The repression-dissent nexus in high-threat environments: Evidence from communist Romania

Vlad Surdea-Hernea[1] and Aurelian Plopeanu[2]

[1]Doctoral School of Political Science, Public Policy and International Relations, Central European University, Wien, Austria

[2]Department of Social Sciences and Humanities, Institute of Interdisciplinary Research, "Alexandru Ioan Cuza" University, Iași, Romania

July 25, 2024

Abstract

We demonstrate the persistent role of political violence in shaping identities, making people from victimised communities more likely to engage in dissent even in high-threat environments. Theoretically, we argue that extreme repression instills anti-regime hostility that is curated and nurtured over time, making dissent the appropriate form of political behaviour when the opportunity arises, regardless of its consequences. Our research focuses on the Romanian Gulag, a network of labour camps, penal colonies and extermination centres used by the communist regime to suppress opposition, resulting in hundreds of thousands of deaths between 1945 and 1965. Using spatial regression and instrumental variable methods, we find that places with Gulag facilities had, on average, 5 times more people injured during the anti-communist revolution of 1989. Bayesian process tracing, conducted in a pathway case selected using causal forests, provides ample evidence in support of our theorised causal mechanism.

Keywords: political violence, communism, repression, dissent, persistent effects, instrumental variable, Bayesian process tracing

1 Introduction

The legacy of political violence[1] is one of the most powerful forces shaping anti-regime attitudes (Neundorf and Pop-Eleches, 2020; Walden and Zhukov, 2020). According to the current theoretical consensus, whether such attitudes translate into dissent depends on the political opportunity structure (POS), with opposition mobilising when the expected costs of further repression in the given environment are lower than the strategic benefits of dissent (Kilavuz et al., 2023; Rozenas and Zhukov, 2019; Wang, 2021; Zhukov, 2023). However, this is not enough to provide a credible account of dissent in high-threat environments, such as the 1992 Bisho protest march in present-day South Africa or the 1989 Tiananmen Square demonstrations in China(Anisin, 2019).

In this paper, we explore an alternative mechanism that can explain the decision-making process of individuals who engage in dissent in response to repression, even in high-threat environments. Our theory, anchored in the logic of appropriateness (March and Olsen, 1996, 1998), is based on the premise that in a setting where individuals have a history of indiscriminate violence, their collective identity is structured in part by how the memory of oppression is curated and cultivated by the community (Charnysh and Peisakhin, 2022; Haffert, 2022). When this component of identity becomes salient, individuals, acting as members of their victimised community, engage in dissent not just strategically, as a result of risk-reward calculations, but as a constitutive part of who they are. Dissent becomes an expression of a deontological norm about how individuals from a community with a shared value system should behave (Pearlman, 2013).

Empirically, we turn to one of the most brutal episodes of political violence in the 20^{th} century, the Gulag system of labour camps, penal colonies and extermination centres established by the communist regime in Romania after 1945, in which more than 500,000 lives were lost[2]. Consistent with our theory, we show that people from localities where a Gulag facility was present adopted anti-communist norms triggered by witnessing the height of regime violence or learning about it through persistent communal narratives. These individuals were significantly more likely to actively participate in the December 1989 Revolution, the only violent anti-communist revolution in Central and Eastern Europe.

To establish this relationship, we draw on original data on the universe of Gulag facilities in Romania and leverage a variety of spatial regression tools, as well as an instrumental

[1] We define political violence or repression, following (Davenport, 2007, p.2), as the use of physical sanctions against an individual or organisation to impose significant costs on the victims and to deter activities and beliefs perceived as challenging the government.

[2] Primary data has demonstrated that the memory of the more than 500,000 lives lost in the Gulag persisted long after the onset of de-Stalinisation in Romania, producing generations of *silent dissidents* (Cesereanu, 2005; Popescu-Sandu, 2009; Petrinca, 2017).

variable (IV) setup that exploits the apolitical logistics of establishing the Gulag. Our main result is that, on average, two more people were severely injured during the Revolution who came from localities that had a Gulag facility than from those that did not. Then, by conducting Bayesian process tracing in a pathway case (Fairfield and Charman, 2017, 2022), we provide mechanistic evidence that it was indeed the memory of political violence that persisted and engendered anti-communism norms, which then motivated people to disregard the high-threat environment in December 1989.

We make several contributions. First, we bring a novel theoretical perspective to the debate on the behavioural effects of political violence: does it inhibit or inflame opposition? For decades, empirical results on this question have been mixed (Escribà-Folch, 2013). As noted above, the POS theory of Rozenas and Zhukov (2019) has attempted to provide a unifying framework that can explain both sets of seemingly contradictory findings, but its high internal consistency has come at the cost of low empirical coverage. Our model improves the coverage of observed patterns of dissent in high-threat environments, without calling into question the validity of POS theory in most settings. This shift from conceptualising dissent as an algorithmic process to a more complex mix of rational choice and social norms about what constitutes appropriate behaviour aligns current research practices in political science with findings from other fields, such as sociology and anthropology (Kurzman, 2008; Pearlman, 2013).

