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Stalin and the origins of mistrust

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ABSTRACT

We examine current differences in trust levels within the countries of the former Soviet Union (FSU) and trace their origins back to the system of forced labor during Stalin, which was marked by high incarceration rates and harsh punishments. We explore whether those exposed to knowledge about the repressions became less trusting and transferred this social norm to future generations and communities. We argue that political repressions were more salient and visible to local communities living near forced labor camps (gulags), which symbolized the harshness of Stalin's regime. Combining contemporary survey data with the geolocation of forced labor camps, we find that living near former gulags lowers present-day social trust and civic engagement. These effects are independent of living near places where Stalin's victims were arrested. Moreover, they are above and beyond any experiences with war or civil conflict that the extant literature documents, indicating that the gulag system's repressiveness is a crucial trigger of the mistrust culture within the FSU countries today. As such, we furnish novel evidence on how past political repression matters for current socioeconomic outcomes.

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1. Introduction

Trust underpins economic exchange and, as such, is essential to economic development (Arrow, 1972; Algan and Cahuc, 2010; Knack and Keefer, 1997; Tabellini, 2010). This fact explains economists' interest in the historical origins of trust norms within and across national borders. An important strand of literature has focused on the role of historical developments for trust. For example, Nunn and Wantchekon's (2011) seminal paper links contemporary survey data with ethnicity-level data on slave exports to show that respondents whose ancestors were disproportionately sold into slavery tend to mistrust their neigh-

bors, relatives, and the local government.¹ Furthermore, Guiso et al. (2016) find that Italian cities with self-government status in the Middle Ages have higher present-day civic engagement levels than their counterparts without such a historical free city-state status. In another seminal contribution, Ashraf and Galor (2013) demonstrate that prehistorically determined genetic diversity negatively correlates with present-day interpersonal trust. Recent work also shows that exposure to war and political

¹ More recently, Okoye (2021) demonstrates that exposure to Christian missions in Africa lowers present-day trust of neighbors, relatives, co-ethnics, and other individuals in former British colonies, but media and education in non-British colonies increase trust in non-British colonies. In another recent paper, Aassve et al. (2021) demonstrate that the descendants of Spanish Flu survivors who moved to the United States experience lower social trust today. Lichter et al. (2020) find that the intensity of past spying networks in East Germany still lowers interpersonal and institutional trust today.

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conflicts negatively correlates with interpersonal trust (Bai and Wu, 2020; Conzo and Salustri, 2019).²

Building on this body of literature, our paper is the first to link *within*-country societal trust differences in the former Soviet Union (FSU) to past political repression. Combining contemporary individual-level geocoded data from the 2016 Life in Transition Survey (LiTS) with information on the location of former gulags in the FSU (Smirnov, 1998), we demonstrate that living near a place of past repression created an enduring culture of mistrust within the countries of the FSU.

Established in the 1920s and peaking during Joseph Stalin's rule (1929–1953), the gulag system sentenced millions of men, women, and children to penal labor (see Appendix A for details). Stalin's regime used harsh punishments and criminalized aspects of economic and social life, such as minor workplace violations and mistakes, which would hardly constitute a crime in a modern democracy (Belova and Gregory, 2009; Gregory et al., 2011; Miller and Smith, 2015). The Soviet authorities sent the victims to gulags based on accusations of anti-Soviet activity, sabotage, or failure to report such activity of others (Gregory, 2003; Khlevniuk and Belokowsky, 2015).³

As such, Stalin's political repression apparatus raised the cost of engaging in public life and trusting others. Avoiding incarceration amidst this mass terror and repression involved mistrusting others as a means to ensure self-preservation. As Figes (2007, Chapter 4) explains, "*With the end of genuine communication, mistrust spread throughout society. People concealed their true selves behind public masks. [...] In this atmosphere fear and terror grew.*"

While Stalin's repressions affected society as a whole, our results suggest that the consequences of repression are more intense near former places of incarceration. This indicates that the salience of political repression, epitomized by the gulag system, was stronger near former camps, and it created enduring scarring effects for communities living nearby. Furthermore, we find suggestive evidence that the social norm of mistrust is stronger for near camps that closed down more recently and among middle-aged respondents and families who experienced repression.

Furthermore, we show that individuals living near gulag sites harbor mistrust towards present-day state institutions, such as the police, courts, and the local authorities. We argue that this is no coincidence as these institutions were responsible for carrying out Stalin's repressions at the time. Importantly, living near a former campsite especially influences mistrust of neighbors, fitting with the historical evidence that Soviet authorities relied on neighbors spying on one another (Figes, 2007) and willingly or reluctantly coming up with lists of potential "enemies of the people." Consequently, the gulag—an epitome of political repression—durably eroded trust in one's social circle, and especially in neighbors.

² A flourishing scholarship in economics has examined how past events and circumstances affect current socioeconomic outcomes and institutions. For overviews, see Cioni et al. (2021), Michalopoulos and Papaioannou (2017), Nunn (2009, 2014, 2020), Spolaore and Wacziarg (2013), and Voth (2020). In addition, Walden and Zhukov (2020) provide a detailed summary of the literature on the long-term consequences of political violence, including political repression and genocide.

³ Gulags fundamentally differed from the Nazi concentration camps in their organization and activities. Whereas Nazi camps tortured or exterminated specific population groups that the regime deemed undesirable based on their ethnic origin or political views, gulags were mostly industrial production complexes using forced labor. While Nazi camps also had a forced labor element, their main goal was extermination, as evidenced by the differences in mortality between the two systems (Barenberg et al., 2017). A person sentenced to gulag labor could, at least in principle, expect to be released at the end of the sentence, which was not the case with Nazi camps (Barnes, 2000).

Finally, the mistrust of society, neighbors, and institutions also manifests itself in lower civic engagement. Living within 10 km of a former gulag lowers the probability of voting, socializing with friends and family, and being a current political party member.

Importantly, we argue that these results are not because gulag camps were put in low-trust and low-civic-engagement localities. While surveys with information on trust and civic engagement are unavailable for the time period before gulags were built, Lankina and Libman (2017) demonstrate that Russian localities that later on ended up having gulags were more developed *before* the construction of the camps. Specifically, these regions had high human capital, as evidenced by the higher shares of literate individuals, nobility, middle class, clergy, and merchants. European regions with low historical literacy rates have lower social trust today (Tabellini, 2010). Extrapolating the evidence in Tabellini (2010) to our setting implies that because gulag areas were historically more literate, they also likely had higher trust levels. More generally, because human capital and trust are positively correlated (e.g., Knack and Keefer, 1997; Tabellini, 2010), gulag areas likely had a positive pre-trend in trust. This implies that our negative estimates are then a lower bound of the actual mistrust effects associated with gulag locations.

Our results suggest that past political repression, epitomized by places of forced labor, bred persistent social and institutional mistrust and low civic engagement. In addition to the scarring effect consistent with our results, we test for alternative mechanisms and explanations. For example, a possible alternative explanation is that the gulag locations coincide with the places where Stalin's victims were arrested. To explore this possibility, we perform additional analyses, which reveal that our results are independent of proximity to the places where the victims of repressions were arrested. This result suggests that gulag locations are the main symbol of Stalin's political repression and a major factor shaping collective memory and trust outcomes today.

Furthermore, we show suggestive evidence that the social norm of mistrust could be due to the male-biased sex ratios created by the predominantly male inmate population in gulag localities. Moreover, we can plausibly rule out mechanisms related to selective migration and the possibility that our results reflect the disutility associated with living near former gulags refurbished into current prisons. Our results are robust to using alternative definitions of the distance to the nearest camp, including potentially endogenous controls, using regressions with entropy balancing weights (Hainmueller, 2012), survey weights, dropping countries from the analysis sample, applying region fixed effects, relying on alternative measures of trust, and falsification tests using placebo gulag locations.

Our paper most closely relates to the literature on the origins of within-country differences in trust-related beliefs and cultural norms in post-communist countries in Central and Eastern Europe and the FSU (Becker et al., 2016; Grosjean, 2011, 2014). These papers link current trust differences to either past institutional differences or war experiences. By contrast, we show that past political repression still determines trust levels in the FSU today and show suggestive evidence about the possible channels through which this social norm may have persisted over time.

2. Institutional setting

The gulag system existed from 1922 until Stalin's Death in 1953 (Applebaum, 2004). While most camps closed down by 1960, some remained in existence until the 1980s and have been operating as regular prisons (Pallot, 2005).

About 20 million people were at some point inmates at gulag camps (Khlevniuk and Nordlander, 2004; Markevich, 2016, see also

Appendix A).⁴ In 1953, the year of Stalin's death, the gulag population totaled more than 2.5 million, implying an incarceration rate of 1,558 per 100,000 people, which was more than ten times higher than that year's US figures for penal incarceration (Belova and Gregory, 2009).⁵ Recent survey evidence also suggests the enduring memory of Stalin's repression and its persistence in collective memory. According to the Russian Public Opinion Research Center (2018), 80 percent of Russians are aware of Stalin's repressions. Over one-third of respondents reports having relatives who experienced repressions during Stalin.

A critical aspect of the history of the gulag concerns the debated question of whether the Soviets carefully planned the location of the labor camps or not. While the Soviets undoubtedly utilized some of the forced labor camps to industrialize remote areas (Markevich and Mikhailova, 2012), camps also existed in industrialized centers such as Moscow and the Ural region (Fig. 1).

Fig. 1 suggests that camp locations are non-random, which is a fact that the extant literature also implies. For example, Applebaum (2004) suggests that camp locations may have resulted from local elites' lobbying efforts. Furthermore, according to Mikhailova (2012) and Lankina and Libman (2017), Soviets purposefully built gulags near urban centers experiencing labor shortages. Mikhailova (2012) estimates that two out of three camps were within 35 km of a city with 100,000 residents in 1939, and four out of five camps were within 35 km of a present-day town.⁶ Moreover, Russian localities with a gulag had higher literacy rates and shares of nobility and clergy than non-gulag sites before 1917 (Lankina and Libman, 2017). The location of gulags is, therefore, not orthogonal to pre-development characteristics.

The Soviet state tried to limit the information about gulags. The authorities censored prisoners' letters, controlled visits and packages from relatives, and forbade released prisoners to move to big cities (Khlevniuk and Belokowsky, 2015). However, historians (Alexopoulos, 2005; Barenberg, 2014, p. 7; Bell, 2013; Khlevniuk and Belokowsky, 2015; Shearer, 2015) disagree that the gulag was an "archipelago" devoid of contact with the rest of society (Solzhenitsyn, 2007). Frequent communication between the inmates and the general population occurred for several reasons. First, between 1934 and 1952, the Soviets released about 7 million camp prisoners (some more than once) (Khlevniuk and Belokowsky, 2015). Getty et al. (1993) show that about 20–40 percent of prisoners were released each year. In addition, in 1945, the Soviets amnestied or reduced the sentences of more than 600,000 prisoners, or 40 percent of the gulag population at the time (Alexopoulos, 2005). Due to complex residential mobility laws, labor market discrimination, and a lack of resources, these released prisoners tended to stay behind in the gulag areas and work in the gulag complexes as free laborers (Alexopoulos, 2005; Barnes, 2011; Pallot, 2005; Shearer, 2015). While official data on this topic are unavailable, based on anecdotal evidence, Barnes (2011) concludes that about a third to a half of the released inmates stayed near the camp upon their release.

Second, gulag prisoners and free laborers often worked side-by-side in enterprises. Some prisoners also worked on different sites or civil construction projects (e.g., hospitals and schools) outside

the labor camp and could move in and out of the camp unsupervised. Third, gulags were often located in or near residential areas, and prisoners on a light regime could mingle with the non-institutionalized population (Khlevniuk and Belokowsky, 2015). As such, the local people near gulags were both aware of gulags' existence and were often in contact with the prisoners. Therefore, we argue that the salience of the gulag and the political repression that it represented were strongest near such places of incarceration.

3. Conceptual framework and hypotheses

Our main argument is that those living near gulag camps developed a social norm of mistrust for two distinct reasons: i) fear of repression, made salient by the proximity to the labor camp, and ii) fear of the untrustworthiness of the inmates. Based on these two channels, we have several conjectures related to the expected associations between living near former gulags, trust, and civic engagement.

3.1. Fear of repression

Political repression during Stalin's regime was pervasive. The criminalization of ordinary activities, harsh punishments, and the encouragement to be vigilant and report others' innocuous behaviors to the authorities (Belova and Gregory, 2009; Gregory et al., 2011; Miller and Smith, 2015) increased the cost of trusting people. Because the smallest action could be interpreted as dissent, for which one could be arrested and then sent to a gulag, mistrusting others was a viable coping strategy to avoid incarceration and ensure self-preservation.

While repressions happened everywhere in the Soviet Union, living near a campsite made political repression and its consequences more salient and visible to bystanders. Those living near gulag communities at the time could gather information about the extent of the terror, which likely had a scarring effect. The memories of released relatives or other former prisoners who settled locally and interactions with gulag prisoners who worked alongside free laborers or roamed across towns made the repressions and their consequences tangible for bystanders. As a result, gulag contemporaries living near a campsite likely developed mistrust, which persisted in the community over time.

