot yet assess how our findings relate to other nations. While this focus has the advantage that we hold institutional and cultural characteristics constant, the general problem of how to approach the present findings in a comparative way beyond the case of Switzerland remains. According to the late Stein Rokkan (1970), however, Switzerland can be thought of as a microcosm of Europe because of its cultural, linguistic, religious and regional diversity. In this regard, Switzerland has been described as composed of three groups that 'stand with their backs to each other' (Steiner, 2001, p. 141). Put differently, conclusions drawn from empirical analyses in the German-speaking part of Switzerland are likely to be valid for Germany and Austria. In addition, regarding the situation of the pandemic in spring 2020, Switzerland had a comparable situation to many Western European countries with similar numbers of infections and countermeasures. Furthermore, we conducted our experiment at the height of the first wave in March and April 2020. When looking at the second and third wave of the pandemic, we can see that the countermeasures are parallel, indicating that the social consequences are similar. Yet, the lack of times series data prevents us from concluding that the effects are the same in early 2021, albeit that the pandemic situation remains pivotal. Second, in contrast to Aassve et al. (2020), we did not investigate the health-related impact of the Coronavirus but rather use the crisis as an opportunity to study the influence of information about the social consequences on different forms of social trust. While there are convincing arguments that health-related aspects of the crisis impact the three forms of trust in different ways, we cannot empirically test this with

our data (Aarøe et al., 2017; Aassve et al., 2020). Third, although we paid great attention to employing credible frames portraying scenarios fit for a real-world study, we cannot test the effect of crises directly but rather how information and experiences of a crisis affect trust decisions. Fourth, while we find effects of information on various forms of social trust, we cannot be sure whether the effects are based on the mechanisms we suggested. For instance, the positive effect of positive information on trust in strangers could be based on the reduction regarding uncertainty or on the evidence of prosocial behavior. As we do not attempt to isolate effects or specific mechanisms and instead focus on the compound treatment effect (Esaiasson et al., 2020; Hernán & VanderWeele, 2011), future research should thus account more explicitly for potential mechanisms.

Despite these caveats, our study provides a substantive contribution to the scholarly literature and has important implications. First, our analyses reveal that positive and negative information have distinct effects on the different dimensions of social trust. This is true even in times of high information density when we usually would expect specific information to have little additional effect. Second, we show that it is important to distinguish the different dimensions of social trust, namely particularized trust, identity-based trust, and trust in strangers. As we show that information affects these forms of trust differently, analyses not accounting for this dimensionality would potentially neglect more subtle results. Third, by focusing not only on pessimistic but also optimistic information in times of crisis, we provide a more realistic analysis. As many contributions have expanded our understanding of the effects of issue frames in artificial lab-experiment settings, we provide systematic evidence on the causal impact

of information on building social trust in a real-world context with information that reflects typical experiences of the current times of crisis.

As research has shown that trust can foster economic growth, social interactions and democracy, our findings have important implications. As positive and optimistic information increases trust in people with whom one shares an emotional commitment based on a shared identity, this reinforces the notion that this type of trust is a psychological group response aimed at restoring psychological equanimity in social situations that pose a threat to the self (Navarro-Carrillo et al., 2018). This could potentially strengthen the social fabric of society by forming a rally effect within society. It has to be noted, however, that these forms of trust might also have negative implications such as in-group favoritism or out-group derogation. The negative effect on trust in strangers could be regarded as an indication for such negative developments. Negative reactions towards strangers and out-group members can pose serious challenges to social cohesion. In this regard, whether increasing identity-based trust strengthens the societal fabric crucially depends on the inclusiveness of the in-group definition.

To end with a silver lining, in our survey experiment we found that information about positive social developments in times of crisis can increase specific forms of social trust. The increase of identity-based trust may be a stepping stone for developing personal and social initiatives, thus enabling new growth opportunities and social developments in the aftermath of the crisis.

ORCID

Maximilian Filsinger http://orcid.org/0000-0002-6583-8301

Markus Freitag http://orcid.org/0000-0003-2428-0652

Julian Erhardt http://orcid.org/0000-0002-4705-8889

Steffen Wamsler http://orcid.org/0000-0003-1768-3226

Data availability statement

The data that support the findings of this study are available in the Open Science Framework: https://doi.org/10.17605/OSF.IO/B53JS

All authors agreed to submission. The article is currently not considered for publication by any other journal.