Second, this paper adds to the body of empirical research examining the legacies of political violence (Hager and Krakowski, 2022; Haffert, 2022; Lupu and Peisakhin, 2017; Rozenas et al., 2017; Rozenas and Zhukov, 2019; Zhukov and Talibova, 2018), in particular gulag-like structures. While many papers using credible identification strategies have been published in recent years (Charnysh and Finkel, 2017; Homola et al., 2020; Miller and Smith, 2015), their (over)reliance on a limited number of single-country studies limits the generalisability of the theories derived from them (Pepinsky, 2019). By departing from traditional settings such as Nazi Germany and the Soviet Union and considering a less studied country, Romania, we help to assess the external validity of established findings.

Third, we add to the literature highlighting the role of meso-level organisations in ensuring the persistence of historical institutions and events (Charnysh and Finkel, 2017; Haffert, 2022; Neundorf and Pop-Eleches, 2020). We provide evidence that understanding the long-term links between repression and dissent is predicated on grasping the network of community organisations, such as family, kinship, churches or schools, that drive the process of socialisation. Methodologically, we argue that validation of this causal chain is best achieved in a mixed-methods framework that provides both cross-case evidence for the existence of a causal effect and within-case evidence for the causal mechanism through which this ef-

fect propagates. To our knowledge, this is the first paper to implement formal Bayesian process tracing to study the repression-dissent nexus, in line with recent methodological developments in mixed methods research (Fairfield and Charman, 2017, 2019, 2022). We also describe and implement an original case selection algorithm for pathway cases to perform process tracing not only with an appropriate template, but also in an appropriate setting for valid causal inference, building on Gerring (2007).

2 A theory of dissent in high-threat environments

Authoritarian regimes rely on political violence to forcibly extract loyalty by reducing the likelihood and intensity of opposition activity (Davenport, 2007; Escribà-Folch, 2013; Gerschewski, 2015). However, exposure to violence cultivates persistent hostile attitudes that extend beyond the immediate perpetrators to the wider political regime, reflecting grievances that can reverberate through communities for decades, if not centuries (Bautista et al., 2023; Balcells, 2012; Charnysh and Finkel, 2017; De Juan et al., 2022; Desposato et al., 2021; Homola et al., 2020; Lupu and Peisakhin, 2017). However, it remains unclear under what conditions this attitudinal hostility is translated into action.

In a seminal paper, Rozenas and Zhukov (2019) show that the conversion of attitudes into dissent is a function of the POS, specifically whether the expected probability of further severe repression is sufficiently high. Low-threat environments, where risks are minimal, encourage dissent, while high-threat environments, characterised by a high risk of severe repression, tend to discourage it[3] Building on this, Zhukov (2023) provides cross-national evidence that communities have a threshold of violence beyond which the opposition loses its ability to recoup losses by attracting new dissidents. High-threat environments correspond to an authoritarian regime that has crossed this threshold.

This POS theory relies on a consequentialist account of dissent, where citizens act 'as if' based on risk-reward assessments in an uncertain environment. Even research that incorporates affective responses into decision-making, such as Young (2019), tends to frame emotions only as amplifiers of perceived risk, whereas we know they can independently drive political action and override individual utility considerations (Dornschneider-Elkink and Edmonds, 2024; Kurzman, 2008; Pearlman, 2013, 2016, 2018). The failure to integrate emotions and the narratives they constitute as independent conditions into the POS model resulted in low empirical coverage, given the large number of cases where dissent consistently occurs

[3]Kilavuz et al. (2023) extend this to medium-threat environments, which they argue is the most common long-term scenario in authoritarian systems. They provide empirical evidence that, in a medium-threat environment, exposure to political violence reduces citizens' willingness to engage in dissent but, conditional on the onset of dissent, increases their commitment to the cause.

despite the high-threat environment (Anisin, 2019). This is illustrated in Figure 1, which provides a typology of cases based on whether or not dissent occurs in high- or low-threat environments. According to POS theory, the upper-right and lower-left quadrants should be populated by the vast majority of typical cases. The other two quadrants would then be filled by remaining deviant cases, where the empirical reality goes against the theoretical prediction.