Furthermore, the Soviets relied on institutions and individuals for surveillance and spying, which were aspects of the terror itself.⁷ In addition to employing professional police agents and informants, Soviet authorities encouraged and incentivized citizens to spy on one another and report any potential "enemies of the people" who were typically interrogated, tried, and then executed or sent to gulags or labor colonies. For example, a 1935 report by the Communist Party Central Committee Secretary documents a network of 27,650 resident police agents and an informant network of 270,777 individuals (Shearer, 2004). Under Stalin's rule, the Soviet penal code defined a range of "counter-revolutionary" crimes, such as espionage, anti-Soviet agitation, contact with foreigners, and treason. The penal code covered thoughts, actions, or lack of actions. Soviet citizens often had the incentive to report others—typically, neighbors, teachers, colleagues, and even spouses—to avoid repression and signal party loyalty (Fitzpatrick, 1996; Gregory, 2013; Lskavyan, 2007; Zhukov and Talibova, 2018). The regime created the impression that an elaborate network of traitors and saboteurs was endlessly seeking to undermine the Soviet Union's progress and prestige. It was up to vigilant citizens to intercept this network by reporting it to the authorities

⁴ This figure includes repeat incarcerations and excludes about 1 million executions, the exile of 6 million, and the sentences to correctional works of another 20 million.

⁵ Including the exiled "special settlers" (deported ethnic groups) in this calculation would yield an incarceration rate of 2,605 per 100,000 population (Belova and Gregory, 2009).

⁶ Nevertheless, some disagree that the Soviets tended to build gulags near urban centers. Zhukov and Talibova (2018) show that the regime placed gulags in railroad-accessible rural areas in Russia. Reconciling the evidence from both Zhukov and Talibova (2018) and Mikhailova (2012) implies that the Soviets initially set up gulags in rural areas, which later became urbanized.

⁷ This mass surveillance was, in fact, endemic in other socialist and communist societies (e.g., Lichter et al., 2020).

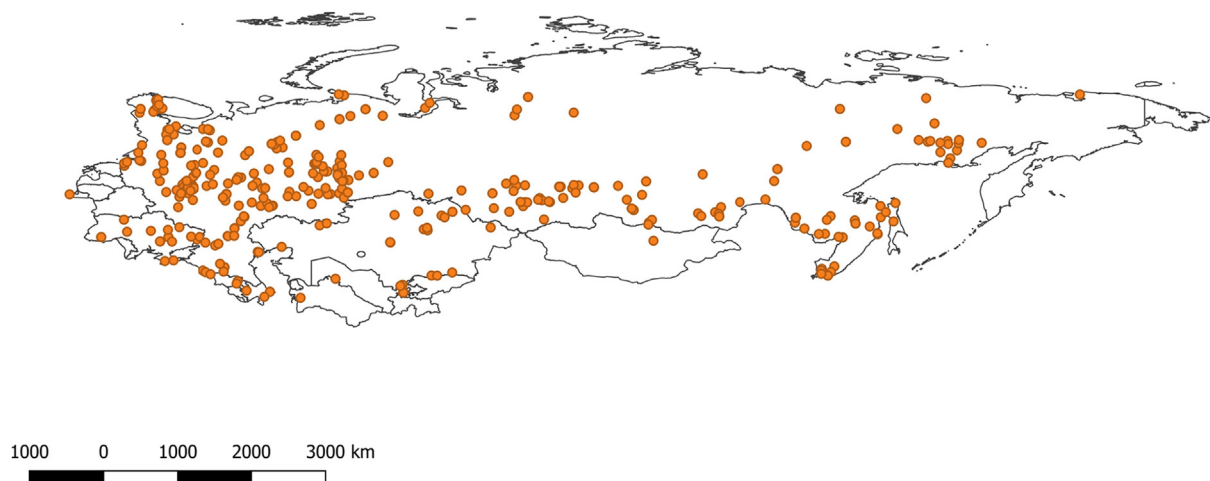


Fig. 1. Geographic distribution of gulag camps on the territory of the former Soviet Union, 1923–1960. Source: Authors based on Smirnov (1998).

and ensuring the Soviet Union's glorious future. This paradigm entailed that arresting a single "enemy of the people" called for and justified charging five to ten other individuals as co-conspirators and accomplices (Cohen, 2012). Under torture, those interrogated also reported "accomplices" from their social circle (Gregory et al., 2011).

In this environment, keeping one's head down and mistrusting others was an essential survival strategy. Parents taught their children to mind what they say and to be wary of neighbors who could be overhearing private conversation through the walls of communal apartments (Figs, 2007). As explained in section 7.3 below, this is consistent with models of the intergenerational (vertical) transmission of values (e.g., Bisin and Verdier, 2001).

While spying took place all over the Soviet Union, the proximity to the camps and the visibility of the extent and scope of punishment it brought likely made the fear, caution, and mistrust of others stronger and more tangible for those living near camps compared to those living further away. Therefore, we anticipate that mistrust of others, and especially neighbors, is a particularly salient consequence of living in proximity to former gulags. Furthermore, we expect that in addition to social mistrust, the scarring effect due to fear of political repression also led to mistrust of state institutions, such as the police and the courts, which carried out these repressions. This hypothesis is also supported by recent research demonstrating that exposure to violence and repression triggers institutional mistrust (e.g., Grosjean, 2014; Nunn and Wantchekon, 2011; Wang, 2021). For example, Wang (2021) finds that individuals who grew up in areas more exposed to repression during the Chinese Revolution are less likely to trust political leaders and are more critical of the regime.

The consequences of the political repression hypothesis for different civic engagement forms are difficult to ascertain *a priori*. On the one hand, past political violence may be associated with lower voting probability (Zhukov and Talibova, 2018). On the other hand, research shows that the erosion of social trust due to past victimization can coincide with increased participation in social and religious groups (Cassar et al., 2013) but also with a lower probability of protest (Wang, 2021). Therefore, we expect that if the scarring hypothesis is correct, living near a former gulag may negatively affect forms of civic engagement.

We also propose and explore whether our results are consistent with an alternative explanation, namely that the placement of the gulag is near places of arrest. While the Soviet authorities used varying arrest tactics, most of the victims were rallied up at home

and often told that they would be gone for a little bit, thus depriving them of the possibility to say goodbye to their relatives or pack clothes and tools that they would later need (Applebaum, 2004). Arrests typically happened in the middle of the night, with the infamous "knock on the door" (Applebaum, 2004). The victims were then brought to the local prison, interrogated—often under torture—, tried and sentenced in a hurry, and sent on a long train journey across the territory of the FSU. The latter aimed at putting prisoners as far away as possible from their former lives (Applebaum, 2004). While in most cases, the sentenced prisoners were transported to the gulag in secrecy, in smaller cities, prisoners sometimes marched through the city in front of the gaze of locals.

Given this historical evidence, it is also possible that the social norm of mistrust also formed and persisted in the places where Stalin's victims were arrested. For example, citizens who lived through the arrests may have developed a collective understanding of the risks and costs of participating in public life (Zhukov and Talibova, 2018). They, therefore, avoided actions that could be interpreted as dissent. Consequently, research shows that contemporary voting tends to be low in localities that experienced more arrests during Stalin's terror (Zhukov and Talibova, 2018). This evidence suggests that avoiding contact with others and "keeping one's head down" (Zhukov and Talibova, 2018, p. 269) was indeed a key survival strategy in the places where arrests took place.

We argue and provide empirical evidence suggesting that living near a forced labor camp intensified the fear of repression and created a mistrust culture in the gulag localities. Yet, if the location of arrest sites coincides with the location of gulags, our results could reflect the repressions that took place at the arrest sites. Nevertheless, we empirically show that the social norm of mistrust that developed near gulags is independent of living near places of arrest. As such, our paper suggests that the gulag was the primary symbol of political repression that bred a persistent culture of mistrust within the FSU.

3.2. The untrustworthiness of the inmates

We also explore that those living in proximity to gulags may have developed mistrust due to the inmates' untrustworthiness. As Alexopoulos notes (2017, p. 235), the encounters between the inmates and locals were marked by "fear and distrust." Gulags typically had a culture of crime and corruption (Heinzen, 2005), given that about a quarter to a third of all inmates were also common

criminals – murderers, rapists, and thieves (Getty et al., 1993), which may have influenced locals' suspicion of the inmates.⁸ In addition, newly freed prisoners often settled in the local communities after releases and amnesties. For example, the 1945 and 1953 pardons freed about 600,000 and 1.5 million prisoners, respectively (Alexopoulos, 2005; Tikhonov, 2003). The authorities frequently failed to arrange transportation (train tickets) for the released prisoners to return to their homes (Alexopoulos, 2005). Local employers typically refused to hire former inmates, and the police authorities did not issue them residency documents (Barnes, 2011). Amnestied prisoners who lacked alternatives settled in the local communities and frequently resorted to crime, given the lack of funds, labor market discrimination, and the inability to move due to strict residency laws they experienced (Alexopoulos, 2005; Figes, 2007). Nordlander (1997) reports that cities near gulags experienced higher crime rates than the rest of the USSR due to released inmates.

Given this evidence, those living near a gulag may have developed mistrust because they feared the crime and disorder associated with the inmates. Figes (2007) explains that the general population could not distinguish between common criminals and political prisoners and simply associated amnesties and releases with crime and hooliganism. We expect that this mistrust of the inmates would manifest itself in low social trust, but not trust of other groups and institutions.

However, the mistrust of the former inmates may have also coincided with higher trust of the Soviet authorities responsible for tackling the problem with the “enemies of the people.” Consequently, locals living near campsites may have developed loyalty towards the oppressor (Walden and Zhukov, 2020). If this were indeed the case, we would expect that living near a former gulag is both negatively associated with social trust and positively linked with trust of institutions. If this conjecture is correct, we would not expect that living near a former gulag would impact civic engagement.

3.3. Channels of transmission

Gathering information is costly in an atmosphere of political terror. The transmission of culture, beliefs, and norms can happen vertically—i.e., from children to parents, “obliquely,” i.e., from adults other than the parents, and horizontally from peers (Bisin and Verdier, 2001; 2011; Creanza et al., 2017; Epstein, 2007; Miho et al., 2020). First, faced with a situation of political repression, individuals learn from others and develop rules of thumb, norms, and behavioral shortcuts, which they apply in repeating situations. This is often referred to as “horizontal” or oblique learning (Chibnik, 1981; Heinrich and McElreath, 2003; Nunn, 2009). Over generations, such cultural learning resembles a Darwinian genetic evolution process (Boyd and Richerson, 1985; Cavalli-Sforza and Feldman, 1981). Second, according to the Bisin-Verdier model, motivated by imperfect empathy, parents evaluate their children's choices through the prism of their parental preferences (Bisin and Verdier, 2011). Cultural transmission results from the careful socialization decisions within the family (i.e., vertical transmission) and indirect socialization through imitating role models and learning (i.e., horizontal/oblique transmission) (Bisin and Verdier, 2011; Spolaore and Wacziarg, 2013). According to this model, if there is a prevailing social norm and little heterogeneity in societal views, parents have few incentives to undertake vertical

⁸ Since many normal daily activities were criminalized, calculating the share of ordinary criminals in gulags is non-trivial. Based on Table 7 in Getty et al. (1993), we added the percentages of offenses of the gulag population falling under “banditry,” “hooliganism,” crimes against persons, and crimes against property (excluding theft of public property). We cannot directly identify criminals vs. non-criminals in the data from Smirnov (1998).

socialization, and instead, children adopt the prevailing social norms (Bisin and Verdier, 2011).

In the context of Stalin's political repression, several studies provide suggestive evidence of the vertical transmission channel. For example, Lupu and Peisakhin (2017) show that in 2014, the descendants of the more intensely deported Crimean Tatars in 1944 show more hostile opinions towards Russia, support Crimean Tatar leadership, and are more politically active. Toews and Vezina (2021) provide suggestive evidence of the inter-generational (vertical) transmission of human capital in gulag areas with higher shares of “enemies of the people” (i.e., educated elites). In one example, Miho et al. (2020) show evidence of horizontal transmission of culture. Specifically, using Stalin's ethnic deportations for identification, the authors demonstrate that locals exposed to the deportees adopted norms of gender equality. While distinguishing between horizontal and vertical transmission in our case is difficult, our results provide suggestive evidence of the vertical transmission channel, which is also consistent with the historical narrative.

4. Related literature

Our paper builds on and contributes to the scholarship on the within-country differences in trust in post-socialist countries. One strand of this literature suggests that the legacies of former empires have shaped current trust levels within Central and Eastern Europe (CEE). For example, Becker et al. (2016) find that Eastern Europeans who live on the former Habsburg Empire border have greater trust in courts and the police and are less likely to pay bribes than their counterparts living in localities without a Habsburg legacy. Moreover, Grosjean (2011) shows living under common imperial institutions such as the Ottoman, Habsburg, or Russian empires influences generalized trust in Eastern Europe.⁹

In addition, two prominent studies claim that former civil war and conflict are the root causes of mistrust in the CEE and FSU region. Grosjean (2014) links institutional distrust in CEE and the FSU with civil strife and violent experiences. Cassar et al. (2013) also find an enduring effect of conflicts on trust and economic preferences in Tajikistan. The authors document that the decreases in trust and economic performance due to conflict experiences coincide with victims' increases in community life participation.

We also complement the political science scholarship on the gulags' consequences for current political outcomes (Rozenas, Schutte, and Zhukov, 2017; Zhukov and Talibova, 2018). Using victim-level information from Memorial, Zhukov and Talibova (2018) document that communities with a larger number of residents deported to gulags were less likely to vote in recent elections in Russia and Ukraine and unlikely to vote for pro-Russian parties in Ukraine (Rozenas et al., 2017). Both Rozenas et al. (2017) and Zhukov and Talibova (2018) propose that the deportations are proxies for Soviet political repression and violence.¹⁰ Toews and

⁹ Similarly, Alesina and Fuchs-Schündeln (2007) show that living under communism durably shaped the preferences for redistribution in East Germany. Heineck and Sussmuth (2013) find long-lasting differences in trust and perceived cooperativeness between East and West Germans.