Supplmentary material

Supplemental data for this article accessed on the Publisher's website.

References

Aarøe, L., Petersen, M. B., & Arceneaux, K. (2017). The Behavioral Immune System Shapes Political Intuitions: Why and How Individual Differences in Disgust Sensitivity Underlie Opposition to Immigration. *American Political Science Review*, *111*(2), 277–294. https://doi.org/10.1017/S0003055416000770

Aassve, A., Alfani, G., Gandolfi, F., & Le Moglie, M. (2020). *Epidemics and Trust: The Case of the Spanish Flu.* Working Papers 661, IGIER (Innocenzo Gasparini Institute for Economic Research), Bocconi University.

Angrist, J. D., & Pischke, J.-S. (2009). *Mostly Harmless Econometrics: An Empiricist's Companion*. Princeton University Press.

Bauer, P. C., & Freitag, M. (2018). Measuring Trust. In E. M. Uslaner (Ed.), *The Oxford handbook of social and political trust* (pp. 15–36). Oxford University Press.

Bechtel, M. M., Hainmueller, J., Hangartner, D., & Helbling, M. (2015). Reality Bites: The Limits of Framing Effects for Salient and Contested Policy Issues. *Political Science Research and Methods*, *3*(3), 683–695. https://doi.org/10.1017/psrm.2014.39

Boin, A., Hart, P. 't, Stern, E., & Sundelius, B. (2005). *The Politics of Crisis Management: Public Leadership under Pressure*. Cambridge University Press. https://doi.org/10.1017/CBO9780511490880

Borgonovi, F. (2012). The relationship between education and levels of trust and tolerance in Europe. *The British Journal of Sociology*, *63*(1), 146–167. https://doi.org/10.1111/j.1468-4446.2011.01397.x

Bornschier, S., Häusermann, S., Zollinger, D., & Colombo, C. (2021). How "Us" and "Them" Relates to Voting Behavior—Social Structure, Social Identities, and Electoral Choice. *Comparative Political Studies*, Online firyt. https://doi.org/10.1177/0010414021997504

Brandt, M. J., Wetherell, G., & Henry, P. J. (2015). Changes in Income Predict Change in Social Trust: A Longitudinal Analysis. *Political Psychology*, *36*(6), 761–768. https://doi.org/10.1111/pops.12228

Bundesamt für Gesundheit. (2020). *COVID-19 in der Schweiz*. https://covid-19-schweiz.bagapps.ch/de-2.html

Bundesamt für Statistik. (2020). *Bevölkerung*. https://www.bfs.admin.ch/bfs/de/home/statistiken/bevoelkerung/stand-entwicklung/bevoelkerung.html

Carlin, R. E., & Love, G. J. (2013). The Politics of Interpersonal Trust and Reciprocity: An Experimental Approach. *Political Behavior*, *35*(1), 43–63. https://doi.org/10.1007/s11109-011-9181-x

Carlin, R. E., Love, G. J., & Zechmeister, E. J. (2014). Trust Shaken: Earthquake Damage, State Capacity, and Interpersonal Trust in Comparative Perspective. *Comparative Politics*, *46*(4), 419–437.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, *94*(S), 95–120.

De Luca, G., & Verpoorten, M. (2015). Civil war, social capital and resilience in Uganda. *Oxford Economic Papers*, *67*(3), 661–686. https://doi.org/10.1093/oep/gpv036

Delhey, J., Newton, K., & Welzel, C. (2011). How General Is Trust in "Most People"? Solving the Radius of Trust Problem. *American Sociological Review*, *76*(5), 786–807. https://doi.org/10.1177/0003122411420817

Durkheim, E. (1893/1964). *The Division of Labor in Society*. Free Press.