¹⁰ We acknowledge three additional related working papers in the political science literature. First, Kapelko and Markevich (2014) link the location of 352 gulags with district-level voting patterns in present-day Russia. The authors find that districts with a gulag were more likely to vote anti-communist in the 1991 referendum regarding the preservation of the Soviet Union and the first democratic election in 1996. Second, even after controlling for pre-revolutionary economic development trends, Lankina and Libman (2017) find that gulag localities had greater voting competitiveness and were more likely to vote anti-communist in the 1996 and 2012 elections than non-gulag localities. Third, Levkin (2014) documents a negative association between the share of “special settlers” (deported ethnic groups) in 1953 in regions of Russia, Kazakhstan, Kyrgyzstan, and Uzbekistan and trust of the presidency in 2006 and trust of authorities as proxied by voting in the 1991 referendum.

Vezina (2021) demonstrate that gulag localities with a larger share of political prisoners belonging to the educated elites are more economically developed, likely because of persistence in education.

We extend these studies by being the first to examine the individual-level consequences of gulags on social and institutional trust. Our unique contribution to the literature is that our findings demonstrate that the origins of mistrust within FSU countries are due to past exposure to political repression during the Stalin era as proxied by living near a former gulag camp. These are above and beyond civil conflict victimization and living in proximity to arrest sites. We also suggest mechanisms through which gulags' legacy could have had a persisting effect on today's trust levels.

5. Data sources and description

5.1. Individual-level data from the Life in Transition Survey

We use individual-level survey data from the 2016 Life in Transition Survey (LiTS), which is a nationally representative household survey sponsored by the European Bank for Reconstruction and Development and the World Bank (European Bank for Reconstruction and Development and The World Bank, 2016).¹¹ The survey collects a range of self-reported socioeconomic, attitudinal, and opinion data collected via face-to-face interviews. Between the end of 2015 and the beginning of 2016, the LiTS polled about 1,500 respondents living in 51,000 households and 34 countries. A computer randomly selected a primary respondent and a secondary one of the opposite gender in each household with at least two adult members. Interviewers used a two-stage sampling procedure stratified by geographical region and rural or urban status. Researchers updated the sampling frame in the first stage and added new localities to those surveyed in 2010. In the second stage, 20 households were selected with equal probability in 75 locations (50 old and 25 new ones). These locations, or primary sampling units (PSUs), reflect electoral registers or census enumeration areas. Over half (56%) of PSUs are urban in our analysis sample, ranging from 27% in Tajikistan to 77% in Estonia.

We restrict our analysis sample to FSU countries with a gulag on their territory – Azerbaijan, Belarus, Estonia, Georgia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, Ukraine, and Uzbekistan. We also include Mongolia in our analysis sample. The main regressions feature 814 clusters (PSUs), with all countries having 75 PSUs except Mongolia, where we have only 72 PSUs due to missing observations for variables used in the analysis sample. In robustness checks, we also include the non-FSU countries in the LiTS (e.g., Bulgaria, Romania, Czech Republic, Hungary).

The LiTS has several features that make it a suitable source for our analysis. First, the survey includes the only publicly available geolocation (latitude and longitude) of the PSUs in which the respondent resides. This allows us to calculate the distance to the nearest former gulag camp for each respondent's PSU. Second, the LiTS collects socio-demographic characteristics, including age, height, gender, ethnicity, and religion. Third, the LiTS elicits information about the intensity of trust of society, institutions, and different non-state actors. The wording of the generalized trust question in the LiTS is: "Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?" The questionnaire also probes about trust of the presidency, the national, regional, and local governments, the parliament, courts, political parties, the army, police, banks, foreign investors, non-governmental organizations, trade unions, and religious institutions. In addition, the survey contains questions about

trust of family, neighborhood, strangers, and foreigners. The answer categories include "Complete distrust," "Some distrust," "Neither trust nor distrust," "Some trust," and "Complete trust."¹²

The 5-point Likert scale generalized trust question is arguably superior to the trust question in the World Values Survey (WVS) or the General Social Survey (GSS), which offer only two response categories "most people can be trusted" and "you cannot be too careful in dealing with people" (Becker et al., 2016; Fehr, 2009). Specifically, the WVS/GSS measure captures both beliefs about other people's trustworthiness and individual risk preferences (Sapienza et al., 2013). As such, people who have social trust but are risk-averse may find both answer categories reasonable – most people can indeed be trusted, and one should be careful when dealing with people. Sapienza et al. (2013) demonstrate that survey questions of trust of the WVS type are strongly correlated with actual behavior in a trust game, which measures the player's perceived trustworthiness of the other party.

In alternative specifications, we rely on a different dependent variable that captures the *expected trustworthiness of people* by asking, "Suppose you lost your (purse/wallet) containing your address details, and it was found in the street by someone living in this neighborhood. How likely is it that it would be returned to you with nothing missing?" The possible answers include "Not at all likely," "Not very likely," "Quite likely," and "Very likely." The correlation coefficient between the "lost wallet" and generalized trust variables in our sample is 0.16, which is similar to the 0.2 correlation coefficient that Sapienza et al. (2013) report for similar variables based on their experimental study with University of Chicago students.¹³

5.2. Gulag-level information

We complement the individual-level LiTS data with gulag-level information on 474 camps from Smirnov (1998), which we obtained from the German and Russian websites of Memorial (Memorial.de and Memo.ru) – an international non-governmental organization aimed at preserving the history of political repression in the FSU. The Smirnov/Memorial data list 476 camps, but no information on location is available for two of them.¹⁴ These data are based on documents from the State Archive of the Russian Federation collected and systematized by Smirnov (1998). Subject to archival data availability, Smirnov (1998) documented the information about each camp's location, economic activities, number of prisoners, female prisoners, political prisoners, and socially dangerous elements between 1922 and 1960. Appendix

¹² We code the response category "Difficult to say" as "Neither trust nor distrust." The "Difficult to say" answer option is only available for the generalized trust questions and not for the group or institutional trust questions. Coding the response category "Difficult to say" as missing has no consequence for the main findings. The results are available upon request.

¹³ Sapienza et al. (2013) measure generalized trust as "Generally speaking, would you say that most people can be trusted or that you cannot be too careful in dealing with people?" with answers "Most people can be trusted" and "Cannot be too careful" and the wallet question is based on the question "Suppose that while walking on Michigan Avenue in Chicago you lose your wallet with 1,000 dollars inside. A random person that you do not know finds it. He or she does not know you, but he or she is aware that the money belongs to you and knows your name and address. He or she can keep the money without incurring any punishment. According to you, what do you think is the probability he or she will return the money to you?" with the instructions for the answers being: "Report a number between 0 and 100, where 0 means that the money would not be returned for sure and 100 means that it will be returned for sure" (See Tables A1 and A2 in the Technical Appendix in Sapienza et al. (2013)).

¹⁴ We could not locate the geo-coordinates of "Construction 770 and ITL" and "Construction 855 and ITL" (or, in Russian, "СТРОИТЕ.ЛЬСТВО 855 и ИТ.1" and "СТРОИТЕ.ЛЬСТВО 770 и ИТ.1").

¹¹ The LiTS did not poll Turkmenistan.

Table B1 demonstrates that most camps, 418 out of 476, were on the territory of today's Russia. Kazakhstan had 20 camps and Ukraine 16.

We merged the gulag-level data with the LiTS using the Stata user-written program *geonear* (Picard, 2012). For each individual, we kept information about the location and characteristics of the nearest former camp. About 12.5 percent of respondents in the analysis sample live within 10 km of a former gulag, and the average respondent lives about 140 km from a former campsite. Table B2 in the Appendix details the observable characteristics of LiTS respondents in our analysis sample.

5.3. Additional data sources

Like Nikolova and Simroth (2015), we collected PSU-level altitude data from GPS Visualizer (gpsvisualizer.com/elevation). Moreover, in some specifications, we use information on the location of current prisons. We collected data on detention centers, regular jails, maximum-security prisons, and juvenile correctional facilities from the official web pages of penitentiary institutions in the countries in our analysis sample.¹⁵

Furthermore, we collected data on the location of historical railroads of the Russian Empire (see Figure B2 in the Appendix). Specifically, we digitized the location (including endpoints and major and minor stations along the rail lines) of these maps. For the European part of the Russian Empire, we used a 1914 map (Zauer, 1914), and for the Asian part – a map from 1911 (Ministerstvo Putei Soobsheniia, 1911). Using these data, we calculate the distance between each respondent's PSU and the nearest pre-1917 rail station and include that covariate in all analyses. Furthermore, we also collected the geocoordinates of the 67 branches of the Memorial organization located on the territory of the former USSR, and we use this information in a robustness check.¹⁶

Finally, we also rely on information about the location of arrests from Zhukov and Talibova (2018), which cover 2,305,394 individuals between 1917 and 1959. The data were collected from the Memorial Organization's online archives. Fig. 2 details the geographical distribution of the arrest data we use. The dataset includes the individual details for these victims and their sentences. Importantly, it also includes information on the geolocation of the arrest. We only include in our analyses data for individuals sentenced to executions, penal units, prisons, and resettlements between 1919 and 1959 ($N = 947,161$) and exclude records with missing sentence years as well as records with sentences to amnesty, confiscation, medical and travel bans. While this dataset is the only one with information on roundups, it only has a subset of the victims of Stalin's terror. Specifically, while we know from historical sources that about 20 million people were at some point inmates in gulag camps (Markevich, 2016), the arrests data from Zhukov and Talibova (2018) only contain 359,408 individuals who were sentenced to prison or penal units. According to the Memorial organization, the database contains at most a quarter of all victims. Therefore, the dataset on arrests severely undercounts the victims of Stalin's repressions. Moreover, it is difficult to know if there is any particular non-randomness in terms of

the probability of some victims' records being included in the database.¹⁷ Based on Fig. 2, information on arrests is more likely to be coming from the European part of the FSU and the regions of Urals and Siberia bordering Kazakhstan and Mongolia.

6. Empirical strategy

We test whether living near a former gulag has a lasting impact on trust. To that end, we model the trust T perception of individual i living in location l in country c as:

$$T_{ilc} = \alpha + G_{ilc} + \mathbf{X}'_{ilc}\gamma + \eta_c + \varepsilon_{ilc} \quad (1)$$

where G is a binary indicator for whether the respondent lives within 10 km of a former gulag site or not. In alternative specifications, we measure G as the actual distance to the nearest campsite in kilometers or living within 20, 30, 50, and 100 km of a camp. Most individuals' daily activity is within 10 km, which motivates the choice of this particular distance (Song, Qu, Blumm, and Barabási, 2010). Our data captures the location of each camp's central administration, i.e., where the prisoners slept. However, the prisoners could work on projects both within and outside the camp, for instance, by providing services in the nearest settlement or working on the nearest quarry or plant construction. The 10 km distance is, therefore, plausible within this context. As such, gulag inmates likely worked on projects within this distance and interacted with the local population.

Furthermore, \mathbf{X} includes a set of exogenous controls, such as age, gender, height, ethnicity, religion, geographic latitude, longitude, and altitude, and η denotes the country of residence.¹⁸ As in Becker et al. (2016) and Nunn and Wantchekon (2011), we cluster the standard errors at the primary sampling unit (PSU) level to account for the interdependence of characteristics of respondents living in the same locality. This is necessary, because the distance to the nearest gulag camp is at the PSU level and not at the individual level. Furthermore, because trust variables are measured on a 5-point Likert scale, like Becker et al. (2016) and Nunn and Wantchekon (2011), we estimate equation (1) using an ordered logit. We also provide OLS results for our key estimations, either in a separate panel below the ordered logit estimates or in the Appendix.

As noted above, the *ex-ante* trust patterns in gulag areas pose a potential challenge to our results' validity. Camp localities tended to be railroad-suitable or accessible and relatively more economically developed (Lankina and Libman, 2017; Zhukov and Talibova, 2018). Relatively prosperous regions also have high trust

¹⁷ The primary source on the arrests data that we source from Zhukov and Talibova (2018) is the Memorial organization's database on the victims of political terror in the USSR. It is collected through the efforts of local Memorial branches, local NGOs, and independent researchers, based on archival materials, open documents of the commissions on victims' rehabilitation, governmental information centers, and the so-called "Memory Books" (Knigi Pamyati). As noted by the Memorial organization (Memo.ru, 2017), the latter source is the most informative one, but it also has several shortcomings. Such books are published regionally in very low volumes, typically have no digital form, and are not consistent between regions in terms of content and language. For instance, some books include information only on those sentenced to execution, while others include the resettled and deportees as well. Also, some books include data on the residents of the respective region, while in other cases, information on those who were sentenced to incarceration in this region is also included. Furthermore, information on the victims' family members is often missing. Finally, in some countries or regions within the countries of the former Soviet Union, such books are not published at all.

¹⁸ We include height as a regressor as research highlights its link with trust and risk preferences (Dohmen et al., 2008; Dohmen et al., 2011). We create a categorical variable denoting the within-country quartiles of height. We also code missing responses. This category has no interpretation but is included to prevent loss of observations because about 11 percent of our analysis sample did not report height information.

¹⁵ We lack such information for Tajikistan and Kyrgyzstan.

¹⁶ Specifically, we used information from the Memorial organization's website <https://www.memo.ru/en-us/memorial/departments/#map>. The local branches of Memorial conduct various activities, e.g., organizing public events and exhibitions, collecting and maintaining archival materials aimed at preserving the memory of the victims of political repressions in a particular region or locality. Proximity to a Memorial branch may keep alive the memory of gulags and past repressions among locals.

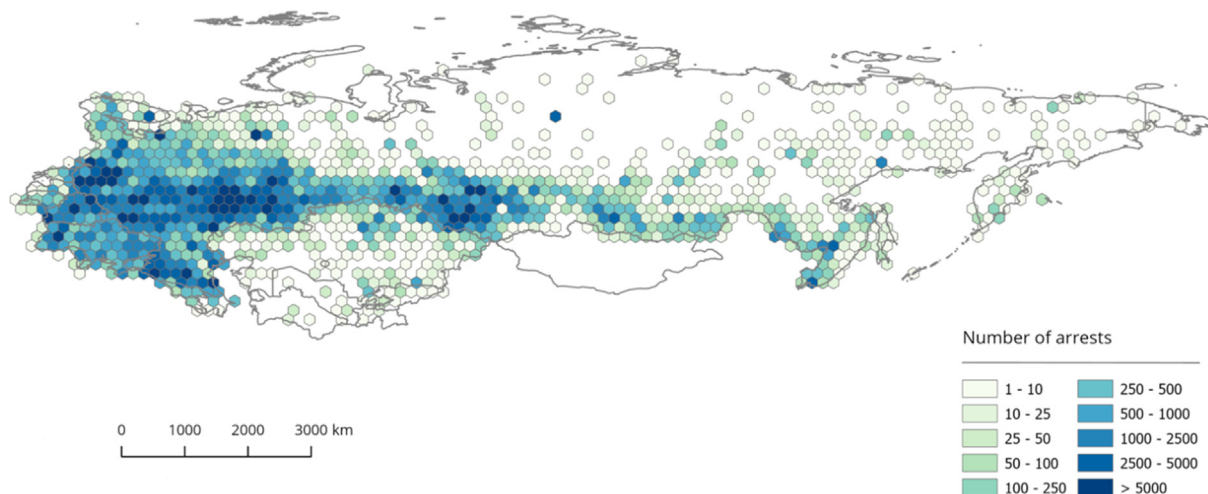


Fig. 2. Distribution of arrests resulting in the resettlement, execution, penal unit, and prison sentences between 1919 and 1959. Source. Authors based on data from Zhukov and Talibova (2018).

levels (Tabellini, 2010), implying that gulag sites may have had high and not low trust levels before the construction of the actual camps. This means that any adverse consequences of gulags' proximity on trust we document would represent a low bound of the associated effects.

7. Results

7.1. Baseline results

Table 1 details our main regression results based on ordered logit estimations. OLS results of the same estimations are available in Table B3. All specifications include individual-level controls for gender, age, age squared, religion, a dummy for Russian ethnicity, height, geographic controls for country of residence (Soviet subnational residence region), latitude, longitude, altitude, and distance to the nearest pre-1917 railroad station. The dependent variable in all models is generalized trust (on a 1–5 scale). Models (1)–(8) offer alternative specifications of our key independent variable, with Model (1) being the baseline specification. We discuss each of the results in detail below.

The main conclusion from Model (1) in Table 1 is that living near a former gulag camp is associated with lower current social trust levels. The magnitudes of the coefficient estimates are available in Fig. 3. On average, the probability of reporting complete distrust is 2.5 percentage points higher for those living within 10 km of a former camp compared with those living further away (14.2 vs. 16.7 percent, respectively). Furthermore, living within 10 km of a former camp increases the likelihood of reporting some distrust by 2 percentage points, and decreases the likelihood of reporting some trust and complete trust by 3.2 and 1.1 percentage points, respectively. All of these differences are statistically significant at the 5 percent level or lower. However, there is no statistically significant difference in answering “neither trust nor distrust” between those who live within 10 km and those living further away from a former camp. The magnitudes of the associations we document are similar to those in Becker et al. (2016) in the context of living in PSUs that were once part of the Habsburg empire and trust in courts and the police. Gauging the magnitudes of the coefficient estimate of living near a former camp is also possible using the OLS estimates in Table B3, Model (1). Specifically, residing within 10 km of a gulag is associated with a 0.11-point decrease in trust (on a 1–5 scale). Evaluated at the sample mean

of trust of 2.89, this constitutes a decline of 3.8 percent. While small in magnitude, these estimates are economically meaningful, considering that they have persisted for over half a century.

The rest of the estimations in Table 1 confirm our main conclusion that residing near a former gulag is detrimental to social trust. In Models (2)–(4), we show that living within 20, 30, 50, or 100 km from a former forced labor camp is likewise linked with social mistrust. Based on the OLS estimates, the magnitudes of the coefficient estimates for the main regressors in these models are similar to those of living within 10 km (see Table B3).¹⁹ In the same spirit, Model (6) of Table 1 uses an alternative measure of distance – namely, the actual distance to the nearest campsite, with the average respondent living about 142 km away. The results demonstrate that living further away from a former forced labor camp is positively associated with trust. Benchmarking based on the OLS estimates (Table B3, Model (6)) suggests that living an additional 100 km further away from a former gulag increases trust by 0.05 points, which is rather modest in terms of magnitude. Furthermore, in Model (7), we demonstrate that (the log of) the total number of former prisoners within 10 km, which is an intensity measure, is negatively linked with trust.²⁰ Finally, in Model (8), the distance to the gulag variable is defined as a set of mutually exclusive dummy variables for whether the respondent lives within 10 km, 10–30 km, 30–50 km, 50–100 km, or more than 100 km away of a former camp. The results demonstrate that living close to a gulag is linked with mistrust; however, the association dissipates after about 50 km.

Our findings thus far document the association between living near a former gulag site and present-day trust levels. We next explore whether this mistrust of society associated with living former camp sites also manifests itself in lower civic engagement aspects. In other words, we check whether living near former places of forced labor also led to long-lasting behavioral norms that compromised social cohesion and the quality of the social fabric.

As Fig. 4 and Table B4 in the Appendix show, similar to Zhukov and Talibova (2018), living within 10 km of a former gulag lowers

¹⁹ We would like to point out that the indicators designating respondents' proximity to a camp within 10, 20, 30, 50, and 100 km are not mutually exclusive. In other words, an individual who lives within 30 km of a former camp is also included in the within 10 km and within 20 km variables. Model (8) of Table 1 presents the results when the categories are mutually exclusive.

²⁰ Prior to log-transforming the total number of prisoners, we replaced observations equal to 0 with a 1, so that log of 1 is 0 and these observations are preserved in the regression analyses.

Table 1
Proximity to former gulag camps and present-day trust levels, ordered logit results, baseline specifications.

	Generalized trust	Generalized trust	Generalized trust	Generalized trust	Generalized trust	Generalized trust	Generalized trust	Generalized trust
Gulag within 10 km	-0.203** (0.100)							
Gulag within 20 km		-0.231*** (0.082)						
Gulag within 30 km			-0.206*** (0.076)					
Gulag within 50 km				-0.262*** (0.074)				
Gulag within 100 km					-0.209*** (0.075)			
Distance to the nearest gulag (in 100 s km)						0.096*** (0.032)		
Ln(Nr. of gulag prisoners within 10 km)							-0.019* (0.011)	
<i>Reference category. Gulag more than 100 km away</i>								
Gulag within 10 km								-0.293*** (0.106)
Gulag 10–30 km away								-0.224** (0.103)
Gulag 30–50 km away								-0.358** (0.160)
Gulag 50–100 km away								-0.059 (0.117)
Individual-level controls	Y	Y	Y	Y	Y	Y	Y	Y
Geographic controls	Y	Y	Y	Y	Y	Y	Y	Y
Distance to a pre-1917 rail station	Y	Y	Y	Y	Y	Y	Y	Y
Country dummies	Y	Y	Y	Y	Y	Y	Y	Y
N. obs.	16,415	16,415	16,415	16,415	16,415	16,415	16,415	16,415
Pseudo R ²	0.023	0.024	0.024	0.024	0.024	0.024	0.023	0.024

Source. Authors' calculations based on data from Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016.
Notes. *** p < 0.01, ** p < 0.05, * p < 0.1. Coefficient estimates and standard errors (clustered at the PSU level) are from ordered logit estimations. The unit of observation is an individual. Generalized trust is based on the question “Generally speaking, would you say that most people can be trusted, or you can’t be too careful in dealing with people?” Generalized trust is measured on a 5-point scale, whereby 1 = complete distrust, 2 = some distrust, 3 = neither trust nor distrust, 4 = some trust, and 5 = complete trust. The key independent variable in Model (1) is coded as 1 if the respondent lives within 10 km of a former gulag and 0 otherwise; in Models (2)–(5), it is 1 if the respondent lives within 20, 30, 50, and 100 km of a former gulag, respectively, and 0 otherwise. The key independent variable in Model (6) is the distance in 100 s of km between the respondent’s location and the nearest former camp divided by 100 for scaling purposes. The key independent variable in Model (7) is the natural logarithm of the number of former gulag prisoners within 10 km. The key independent variable in Model (8) is coded based on whether the respondent lives within different mutually exclusive distances of a former gulag, 1 = within 10 km, 2 = within 10–30 km, 3 = within 30–50 km, 4 = 50–100 km, and 5 = more than 100 km (reference group). The individual-level controls are age, age squared, gender, height dummies, Russian ethnicity, and religion. The geographic controls include latitude, longitude, and elevation. All regressions include the distance between each respondent and the nearest pre-1917 rail station and country dummies.

the probability of voting. It also erodes other forms of civic capital, such as socializing with friends and family, and being a current political party member. Simultaneously, however, living near to former camps does not influence memberships in civic groups or engaging in collective action (i.e., participating in a strike or demonstration or signing a petition). Yet, proximity to Stalin’s former camps is associated with some forms of civic disengagement, suggesting that the socioeconomic consequences of past terror that we document are not just social norms related to trust but also have a behavioral aspect.

7.2. Endogeneity and robustness checks

Our results thus far indicate that living near former labor camps is linked with a lower probability of participating in social life and trusting others. This result suggests that proximity to gulags increased the salience of terror and, as such, triggered a behavioral and social norm of mistrust. People living near gulags may have subsequently transferred the mistrust norm to their offspring (Figes, 2007) and others around them. As such, these results provide initial evidence supporting the hypothesis related to fear of political repression channel that we outlined in Section 3.1. In this sub-section, we investigate the robustness of this conditional cor-

relation and pursue strategies to assess whether our results could be considered causal. Specifically, we control for observables, use selection on observables to gauge the bias from unobservables, provide falsification tests, and provide additional robustness checks.

7.2.1. Omitted variables and selection issues

It is possible that our results are driven by omitted variables that are correlated with former camp locations and trust levels. We address this issue by performing several tests. First, to ascertain the extent to which omitted variables may drive our results, we perform a check proposed by Oster (2019), which is a modification of Altonji, Elder, and Taber (2005). The strategy relies on the information from the selection of observables to assess the extent to which unobservables could be driving the main results. The essence of this check is to ascertain the size of the selection of unobservables relative to observables that would render the coefficient estimate of living within 10 km of a former labor camp to be zero. To that end, we need to calculate the value of R_{max}^2 , which denotes the value of the coefficient of determination based on a hypothetical regression including trust, living within 10 km of a former camp, and all observed and unobserved covariates. Follow-

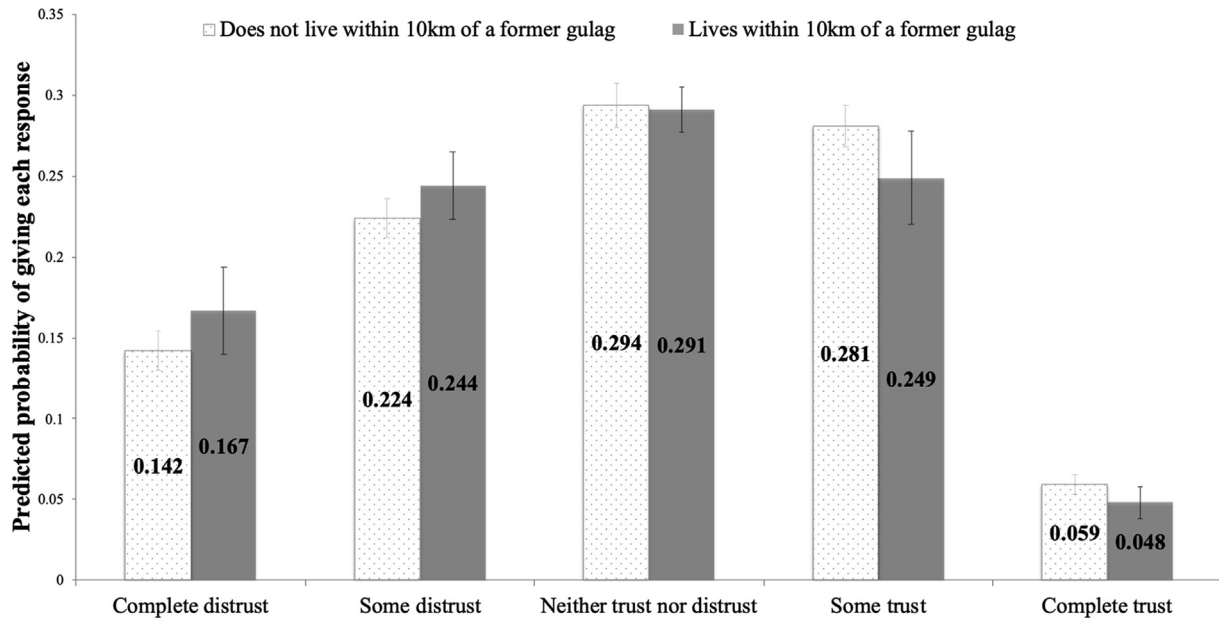


Fig. 3. Proximity to former gulag camps and present-day trust levels, average adjusted predictions, with 95% Confidence Intervals. Source. Authors' calculations based on Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016. Note. The figure shows the average adjusted probabilities for each category of generalized trust, which is measured using the question, "Generally speaking, would you say that most people can be trusted, or you can't be too careful in dealing with people?" The results are based on Table 1, Model (1). The difference in predicted probabilities between those living within 10 km of a former camp and those living further away is statistically significant at 5% or lower for all values of trust except "neither trust nor distrust." The p-values for those differences in the predicted probabilities are as follows. Complete distrust. $\text{prob} > \chi^2 = 0.05$; Some distrust. $\text{prob} > \chi^2 = 0.04$; Neither trust nor distrust. $\text{prob} > \chi^2 = 0.19$; Some trust. $\text{prob} > \chi^2 = 0.04$; Complete trust. $\text{prob} > \chi^2 = 0.03$.