Esaiasson, P., Sohlberg, J., Ghersetti, M., & Johansson, B. (2020). How the coronavirus crisis affects citizen trust in institutions and in unknown others: Evidence from 'the Swedish experiment'. *European Journal of Political Research.* Advance online publication. https://doi.org/10.1111/1475-6765.12419

Filsinger, M., & Freitag, M. (2020). Sozialkapital als Motor gesellschaftlicher Integration. In G. Pickel, O. Decker, S. Kailitz, A. Röder, & J. Schulze Wessel (Eds.), *Handbuch*

Integration (Vol. 52, pp. 1–13). Springer Fachmedien Wiesbaden.
https://doi.org/10.1007/978-3-658-21570-5_21-1

Freitag, M., & Bauer, P. C. (2013). Testing for Measurement Equivalence in Surveys.
Public Opinion Quarterly, *77*(S1), 24–44. https://doi.org/10.1093/poq/nfs064

Freitag, M., & Bauer, P. C. (2016). Personality traits and the propensity to trust friends
and strangers. *The Social Science Journal*, *53*(4), 467–476.
https://doi.org/10.1016/j.soscij.2015.12.002

Freitag, M., & Traunmüller, R. (2009). Spheres of trust: An empirical analysis of the
foundations of particularised and generalised trust. *European Journal of Political
Research*, *48*(6), 782–803. https://doi.org/10.1111/j.1475-6765.2009.00849.x

Gesthuizen, M., van der Meer, T., & Scheepers, P. (2008). Education and dimensions of
social capital: Do educational effects differ due to educational expansion and social
security expenditure? *European Sociological Review*, *24*(5), 617–632.

Geys, B., & Qari, S. (2017). Will you still trust me tomorrow? The causal effect of
terrorism on social trust. *Public Choice*, *173*(3-4), 289–305.
https://doi.org/10.1007/s11127-017-0477-1

Greenwald, A. G., Banaji, M. R., & Nosek, B. A. (2015). Statistically small effects of the
Implicit Association Test can have societally large effects. *Journal of Personality and
Social Psychology*, *108*(4), 553–561. https://doi.org/10.1037/pspa0000016

Hernán, M. A., & VanderWeele, T. J. (2011). Compound treatments and transportability
of causal inference. *Epidemiology*, *22*(3), 368–377.
https://doi.org/10.1097/EDE.0b013e3182109296

Hogg, M. A., Meehan, C., & Farquharson, J. (2010). The solace of radicalism: Self-
uncertainty and group identification in the face of threat. *Journal of Experimental
Social Psychology*, *46*(6), 1061–1066. https://doi.org/10.1016/j.jesp.2010.05.005

Johns Hopkins University. (2021). *Coronavirus Resource Center*.
https://coronavirus.jhu.edu/map.html

Kang, S., & Skidmore, M. (2018). The Effects of Natural Disasters on Social Trust:
Evidence from South Korea. *Sustainability*, *10*(9), 2973.
https://doi.org/10.3390/su10092973

Kenworthy, J. B., & Jones, J. (2009). The Roles of Group Importance and Anxiety in
Predicting Depersonalized Ingroup Trust. *Group Processes & Intergroup Relations*,
12(2), 227–239. https://doi.org/10.1177/1368430208101058

Kijewski, S., & Freitag, M. (2018). Civil War and the Formation of Social Trust in Kosovo.
Journal of Conflict Resolution, *62*(4), 717–742.
https://doi.org/10.1177/0022002716666324

Lount, R. B., & Pettit, N. C. (2012). The social context of trust: The role of status.
Organizational Behavior and Human Decision Processes, *117*(1), 15–23.
https://doi.org/10.1016/j.obhdp.2011.07.005

Martini, S. (2016). *Trusting people in times of crisis: Panel and experimental evidence on the political foundations and consequences of social trust.* Universitat Pompeu Fabra. https://www.tdx.cat/handle/10803/402890?show=full

Matthes, J. (2007). Beyond accessibility? Toward an on-line and memory-based model of framing effects. *Communications*, *32*(1), 51–78. https://doi.org/10.1515/COMMUN.2007.003

Miller, A. S., & Mitamura, T. (2003). Are Surveys on Trust Trustworthy? *Social Psychology Quarterly*, *66*(1), 62. https://doi.org/10.2307/3090141

Münch, R. (2015). Integration, Social. In J. D. Wright (Ed.), *International encyclopedia of the social & behavioral sciences* (2nd ed., pp. 243–248). Elsevier. https://doi.org/10.1016/B978-0-08-097086-8.32077-3

Navarro-Carrillo, G., Valor-Segura, I., Lozano, L. M., & Moya, M. (2018). Do Economic Crises Always Undermine Trust in Others? The Case of Generalized, Interpersonal, and In-Group Trust. *Frontiers in Psychology*, *9*, 1955. https://doi.org/10.3389/fpsyg.2018.01955

Newton, K., & Zmerli, S. (2011). Three forms of trust and their association. *European Political Science Review*, *3*(2), 169–200. https://doi.org/10.1017/S1755773910000330

Offe, C. (1999). How can we trust our fellow citizens? In M. E. Warren (Ed.), *Democracy and Trust* (pp. 42–87). Cambridge University Press.