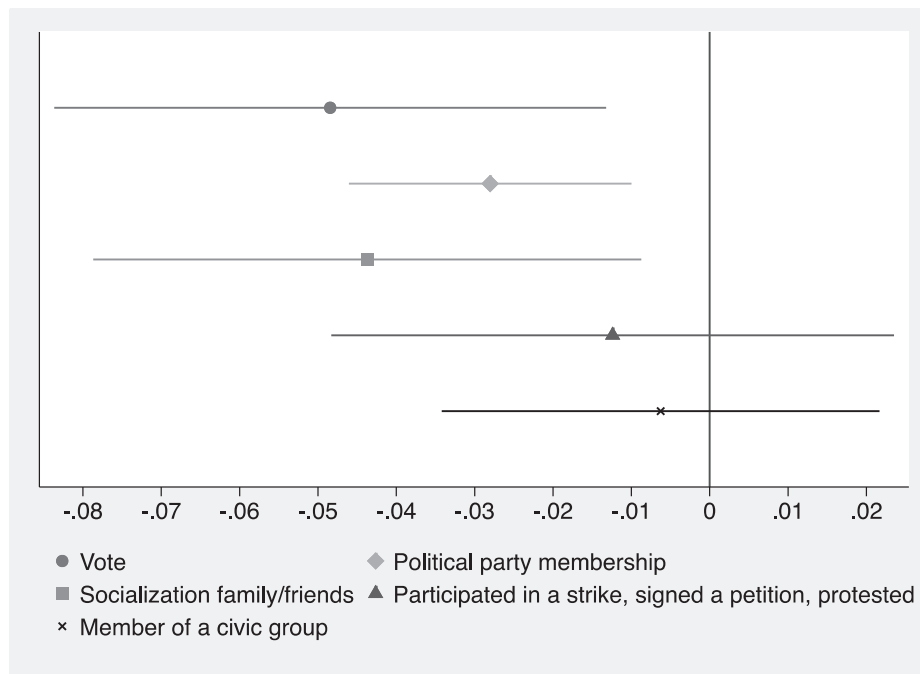


Fig. 4. Proximity to former gulag camps and present-day trust levels and social capital, average marginal effects with 95% Confidence Intervals. Source. Authors' calculations based on Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016. Notes. The figure shows the effect of living within 10 km of a former gulag on the predicted probability of reporting each action. "Voted" is a binary outcome coded as 1 if the respondent said that they voted in the last local-level, parliamentary, or presidential election and 0 otherwise; 77.12 percent of the analysis sample reported having voted in the previous election. "Political party membership" is coded as 1 if the respondent is a member of a political party and 0 otherwise; 6.12 percent of respondents are current party members. "Visits friends/family at least monthly" is coded as 1 if the respondent reported visiting family and friends who do not live in the same household at least monthly and 0 if they visit them less frequently or never; 78.49 percent of respondents visit their friends and family at least monthly. "Member of a civic group" is coded as 1 if the respondent is an active member of at least one civic group, such as charity organizations, youth associations, and others; 10.67 percent of respondents are active members of at least one civic group. "Participated in a strike, signed a petition, or protested" is coded as 1 if the respondent took part in at least one of these actions and as 0 if they reported that they have not participated in these actions or if they said that they might do so in the future; 7.47 percent of respondents participated in at least one of these actions. The results are based on Table B4.

ing Oster (2019), we calculate the value of R^2_{max} based on multiplying the R^2 from an OLS estimation of Equation (1), which in our case is 0.068, by a factor of 1.3. The control variables in that regression are age, age squared, gender, height, Russian ethnicity, religion, latitude, longitude, elevation, distance to the nearest pre-1917 rail station, and the ten country dummies. The Oster check results show that any unobserved heterogeneity needs to be 28 times greater than that of the variables included in Table 1, Model (1) to explain away the trust consequences of living in proximity to

a former gulag that we document. In other words, omitted variables bias is unlikely to be the primary driver of our results.

In addition, several specifications presented in Table 2 offer additional sensitivity checks that address the selection and omitted variables issues. Panel A provides results from ordered logits, and Panel B details OLS results. Model (1) in Panel A replicates the results from Model (1) in Table 1 to facilitate comparisons.

Our baseline specifications control for individual characteristics and other variables that are orthogonal to the gulag location. Additional variables, such as individuals' level of education, wealth,

Table 2
Proximity to former gulags and present-day generalized trust, robustness checks.

	(1) Generalized trust, baseline result	(2) Generalized trust, extra ind. controls	(3) Generalized trust, entropy balancing	(4) Generalized trust, PSU controls	Generalized trust, with region FE	(6) Generalized trust, non-FSU post-socialist countries	(7) Generalized trust, survey weights	(8) Likelihood neighbors return lost wallet
<i>Panel A. Ordered Logit Results</i>								
Gulag within 10 km	-0.203**	-0.178*	-0.203***	-0.227**			-0.313**	-0.375***
	(0.100)	(0.108)	(0.049)	(0.112)			(0.137)	(0.107)
Distance to the nearest gulag (in 100 s km)					0.096***	-0.092		
					(0.032)	(0.065)		
Pseudo R ²	0.023	0.025	0.027	0.024	0.024	0.017	0.029	0.026
<i>Panel B. OLS Results</i>								
Gulag within 10 km	-0.109*	-0.097	-0.113***	-0.121*			-0.167**	-0.182***
	(0.059) [0.058]	(0.064)	(0.029)	(0.066)			-0.08	(0.050)
Distance to the nearest gulag (in 100 s km)					0.074*	-0.045		
					(0.041)	(0.034)		
Adj. R ²	0.066	0.069	0.079	0.067	0.121	0.044	0.082	0.063
Individual-level controls	Y	Y	Y	Y	Y	Y	Y	Y
Latitude, longitude, and altitude	Y	Y	Y	Y	Y	Y	Y	Y
Distance to pre-1917 rail station	Y	Y	Y	Y	Y	N	Y	Y
Endogenous controls	N	Y	N	N	N	N	N	N
Region FE	N	N	N	N	Y	N	N	N
PSU controls	N	N	N	Y	N	N	N	N
Number of PSUs per region	N	N	N	Y	N	N	N	N
Country dummies	Y	Y	Y	Y	Y	Y	Y	Y
N. obs.	16,415	16,401	16,415	16,415	16,415	20,712	16,415	15,659

Source. Authors' calculations based on data from Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016.

Notes. *** p < 0.01, ** p < 0.05, * p < 0.1. Coefficient estimates are from ordered logit (ologit) estimations in Panel A and from ordinary least squares (OLS) in Panel B. The unit of observation is an individual. Generalized trust is based on the question, "Generally speaking, would you say that most people can be trusted, or you can't be too careful in dealing with people?" Generalized trust is measured on a 5-point scale, whereby 1 = complete distrust, 2 = some distrust, 3 = neither trust nor distrust, 4 = some trust, and 5 = complete trust. In Model (8), generalized trust is based on the question, "Suppose you lost your purse/wallet containing your address details, and it was found in the street by someone living in this neighborhood. How likely is it that it would be returned to you with nothing missing?", whereby 1 = not at all likely, 2 = not very likely, 3 = quite likely, 4 = very likely. The key independent variable is coded as 1 if the respondent lives within 10 km of a former gulag and 0 otherwise in Models (1)-(4) and Models (7)-(8). In Models (5) and (6), the key independent variable captures the distance to the nearest former gulag in km, divided by 100 for scaling purposes. Model (1) in Panel A shows the baseline result from Table 1, Model (1). Below the coefficient estimate in Model (1), Panel B, we report two standard errors. The first, reported in parentheses, are from standard errors clustered at the PSU level. The second, reported in brackets, are corrected for spatial dependence based on a procedure from Conley (1999) at 1 degree. Model (2) features additional endogenous controls. respondent's level of education, a wealth index, the urban or rural status of the locality, and working status. Model (3) is a weighted regression using weights applied after entropy balancing, and in Panel B, the ordinary R2 rather than the adjusted R2 is reported for this estimation. Model (4) includes the following PSU-level controls. the share of respondents with tertiary education, a wealth index (ownership of a telephone, TV, computer/laptop/tablet, washing machine, car, bicycle, motorcycle, and internet access), and an indicator for the number of PSUs within the region. Model (5) includes regional FE (subnational region within the territory of each PSU country). Model (6) features Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, North Macedonia, Hungary, Kosovo, Montenegro, Poland, Romania, Serbia, Slovakia, and Slovenia. The individual-level controls are age, age squared, gender, height dummies, Russian ethnicity, and religion. Model (7) is estimated using the LiTS survey weights that add up to population totals. Model (8) uses a different dependent variable. likelihood of neighbors returning lost wallet, which is based on the question "Suppose you lost your (purse/wallet) containing your address details, and it was found in the street by someone living in this neighborhood. How likely is it that it would be returned to you with nothing missing?" It is measured on a 4-point scale, whereby 1 = not at all likely, 2 = not very likely, 3 = quite likely, and 4 = very likely. The geographic controls include latitude, longitude, and elevation. All regressions except model (6) include the distance between each respondent and the nearest pre-1917 rail station. All regressions include country dummies.

working status and education may be outcomes of the location of former camps themselves and as such, may be channels through which the consequences of living near a former camp on trust operate (Becker et al., 2016). In principle, these variables are endogenous as they could be outcomes of living in proximity to gulags. As such, these endogenous variables constitute “bad controls” (Angrist and Pischke, 2009) as they may introduce selection bias. Nevertheless, in Column (2) of Table 2, we control for the respondent’s level of education, wealth, urban or rural residence, and labor market status. The coefficient estimate of the key regressor – “gulag within 10 km” – becomes marginally statistically significant. Nevertheless, the p-value associated with the χ^2 test for the equality of the coefficient estimates between Model (1) and Model (2) of Panel A based on seemingly unrelated estimations is 0.46. This finding suggests that our main results are robust to the inclusion of these additional individual-level controls.

We perform a second check of whether selection into living within 10 km of a former camp and reporting certain trust levels is the main driver of the estimates we report. Specifically, Model (3) of Table 2 presents entropy-balancing-adjusted regression results (Hainmueller, 2012). Using the Stata user-written program *ebalance* (Hainmueller and Xu, 2013), we apply a two-step procedure whereby we first create comparable groups of respondents who live within 10 km of a former gulag (treated group) and further away (comparison group). This step involves generating a set of entropy balancing weights, which we apply to the regression in the next step. We did the balancing based on both the mean and the variance of the covariates’ distribution. The magnitude of the coefficient estimate of the key regressor (living within 10) in the entropy balancing regression is nearly identical to that in the main model. While the procedure relies on the assumption that selection on observables can inform us about selection on unobservables, it provides some reassurance that selection is not the main driver of our results.

Furthermore, we have two sets of checks that attempt to understand whether the indicator for living within 10 km of a former labor camp simply reflects omitted PSU-level or regional characteristics. To that end, in Column (4) of Table 2, we control for PSU-level factors, including wealth, the share of tertiary educated, and the number of PSUs per region. The results suggest that the inclusion of these PSU-level controls does not substantively alter the main conclusions. This suggests that our results are robust to including individual and PSU characteristics and that these variables are unlikely to be the channels through which the gulag effect operates. Furthermore, in Column (5) of Table 2, we include 107 region fixed effects for the subnational regions within the territories of each FSU country in our sample. The key independent variable in that regression is the distance to the nearest former labor camp rather than living within 10 km of a former gulag. Because 12.5 percent of our analysis sample lives within 10 km of a former camp, imposing region fixed effects leaves insufficient variation to identify the effects of gulag proximity on trust, which necessitates the use of the actual distance. As Model (5) indicates, our results are robust to including the region dummies. This implies that our gulag dummy is not simply capturing fixed region characteristics, such as population density, regional unemployment rates, or urbanization levels.

We also acknowledge that endogeneity issues resulting from the non-random location of gulags may potentially bias our results. Specifically, if gulags were put in low-trust areas to begin with, our results may simply be capturing these pre-trends in trust. To check this issue, we would need information on the pre-gulag trust levels in each PSU. Such information does not exist, unfortunately. Nevertheless, we argue that this issue does not invalidate our findings. If the Soviets targeted areas that were a priori more economically developed and railroad-suitable (Lankina and Libman, 2017;

Zhukov and Talibova, 2018), then these localities also likely had high pre-gulag trust levels. In this case, our coefficient estimates are smaller in absolute value than they should be and are a lower bound of the impact of living in proximity to former gulags on trust.

7.2.2. Falsification tests

Our next set of checks concerns two falsification tests. As a first check, we ran 10,000 simulations to randomly allocate gulags within 10 km of PSUs and check whether living within 10 km of a placebo gulag affects individuals’ generalized trust.²¹ In other words, we test whether the association between living in proximity to a former gulag and trust remains when we randomly assign fictitious gulag locations to individuals. To that end, we randomly assigned 12.5 percent of the analysis sample respondents to placebo gulag locations, while they do not actually live near one. The specific percentage of 12.5% comes from the fact that 12.5% of our sample lives near a former gulag camp. The results are depicted in Fig. 5. The solid vertical line corresponds to the coefficient estimate of -0.203 from Model (1) of Table 1. Fig. 5 indicates that the distribution of fictitious gulags’ impact on trust is concentrated around zero. Moreover, placebo gulags’ impact on trust is statistically significant in only 4.6 percent of cases, suggesting that the estimates in Model (1) in Table 1 are not a data artifact.

As a second check, we calculated the distance to the nearest gulag for a sample of non-FSU transition countries, including Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, North Macedonia, Hungary, Kosovo, Montenegro, Poland, Romania, Serbia, Slovakia, and Slovenia. Although these countries were socialist or otherwise under Soviet influence, none had a gulag on their territory. The average respondent in these countries lives more than 700 km from a former FSU gulag.²² As expected, Model (6) of Table 2 demonstrates no statistically significant association between distance to the nearest gulag and generalized trust for this country group.

7.2.3. Additional robustness checks

We also present checks related to spatial autocorrelation and the sample composition. First, in Model (1) of Panel B, we show that our main results are not driven by spatial autocorrelation by offering OLS estimations with Conley standard errors (Conley, 1999). We report two standard errors below the coefficient estimate in Model (1) of Table 2, Panel B. First, reported in parentheses, are standard errors clustered at the PSU level. The second, in brackets, is corrected for spatial dependence based on Conley’s (1999) procedure at 1 degree (approximately 111 km). This check implies that the results are robust to spatial autocorrelation corrections of the standard errors.

Second, in Model (7), we use the inverse of the LiTS survey design weights that add up to population totals to account for possible differences in the probability of being sampled between the respondents. The results remain similar to those in the main specifications. This check ensures that our results are not affected by the survey design.

Next, in Model (8) of Table 2, we rely on an alternative dependent variable measuring the perceived likelihood that the respondent’s neighbors will return a lost wallet. The results are very

²¹ Borjas (2017) uses a similar approach in constructing the counterfactual distribution of Cuban immigration’s estimated impact on the wages of locals in Miami.

²² Some of these countries had institutions of incarceration for political prisoners on their territory during communism, e.g., Belene in Bulgaria, Jachymov in the Czech Republic, and Goli Otok in Croatia. Such institutions were not under the direct rule of the gulag system and, therefore, are not the subject of our analysis. If such camps had an impact on trust in local communities nearby, our results would present a lower bound estimate of the effect of gulags on trust.

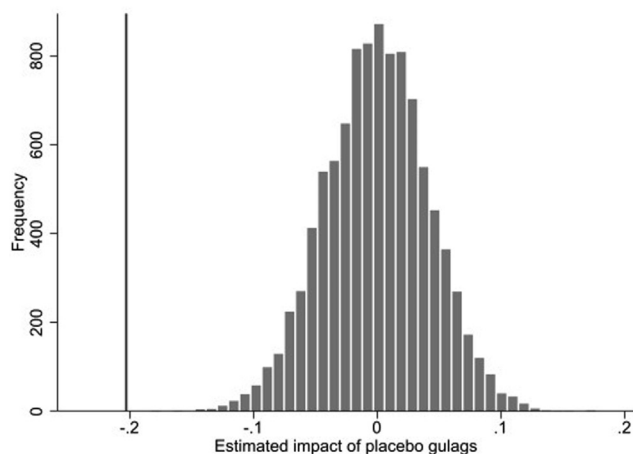


Fig. 5. Distribution of the estimated impact of living in proximity to placebo gulags on generalized trust. Source. Authors' calculations based on 10,000 simulations using Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016. Note. The solid vertical line corresponds to the point estimate of living within 10 km of a former gulag on generalized trust in Model (1), Table 1. We test whether the association between living in proximity to a former gulag on trust remains when we randomly allocate 12.5 percent of our respondents to live near a fake former gulag site. The figure shows that most of the point estimates associated with living within 10 km of fake gulags are concentrated around zero, suggesting that randomly allocated placebo gulags have no impact on individual trust.

similar to those using the main generalized trust question. Specifically, respondents living within 10 km of a former gulag are less likely to believe that those living in the same area will return a lost purse. Figure B3 in the Appendix details the magnitudes of the associated effects. For instance, the probability of stating that neighbors are not at all likely to return a lost wallet is about 7 percentage points higher for those living within 10 km of a gulag than those living further away. Meanwhile, interviewees living near former camps were also 5 and 3 percentage points less likely to state that neighbors are quite or very likely to return a lost wallet, respectively. All differences are statistically significant at the 5 percent or lower.

Finally, we provide robustness checks whereby we sequentially remove one FSU country out of our analysis sample at a time and re-estimate Eq. (1) using the remaining countries. We repeat this procedure by sequentially taking out each country in our sample. This check aims at understanding whether our results are driven by particular countries in the sample. The estimated coefficients of living within 10 km of a gulag for all of these subsamples are presented in Figure B4 in the Appendix. The first estimate replicates the results using our baseline sample (Model (1) of Table 1). The remaining coefficient estimates are based on taking one country out of the sample at a time. As shown, all estimated coefficients are negative, and most of them (8 out of 11) are statistically significant, supporting our main conclusion that proximity to a gulag adversely affects trust. Moreover, the confidence intervals of all estimates overlap, implying that the estimates are statistically similar when we sequentially eliminate countries from the sample.

While we cannot completely eliminate or rule out all endogeneity issues, the upshot of this section is that our results survive such a large battery of robustness checks, which suggests that they may plausibly be interpreted as causal.

7.3. Does the proximity to former gulags translate into mistrust of institutions and social groups?

We explore whether the social mistrust norm that developed near former gulags also translates into mistrust of institutions

and other groups. Given the discussion about fear of political repression that we outline in Section 3, the social norm of mistrust should be more pronounced for people living near former forced labor camps because the horrors of the totalitarian past were more salient and visible for people in such communities. Therefore, if the fear of political repression hypothesis is correct, living near former gulags should also lead to mistrust of institutions that carried out these repressions in the past.

However, it may also be possible that fear of the inmates' untrustworthiness also triggered loyalty and trust towards the authorities if people in gulag communities believed that the Soviets were protecting them against the regime's enemies and if the untrustworthiness of the inmates is the main channel behind our results. We explore these possibilities empirically.

Table 3 illustrates that living near a former gulag leads to mistrust of all institutions except the regional government and the presidency.²³ This finding is consistent with the explanation that the social norm of mistrust developed because of past political repression and the institutions associated with it.

Nevertheless, we push the fear of political repression explanation further. Specifically, if the results are not just a data artifact, then living in proximity to former labor camps should not affect the trust of non-state actors such as banks, foreign investors, NGOs, trade unions, and religious organizations. Such organizations were either non-existent during Stalin's time or unassociated with the terror. Therefore, if our main proposition about gulags being a lasting symbol of repression is correct, we would expect that living in proximity to a former labor camp is unassociated with mistrust of banks, foreign investors, NGOs, trade unions, and religious groups. We repeat the primary analyses using trust of non-state actors as the dependent variable to test this proposition. Indeed, Table B7 in the Appendix demonstrates that the coefficient estimates for living within 10 km of a former gulag are not related with trust of all actors unassociated with Stalin's terror.

Moreover, in Table 4, we test whether social mistrust triggered by living close to former labor camps originates from distrusting particular groups such as family, neighbors, foreigners, or strangers. We find that gulags have a lasting impact on mistrust of neighbors, which fits with the historical narrative that Soviet authorities relied on neighbors spying on one another and willingly or unwillingly coming up with lists of potential "enemies of the people" (Fitzpatrick, 1996; Gregory, 2013; Lskavyan, 2007; Zhukov and Talibova, 2018). In many contexts in the Soviet Union, multiple families shared communal apartments where neighbors could overhear conversations (Figes, 2007). Parents actively advised their children to be vigilant and wary of their neighbors because "the walls have ears" (Figes, 2007, Introduction). For example, Figes (2007, Chapter 1) summarizes the memories of Sofia Ozemblovskaja: "Father always said, 'The walls have ears.' Once he even showed us how to hear our neighbors' conversation by listening through a glass against the wall. Then we understood. From then on we too were afraid of our neighbors." While many Soviet citizens were suspicious of their neighbors and had the perception that the informants to the authorities were many, the proximity

²³ The lack of statistical significance of the trust of presidency coefficient estimate may be due to the fact that in several of the former Soviet Union countries in our sample, respondents may associate the question regarding the trust of presidency with a trust of a particular person who runs the state and not with the presidency as a state function. Respondents may be afraid to express mistrust of the President (Letki, 2018; Lühiste, 2006; Mishler and Rose, 1997; Norris, 1999). The lack of statistical significance of "gulag within 10 km" when trust of regional government is the dependent variable is likely because in many of the countries in our analysis sample, respondents may not have much contact with the regional government. Existing research acknowledges that in countries with recently established democracies, such as those in our sample, respondents may not precisely distinguish the functions of different state institutions (Letki, 2018; Mishler and Rose, 1994, 2001).

Table 3
Proximity to former gulag camps and present-day trust of institutions.

	(1) Presidency	(2) Government	(3) Regional government	(4) Local government	(5) Parliament	(6) Courts	(7) Political parties	(8) Army	(9) Police
<i>Panel A. Ordered Logit Results</i>									
Gulag within 10 km	-0.139 (0.099)	-0.244** (0.109)	-0.143 (0.128)	-0.282** (0.111)	-0.325*** (0.108)	-0.399*** (0.115)	-0.247** (0.113)	-0.301*** (0.116)	-0.388*** (0.101)
Pseudo R ²	0.189	0.156	0.123	0.0947	0.145	0.104	0.106	0.102	0.089
<i>Panel B. OLS Results</i>									
Gulag within 10 km	-0.072 (0.048)	-0.148** (0.060)	-0.107 (0.072)	-0.195*** (0.066)	-0.203*** (0.060)	-0.265*** (0.070)	-0.159** (0.068)	-0.160** (0.063)	-0.257*** (0.061)
Adj. R ²	0.418	0.378	0.302	0.233	0.361	0.267	0.287	0.211	0.214
Individual-level controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Geographic controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Distance to a pre-1917 rail station	Y	Y	Y	Y	Y	Y	Y	Y	Y
Country dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
N. obs.	15,872	15,683	14,251	15,599	15,375	15,014	14,876	15,686	15,779

Source. Authors' calculations based on data from Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016.

Notes. *** p < 0.01, ** p < 0.05, * p < 0.1. Coefficient estimates and standard errors are from ordered logit (ologit) estimations in Panel A and ordinary least squares (OLS) estimations in Panel B. The unit of observation is an individual. The standard errors are clustered at the PSU level. All trust variables are measured on a 5-point scale, whereby 1 = complete distrust, 2 = some distrust, 3 = neither trust nor distrust, 4 = some trust, and 5 = complete trust. Trust of the different institutions is based on the question, "To what extent do you trust the following institutions?" The individual-level controls include age, age squared, gender, height, Russian ethnicity, and religion. The geographic controls include latitude, longitude, and elevation. All regressions include the distance between each respondent and the nearest pre-1917 rail station and country dummies.

Table 4
Proximity to former gulag camps and present-day trust of different social groups.

	(1) Family	(2) Neighborhood	(3) People met for the first time	(4) Foreigners
<i>Panel A. Ordered Logit Results</i>				
Gulag within 10 km	0.008 (0.191)	-0.371*** (0.103)	-0.078 (0.100)	0.125 (0.110)
Pseudo R ²	0.075	0.039	0.028	0.046
<i>Panel B. OLS Results</i>				
Gulag within 10 km	-0.010 (0.037)	-0.173*** (0.051)	-0.052 (0.059)	0.070 (0.060)
Adj. R ²	0.068	0.081	0.065	0.092
Individual-level controls	Y	Y	Y	Y
Geographic controls	Y	Y	Y	Y
Distance to a pre-1917 rail station	Y	Y	Y	Y
Country dummies	Y	Y	Y	Y
N. obs.	15,654	16,253	16,084	15,095

Source. Authors' calculations based on data from Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016.

Notes. *** p < 0.01, ** p < 0.05, * p < 0.1. Coefficient estimates and standard errors are from ordered logit (ologit) estimations in Panel A and from ordinary least squares (OLS) estimations in Panel B. The unit of observation is an individual. The standard errors are clustered at the PSU level. All trust variables are measured on a 5-point scale, whereby 1 = complete distrust, 2 = some distrust, 3 = neither trust nor distrust, 4 = some trust, and 5 = complete trust. Trust of the different groups is based on the question, "To what extent do you trust the following groups?" The individual-level controls include age, age squared, gender, height, Russian ethnicity, and religion. The geographic controls include latitude, longitude, and elevation. All regressions include the distance between each respondent and the nearest pre-1917 rail station and country dummies.

of forced labor camps likely made the mistrust of neighbors more salient.