Organization for Economy and Development. (2020). *Education at a Glance 2019*. https://read.oecd-ilibrary.org/education/education-at-a-glance-2019_f8d7880d-en#page48

Pitas, N., & Ehmer, C. (2020). Social Capital in the Response to COVID-19. *American Journal of Health Promotion : AJHP*, *34*(8), 942–944. https://doi.org/10.1177/0890117120924531

Putnam, R. D. (2000). *Bowling alone. The collapse and revival of American community*. Simon & Schuster.

Robbins, B. G. (2019). Measuring Generalized Trust: Two New Approaches. *Sociological Methods & Research*, *121*, 1-52. https://doi.org/10.1177/0049124119852371

Rohner, D., Thoenig, M., & Zilibotti, F. (2013). Seeds of distrust: conflict in Uganda. *Journal of Economic Growth*, *18*(3), 217–252. https://doi.org/10.1007/s10887-013-9093-1

Rokkan, S. (1970). Foreword. In J. Steiner (Ed.), *Gewaltlose Politik und kulturelle Vielfalt. Hypothesen entwickelt am Beispiel Schweiz* (pp. 1–11). Haupt.

Rosenthal, U., Charles, M. T., & Hart, P. T. 't. (Eds.). (1989). *Coping With Crises: The Management of Disasters, Riots, and Terrorism*. Charles C Thomas Pub Limited.

Scheufele, D. A. (2000). Agenda-Setting, Priming, and Framing Revisited: Another Look at Cognitive Effects of Political Communication. *Mass Communication and Society*, *3*(2-3), 297–316. https://doi.org/10.1207/S15327825MCS0323_07

Steiner, J. (2001). Switzerland and the European Union: A puzzle. In M. Keating & J. McGarry (Eds.), *Minority Nationalism and the changing international order.* Oxford University Press.

Stolle, D. (2002). Trusting in strangers: the concept of generalized trust in perspective. *Österreichische Zeitschrift Für Politikwissenschaft*, *31*(4), 397–412.

Tajfel, H. (1974). Social identity and intergroup behaviour. *Information (International Social Science Council*, *13*(2), 65–93.

Tajfel, H., & Turner, J. C. (1979). The Social Identity Theory of Intergroup Behavior. In S. Worchel & W. G. Austin (Eds.), *Psychology of intergroup relations.* (pp. 1–24). Nelson-Hall.

Taylor, S. (2019). *The psychology of pandemics: Preparing for the next global outbreak of infectious disease.*

The American Association for Public Opinion Research. (2016). *Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys* (9th ed.). AAPOR.

Toya, H., & Skidmore, M. (2014). Do Natural Disasters Enhance Societal Trust? *KYKLOS*, *67*(2), 255–279.

Uslaner, E. M. (2002). *The moral foundations of social trust*. Cambridge University Press.

Uslaner, E. M. (2010). Trust and the Economic Crisis of 2008. *Corporate Reputation Review*, *13*(2), 110–123. https://doi.org/10.1057/crr.2010.8

Uslaner, E. M. (Ed.). (2018). *The Oxford handbook of social and political trust*. Oxford University Press.

Weible, C. M., Nohrstedt, D., Cairney, P., Carter, D. P., Crow, D. A., Durnová, A. P., Heikkila, T., Ingold, K., McConnell, A., & Stone, D. (2020). COVID-19 and the policy sciences: initial reactions and perspectives. *Policy Sciences*, *19*(4), 1–18. https://doi.org/10.1007/s11077-020-09381-4

Weinschenk, A. C. (2017). Big Five Personality Traits, Political Participation, and Civic Engagement: Evidence from 24 Countries. *Social Science Quarterly*, *98*(5), 1406–1421. https://doi.org/10.1111/ssqu.12380