We also expected that living near a former camp is negatively associated with trust of strangers or foreigners, especially if the untrustworthiness of the inmates is the plausible channel through which mistrust ensued in the first place. Bystanders or those who may have been released from gulags and settled down in those locations would distrust people outside their social circle or country of origin. However, there is no association between living near a former labor camp and mistrusting strangers or foreigners based on the results in Table 4. This suggests that the social norm of mistrust concerning these two groups was either not strong near places of repression or that this norm did not persist over time.²⁴

²⁴ Ideally, we would have wanted to include the dependent variable trust of colleagues, who were also likely to report a misdemeanor to the authorities, but the 2016 LiTS lacks such information.

All in all, the results in Tables 3 and 4 imply that the political repression triggered the social mistrust finding, whereby the gulag as an epitome of Stalin's terror intensified the mistrust of one's social circle and institutions, and especially neighbors. Consequently, individuals who experienced the gulag as inmates or outsiders internalized feelings of suspicion of fellow citizens and fear of the institutions responsible for repressions, such as police, courts, and the local authorities. They then transmitted these beliefs and behavioral norms to their offspring and communities.

7.4. Alternative explanations I: Gulag sites vs. places of arrests

Our main hypothesis is that former incarceration places are active symbols of the victimization, repression, and collective trauma incurred during Stalin's regime, which durably shaped norms of mistrust. While the terror happened society-wide, individuals and their families living near former incarceration places

were more likely to learn about the terror and continue being actively reminded of it. Nevertheless, if places of arrest coincided with places of incarceration, our results may be simply capturing the terror that happened at roundup sites.

To test this and empirically distinguish between locations of arrests and gulags, we utilize geo-coded information from Zhukov and Talibova (2018) on the arrests of 947,161 victims sentenced to resettlement, execution, penal units, and incarceration between 1919 and 1959. As with the gulags' locations, we calculate the distance to the places of arrest for each individual's PSU in the LiTS data and then create an indicator for whether the respondent lives within 10 km of a former arrest site or not. Yet, these results should be interpreted with caution because, as we explain in Section 5.3, the arrests data only include a subset of all repressed victims.

First, we explore whether there is a spatial overlap between the gulag and arrest sites. Fig. 6 depicts this information. While some of the gulag and arrest sites co-exist or coincide, the overlap is far from perfect. Second, the correlation coefficient between living within 10 km of a gulag and living within 10 km of an arrest site is 0.25, which is rather low.²⁵ Third, the regression analyses in Table 5 demonstrate that while living in proximity to places where victims were rounded up matters for trust outcomes today in and of itself (Model (1) of Table 5), it does not matter once gulag camps are controlled for in the regression. Specifically, Table 5 reveals that living near a gulag camp correlates with trust regardless of whether the individual also lives near an arrest site. This conclusion is robust to all specifications of distances to the nearest former gulag except living within 10 km (Model (3)), where we lack precision. This suggests that the effects we document are independent of living near a former arrest site and that gulags are the primary symbol of political repression in the collective consciousness of people living in the FSU.

7.5. Alternative explanations II

Our key argument is that past political repression, epitomized and made salient by former labor camps' locations, underpins the origins of mistrust within the countries that once comprised the former Soviet Union. The previous section demonstrated that the detrimental consequences of gulag places on trust are above and beyond the influence of living near a place where Stalin's victims were arrested. In this section, we address additional alternative explanations for our findings. Specifically, we discuss migration, current prisons' location, male-biased sex ratios, and conflict victimization.

First, to test whether the results are driven by the in-migration of low-trust individuals, in Table 6, we split the sample based on whether or not the respondent has lived in the same place their whole life.²⁶ For example, the least trusting respondents may have been disproportionately likely to settle in and stay in the gulag areas. Splitting the sample reveals no differences between those with and without migration background, which alleviates concerns that our results are driven by low-trust individuals who have migrated to gulag areas.

A second alternative explanation is that the out-migration of high-trust individuals from localities near a former gulag drives our results. We can only indirectly address this issue by analyzing the relationship between trust and migration intentions. About 4 percent of our analysis sample reports that they would like to move internationally or internally in the year following the survey. The regression results in Table B8 in the Appendix demonstrate

that respondents who have some social trust are marginally less likely to express migration intentions than those who reported complete distrust. Since interpreting interaction terms in non-linear models is not straightforward (Ai and Norton, 2003), we document the marginal effects of Model (1) in Figure B5 in the Appendix. Both more and less trusting respondents state similar (e) migration intentions regardless of whether they live in gulag localities or not, as evidenced by the statistically not significant interaction terms between trust and residing within 10 km of a gulag (or the overlapping confidence intervals crossing the zero line on Figure B5).

Moreover, during communism, Soviet authorities strictly regulated and severely limited residential mobility through mandatory registration of residence (*propiska*) (Gang and Stuart, 1999), forced resettlement programs, and passport control (Ball and Demko, 1978; Rahmonova-Schwarz, 2010; Zhukov and Talibova, 2018). Informal connections could have helped with resettling, but such practices were illegal and costly (Buckley, 1995). In addition, internal migration flows during the Soviet period tended to be from rural to urban areas and from less to more economically developed regions, and these trends intensified after the fall of the Soviet Union (Ball and Demko, 1978; Rahmonova-Schwarz, 2010; Zhukov and Talibova, 2018). Given that camp localities were relatively more economically developed and railroad-accessible (Lankina and Libman, 2017; Zhukov and Talibova, 2018), these areas were arguably less likely to be migrant-sending. Instead, they were likely to attract high socioeconomic status individuals, who also tend to have higher trust levels. In summary, while the out-migration after the fall of the Soviet Union is a possible alternative explanation for our findings and we can therefore not completely rule it out, our evidence and the historical narrative does not seem to support it.

In addition, our results may reflect the disutility of living near places of incarceration in general. In particular, some former gulags were refurbished into current prisons (Pallot, 2005). To check for this possibility, we utilize data on the location of current prisons on the territory of the former FSU countries. We merged this information with the LiTS dataset and calculated the distance to each respondent's nearest current prison. The correlation coefficient between living within 10 km of a contemporary prison and living within 10 km of a former gulag is moderately high (0.39), suggesting some overlap between current prisons and former camps' locations. Nevertheless, living near a currently functioning prison is unassociated with current trust levels, as shown in Model (3) of Table 6, suggesting that our results do not merely reflect the disutility of living near a correctional facility per se.

Our findings imply that the angst of political repression symbolized by the gulag created a mistrust culture for those living near camps, which they passed on to others over time. Because the gulag areas tended to be more economically developed and likely high-trust before the system of forced prison labor, our results possibly trace the origins of the social norm of mistrust within the FSU. Nevertheless, Grosjean (2014) suggests mistrust in CEE and FSU formed due to experiences with WWII and recent civil wars. About one in three (31%) of respondents in our analysis sample report victimization due to WWII. About 4% had recent civil conflict experiences, similar to the summary statistics reported in Table 1 of Grosjean (2014). Because about 6 percent of respondents did not answer the question about victimization in recent civil conflict and 10 percent of respondents did not furnish information about experiences with WWII, we created an additional "missing information" category to prevent loss of information. This category has no informational value but merely serves to preserve the number of observations.

In Model (4) of Table 6, we demonstrate that controlling for recent experiences with civil war or WWII holds no consequence

²⁵ The correlation between the distance (in km) to the nearest gulag and the distance between the nearest arrest site is 0.34.

²⁶ About 55% of our analysis sample has never moved. OLS results for Table 6 are available in Table B6 in the Appendix.

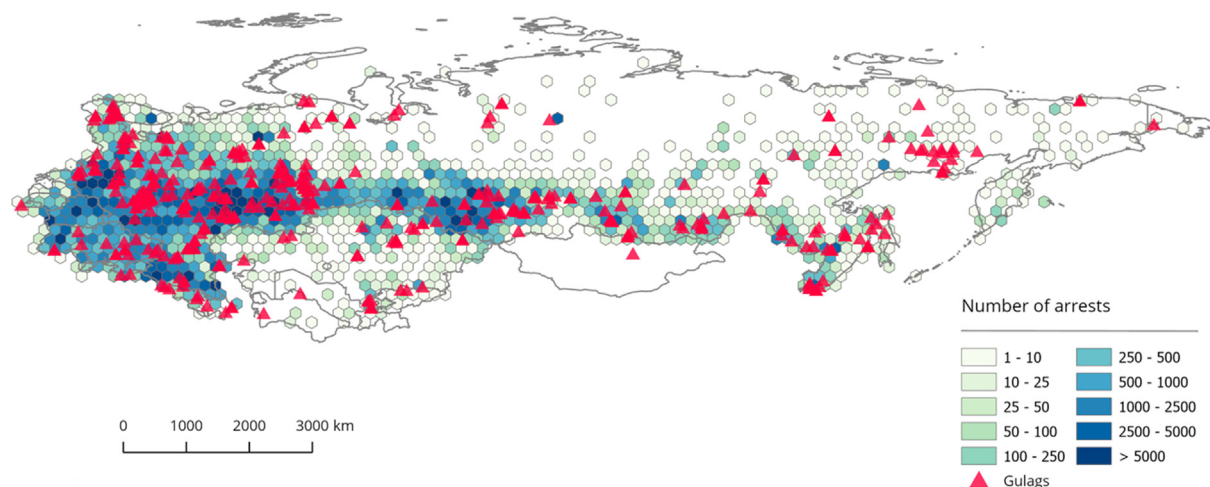


Fig. 6. Geographic distribution of gulag camps and arrest sites. Source. Authors based on data from Smirnov (1998) and Zhukov and Talibova (2018).

Table 5
Proximity to former gulag camps, arrest sites, and present-day trust levels, ordered logit results.

	(1) Generalized trust	(2) Generalized trust	(3) Generalized trust	(4) Generalized trust	(5) Generalized trust	(6) Generalized trust	(7) Generalized trust	(8) Generalized trust	(9) Generalized trust
Arrests within 10 km	-0.145* (0.080)		-0.102 (0.084)	-0.093 (0.083)	-0.103 (0.081)	-0.094 (0.081)	-0.123 (0.080)	-0.107 (0.081)	-0.099 (0.084)
Gulag within 10 km		-0.203** (0.100)	-0.161 (0.105)						
Gulag within 20 km				-0.206** (0.086)					
Gulag within 30 km					-0.184** (0.078)				
Gulag within 50 km						-0.246*** (0.076)			
Gulag within 100 km							-0.198*** (0.075)		
Distance to the nearest gulag (in 100 s km)								0.089*** (0.033)	
Reference category. Gulag more than 100 km away									
Gulag within 10 km									-0.253** (0.111)
Gulag 10–30 km away									-0.224** (0.104)
Gulag 30–50 km away									-0.356** (0.159)
Gulag 50–100 km away									-0.065 (0.117)
Individual-level controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Geographic controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Distance to a pre-1917 rail station	Y	Y	Y	Y	Y	Y	Y	Y	Y
Country dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
N. obs.	16,415	16,415	16,415	16,415	16,415	16,415	16,415	16,415	16,415
Pseudo R ²	0.023	0.023	0.024	0.024	0.024	0.024	0.024	0.024	0.024

Source. Authors' calculations based on data from Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016.

Notes. *** p < 0.01, ** p < 0.05, * p < 0.1. Coefficient estimates and standard errors (clustered at the PSU level) are from ordered logit estimations. The unit of observation is an individual. Generalized trust is based on the question "Generally speaking, would you say that most people can be trusted, or you can't be too careful in dealing with people?" Generalized trust is measured on a 5-point scale, whereby 1 = complete distrust, 2 = some distrust, 3 = neither trust nor distrust, 4 = some trust, and 5 = complete trust. The key independent variable in Model (1) is coded as 1 if the respondent lives within 10 km of a former gulag and 0 otherwise; in Models (2)–(5), it is 1 if the respondent lives within 20, 30, 50, and 100 km of a former gulag, respectively, and 0 otherwise. The key independent variable in Model (6) is the distance in 100 s of km between the respondent's location and the nearest former camp divided by 100 for scaling purposes. The key independent variable in Model (7) is the natural logarithm of the number of former gulag prisoners within 10 km. The key independent variable in Model (8) is coded based on whether the respondent lives within different mutually exclusive distances of a former gulag, 1 = within 10 km, 2 = within 10–30 km, 3 = within 30–50 km, 4 = 50–100 km, and 5 = more than 100 km (reference group). The individual-level controls are age, age squared, gender, height dummies, Russian ethnicity, and religion. The geographic controls include latitude, longitude, and elevation. All regressions include the distance between each respondent and the nearest pre-1917 rail station and country dummies.

Table 6
Proximity to former gulag camps and present-day trust levels, alternative explanations, ordered logit results.

	(1) Migrant background	(2) Non- migrant	(3) Current prisons	(4) WWII/conflict victimization	(5) Memorial branch	(6) Female gulag inmates	(7) No female gulag inmates
Gulag within 10 km	-0.173 (0.111)	-0.228 (0.140)		-0.193* (0.101)			-0.221** (0.109)
Current prison within 10 km			-0.108 (0.073)				
Distance to the nearest Memorial branch (in 100 km)					-0.031 (0.020)		
Gulag with female prisoners within 10 km						-0.091 (0.209)	
Family member killed/injured during WWII = yes				-0.026 (0.054)			
Family member killed/injured during WWII = missing information				-0.190*** (0.073)			
Family member killed/injured during recent civil conflict = yes				-0.141 (0.097)			
Family member killed/injured during recent civil conflict = missing information				0.411*** (0.110)			
Individual-level controls	Y	Y	Y	Y	Y	Y	Y
Geographic controls	Y	Y	Y	Y	Y	Y	Y
Distance to a pre-1917 rail station	Y	Y	Y	Y	Y	Y	Y
Country dummies	Y	Y	Y	Y	Y	Y	Y
N. obs.	7,379	8,832	16,415	16,415	16,415	16,415	15,863
Pseudo R ²	0.017	0.030	0.023	0.024	0.023	0.023	0.024

Source. Authors' calculations based on data from Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016.

Notes. *** p < 0.01, ** p < 0.05, * p < 0.1. Coefficient estimates and standard errors (clustered at the PSU level) are from ordered logit estimations. The unit of observation is an individual. The dependent variable in all specifications is generalized trust, based on the question "Generally speaking, would you say that most people can be trusted, or you can't be too careful in dealing with people?" Generalized trust is measured on a 5-point scale, whereby 1 = complete distrust, 2 = some distrust, 3 = neither trust nor distrust, 4 = some trust, and 5 = complete trust. The key independent variable in Models (1), (2), (4) and (7) is coded as 1 if the respondent lives within 10 km of a former gulag and 0 otherwise; in Model (3), it is coded as 1 if the respondent lives within 10 km of a current prison and 0 otherwise; in Model (5) it is capturing the distance to the nearest branch of the Memorial organization. In Model (6), it is based on whether the respondent lives within 10 km of a former gulag that had female prisoners and 0 otherwise. The individual-level controls are age, age squared, gender, height, Russian ethnicity, and religion. The geographic controls include latitude, longitude, and elevation. All regressions include the distance between each respondent and the nearest pre-1917 rail station and country dummies.

for the magnitude and significance of living near a gulag. In addition, victimization experiences have no direct effect on trust. The difference between having relatives affected by civil conflict and WWII and having no family experiences with victimization is statistically insignificant. As such, our results seem to suggest that the repressiveness of Stalin's regime triggered a social norm of mistrust within the FSU that is above and beyond any distrust originating from war victimization.

Another potential explanation for our findings is that living near a former camp captures proximity to a branch of the Memorial organization, which is dedicated to preserving the memory of repression victims. About half (32 out of 59 Memorial branches) are located in former gulag towns, and we check whether the effects we document merely reflect that. In our analysis sample, only 651 individuals live within 10 km of a Memorial branch, which is why we use the actual distance in km to the nearest office. The average respondent lives within 69 km of a Memorial branch. Model (5) of Table 6 demonstrates that living in proximity of a Memorial branch does not influence trust, suggesting that this is not the explanation behind our findings.

The final alternative explanation we investigate is related to the fact that former labor camps predominantly had male prisoners. Gulags typically had a minority female prisoner population, whose share was under 9 percent until 1940, but reached almost a quarter by 1945 (Getty et al., 1993; Mason, 2001).²⁷ Women in gulags were

political prisoners—often the wives of alleged counter-revolutionaries—and common criminals (Mason, 2001).

Research shows that different social norms and behaviors can develop because of male-biased sex ratios (e.g., Grosjean and Khattar, 2019). The literature suggests, for example, that male-biased sex ratios are associated with higher crime rates (Cameron et al., 2019; Edlund et al., 2013). As such, it is possible that localities with former gulags developed this social norm of mistrust because of the male-biased sex ratios and the associated crime. Such explanations would be consistent with the untrustworthiness of the inmates channel outlined in Section 3.2 above. To test this, in Model (6) of Table 6, we include a different key independent variable: whether the respondent lives within 10 km of a gulag with female prisoners. The intuition behind this exercise is that women are typically less likely to engage in criminal behavior than men (Campanello, 2014) and are more trustworthy (Buchan et al., 2008; Dollar et al., 2001). Therefore, we expect that those living near camps with female inmates were less likely to develop mistrust or that the mistrust norm is weaker near such former gulags. The results in Model (6) of Table 6 provide some suggestive evidence regarding this proposition whereby the coefficient estimate on the variable "gulag with female prisoners within 10 km" is negative but statistically insignificant. Nevertheless, this result is likely due to the lack of statistical power. Only 552 out of the 16,415 respondents in the analysis sample live within 10 km of a former gulag with female prisoners. In addition, in Model (7), we only focus on former gulag camps that had only male prisoners. The results in Models (6) and (7) jointly suggest that the main findings may be due to the fact that former prisoners were predominantly male, corroborating the male-biased sex ratios explanation. It also provides partial support for the hypothesis related to the inmates' untrustworthiness (see Section 3.2).

²⁷ Applebaum (2004) and Mason (2001) document special gulags for female criminals and the wives of counter-revolutionaries, but we are unable to identify such camps based on Smirnov (1998). For example, the Akhtyubinsk camp had only female inmates (Mason, 2001). Nevertheless, our data source documented 1,824 women out of 15,205 prisoners in Akhtyubinsk in 1943. Figure B1 in the Appendix provides the number of females in gulags per year.

Table 7
Proximity to former gulag camps and arrest sites and present-day trust levels, heterogeneity results, ordered logit results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Camps closed before 1946	Camps closed in 1946 and later	Ages 18–30	Ages 31–45	Ages 46–60	Ages 61+	No family repression	Family repression	Family repression = No information
<i>Panel A. Ordered Logit Results</i>									
Gulag within 10 km	-0.209 (0.223)	-0.212* (0.115)	-0.107 (0.141)	-0.241* (0.125)	-0.334** (0.130)	-0.087 (0.168)	-0.127 (0.107)	-0.415** (0.203)	-0.535*** (0.200)
Pseudo R ²	0.022	0.026	0.038	0.022	0.030	0.014	0.020	0.014	0.078
<i>Panel B. OLS Results</i>									
Gulag within 10 km	-0.134 (0.134)	-0.113* (0.068)	-0.042 (0.081)	-0.132* (0.072)	-0.176** (0.078)	-0.071 (0.100)	-0.063 (0.063)	-0.266** (0.117)	-0.313*** (0.118)
Adj. R ²	0.054	0.074	0.103	0.058	0.079	0.031	0.055	0.017	0.191
Individual-level controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Geographic controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Distance to a pre-1917 rail station	Y	Y	Y	Y	Y	Y	Y	Y	Y
Country dummies	Y	Y	Y	Y	Y	Y	Y	Y	Y
N. obs.	4,867	11,548	3,615	5,049	4,405	3,346	13,158	1,438	1,819

Source. Authors' calculations based on data from Memorial.de, Memo.ru, and Smirnov (1998) merged with LiTS 2016.
Notes. *** p < 0.01, ** p < 0.05, * p < 0.1. Coefficient estimates and standard errors (clustered at the PSU level) are from ordered logit estimations in Panel A and from ordinary least squares (OLS) estimations in Panel B. The unit of observation is an individual. The dependent variable in all specifications is generalized trust, based on the question "Generally speaking, would you say that most people can be trusted, or you can't be too careful in dealing with people?" Generalized trust is measured on a 5-point scale, whereby 1 = complete distrust, 2 = some distrust, 3 = neither trust nor distrust, 4 = some trust, and 5 = complete trust. The key independent variable is coded as 1 if the respondent lives within 10 km of a former gulag and 0 otherwise. The individual-level controls are age, age squared, gender, height, Russian ethnicity, and religion. The geographic controls include latitude, longitude, and elevation. All regressions include the distance between each respondent and the nearest pre-1917 rail station and country dummies.

7.6. Channels of persistence

This subsection provides suggestive empirical evidence regarding the question of how the social norm of mistrust in the gulag areas has persisted over time. As noted in Section 3.3., the Bisin-Verdier model of cultural transmission distinguishes between vertical (i.e., within the family) and horizontal/oblique (i.e., the internalization of the prevailing societal norms through imitation or learning) transmission (Bisin and Verdier, 2011). While we cannot precisely distinguish between horizontal and vertical transmission, we perform several analyses that provide suggestive evidence of vertical transmission.

In this subsection, we exploit information on the nearest camp's closing date for each respondent and explore the strength of the mistrust norm associated with living near gulags across generations. We also check whether the social norm of mistrust is stronger among respondents with a family history of repression and those residing near places of former arrests.

First, we compare respondents living within 10 km of a camp with their counterparts living further away based on the number of years since the camp closed down. Specifically, Models (1) and (2) of Table 4 indicate that the social norm of mistrust appears to be stronger for those living near camps that closed down in or after 1946. We note that such analysis is only providing suggestive evidence as there is non-randomness in the timing of camp closures. Nevertheless, this result suggests that camps that were more recently in operation and are therefore fresher in respondents' memory are more associated with the culture of mistrust.²⁸

Second, in Models (3)–(6) of Table 7, we expected that older individuals living within 10 km of a former campsite, who were gulag contemporaries, would be more mistrusting than their younger counterparts. Our findings demonstrate, however, that

the results are concentrated among the middle-aged cohorts, i.e., those born between 1970 and 1984 (aged between 31 and 45 in 2015 (see Model (4)) and respondents born between 1955 and 1969 (see Model (5)), at least based on the statistical significance. Comprising the children and grandchildren of gulag contemporaries, these cohorts may be more knowledgeable about the past gulag locations and the repressions that took place there because they were born and grew up immediately after camps closed down. For example, Stalin's successor Nikita Khrushchev exposed and denounced the repressions (Zhukov and Talibova, 2018). Our results are consistent with evidence from Booth et al. (2018) that the children and grandchildren of those persecuted during the Chinese Cultural Revolution are less trusting and trustworthy. Meanwhile, the association between living near gulags and trust is not statistically significant for the oldest and youngest age groups.

Third, to provide a more direct test of the vertical transmission channel, we explore whether distrust is stronger for politically repressed families. In the 2016 LiTS questionnaire, respondents reported whether their country's government engaged in the persecution, torture, or any kind of violence against the respondent or family members before the fall of communism. While this question is not specific to the timing of Stalin's rule, it can nevertheless provide us with information on whether the mistrust norm is stronger for families that both live near a former forced camp and were themselves repression victims.^{29,30}

About 9 percent of respondents answered this question with a "yes," while another 11 percent did not want to answer or did not know. Since the share of respondents who did not answer this sensitive question is relatively high, we included an additional

²⁸ We chose 1946 as a cutoff for two reasons: first, approximately a third of the camps had closed down by that year; second, following the 1945 amnesty, the size of the gulag "enterprise," as measured by the number of prisoners, steadily increased up until Stalin died in 1953 (see Figure A1 in the Appendix).

²⁹ According to recent polls in Russia, 20 to 30 percent of respondents have relatives who were repressed under Stalin's regime (Levada, 2017; Russian Public Opinion Research Center, 2018).

³⁰ The LiTS questionnaire has information on whether the interviewee or relatives were sent to a labor camp or prison for political reasons during communism. We did not use this question as there are only 96 respondents in the analysis sample who have an imprisoned family member and also live within 10 km of a former camp.

category, “Missing information,” to prevent non-response bias. We present the results in Models (7)–(9) of Table 7. These findings indicate that the mistrust culture near former gulags is concentrated in families who experienced past repression or did not want to report past repression, which is suggestive of the vertical transmission channel (i.e., culture being transmitted intergenerationally within the family).

8. Conclusion

This paper substantively contributes to the burgeoning literature on the origins of differences in trust norms by being the first to attribute *within*-country trust differences in the FSU to the former system of forced prison under Stalin. Using individual-level data containing information on the respondent’s PSU’s geolocation and former forced labor camps’ locations, we document that individuals living near former gulags mistrust society, neighbors, and state institutions. They also have lower civic engagement levels as measured by voting, current party membership, and socializing with friends and relatives. Our results imply that these social and behavioral norms emerged due to the fear of political repression epitomized by the gulag. Amidst the atmosphere of political repression and the incentives for citizens to spy and report on one another, gulags reminded those living near them about the high cost and danger of trusting others. Our evidence suggests that those who witnessed the repressions, both inside and outside the gulag, likely internalized this mistrust and transmitted it to their offspring and communities. All in all, past political repression and the symbols and scarring it leaves behind in collective memory durably shape civic norms and behavior related to trust.

Our results are robust to a battery of sensitivity checks. Specifically, we test the extent to which unobserved heterogeneity and selection drive our results, perform two placebo tests—by assigning respondents to fictitious gulag locations and by relying on the non-FSU countries in the LiTS, and offer additional checks. These checks confirm our baseline results and suggest that these can be interpreted causally. We explore alternative explanations that may be consistent with our findings. Importantly, we demonstrate that while mistrust norms also emerged near places of arrest, living near a gulag erodes trust above and beyond the influence of arrest sites as proxies for repression.

Our results complement recent research by Zhukov and Talibova (2018), who show that past repressions tend to lower current voter turnout, likely due to the general mistrust of institutions that we document. In addition, our results dovetail with the recent work by Miho et al. (2020), who demonstrate that the concentration of ethnic deportees in 1951 correlates with present-day gender norms in the FSU. Indeed, it appears that Stalin’s terror created a wide-ranging change in social norms, including gender and trust norms, which persisted for over half a century. Our work complements the extant literature by showing that the gulag sites are a potent reminder of the horrors of totalitarian repression to persecuted victims and their relatives. This active reminder of repression erodes the civic norms and values and the quality of the social fabric in these gulag localities.

In short, the social and behavioral norms that emerged due to Stalin’s terror persist in the former Soviet countries’ repressed communities. The lesson from history is that past political repression can have long-lasting negative consequences in terms of eroding trust and civic engagement. Unfortunately, political repression and illiberal regimes are not a thing of the past, both in post-Soviet countries and globally. For example, many FSU countries, including Russia, Belarus, Azerbaijan, Kazakhstan, Tajikistan, Turkmenistan, and Uzbekistan, are among the least free and least liberal countries (Freedom House, 2021; The Economist Intelligence Unit, 2021).

Our research provides concrete evidence that repressive regimes erode the future quality of the social fabric, in addition to the suffering they cause in the short run.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

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