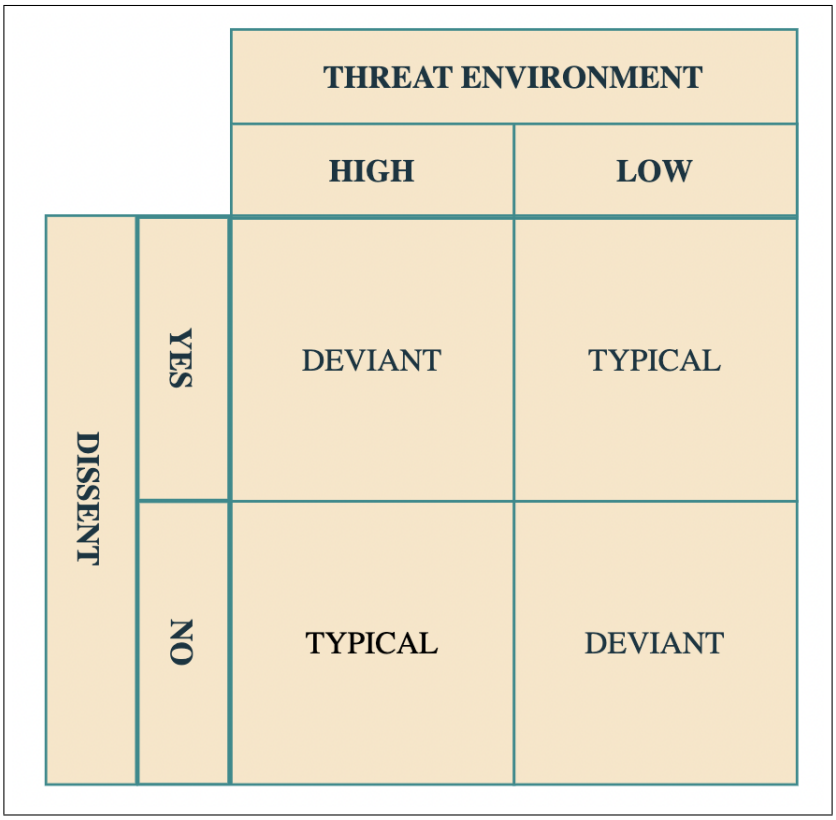

Figure 1: Typology of cases derived from the POS theory

We argue that extending theoretical coverage to the upper-left quadrant requires reconceptualising dissent away from the outcome of a risk-reward analysis and towards the product of group identities forged in response to shared victimisation. This can be achieved by contrasting the logic of consequences and the logic of appropriateness as the unpinning of dissent (March and Olsen, 1996, 1998). The POS theory relies explicitly on the logic of consequences, whereby individuals consider the likely outcome of challenging the regime before deciding whether or not to engage in dissent. Under this assumption, the likelihood of dissent decreases monotonically with the level of threat, consistent with Zhukov (2023). In contrast, the logic of appropriateness holds that political action is driven by social norms that frame what is 'appropriate' in particular contexts, with individuals acting in response

to the question: "What would someone like me do in this situation?" (March, 1994, p.57). This situational sensitivity, which enables people to navigate moral spaces (Taylor, 1992, p.27-28), is heightened in episodes of rupture with the status quo, such as dissent in an otherwise stable autocracy (Pearlman, 2018, p.884).

Appealing to the logic of appropriateness, we argue that following exposure to extreme political violence, citizens may come to see dissent as a meaning-making practice that allows them to express their anti-regime identity and fulfil their moral obligations to the community, regardless of the costs (Kurzman, 2008; Pearlman, 2013). In short, people can sometimes act on the basis of a categorical imperative (Kant, 1993). The question is, by what mechanism does dissent become the normatively appropriate response to repression?

A robust body of evidence shows that individuals exposed to repression internalise shared narratives of violence - either through direct victimisation or indirectly through family, educational and social networks - as they cultivate a collective memory within their community (Charnysh and Peisakhin, 2022; Haffert, 2022; Lupu and Peisakhin, 2017; Neundorf and Pop-Eleches, 2020). Socialised within identities shaped by these narratives and recognising the perpetrators as an out-group, individuals develop collective norms that value the expression of these anti-regime identities over direct individual utility (Bauer et al., 2016). This is consistent with the literature showing that when group identities are strong and salient, individuals are willing to suffer seemingly irrational losses to maintain the standing of their social group and the narratives that motivate them (Bonomi et al., 2021; Sambanis and Shayo, 2013; Shayo, 2009).

Figure 2 describes the currently prevailing model for explaining when repression triggers dissent (panel A), as well as our extension (panel B). According to the latter, dissent no longer decreases monotonically with the level of threat since it is the joint product of structural (i.e. POS theory) and social identity considerations. When such identity considerations dominate, citizens are likely to act according to the logic of appropriateness rather than the logic of consequences. To borrow the terminology of Zhukov (2023), the ability of the opposition to attract new members even in the face of extreme repression increases exponentially when anti-regime norms are triggered.

This is analogous to saying that when political violence generates anti-regime attitudes within a victimised community, the decision whether or not to dissent shifts from privileging individual welfare to embodying the expected response of the group archetype (Bonomi et al., 2021). If the ideal behaviour of the group archetype is dissent, that is, if the imagined individual construed as the reference point would not care about further repression, then so will the members of the community who hold the same norms. From a rationalist perspective, while repression still imposes significant costs on dissenters, these are consistently lower than

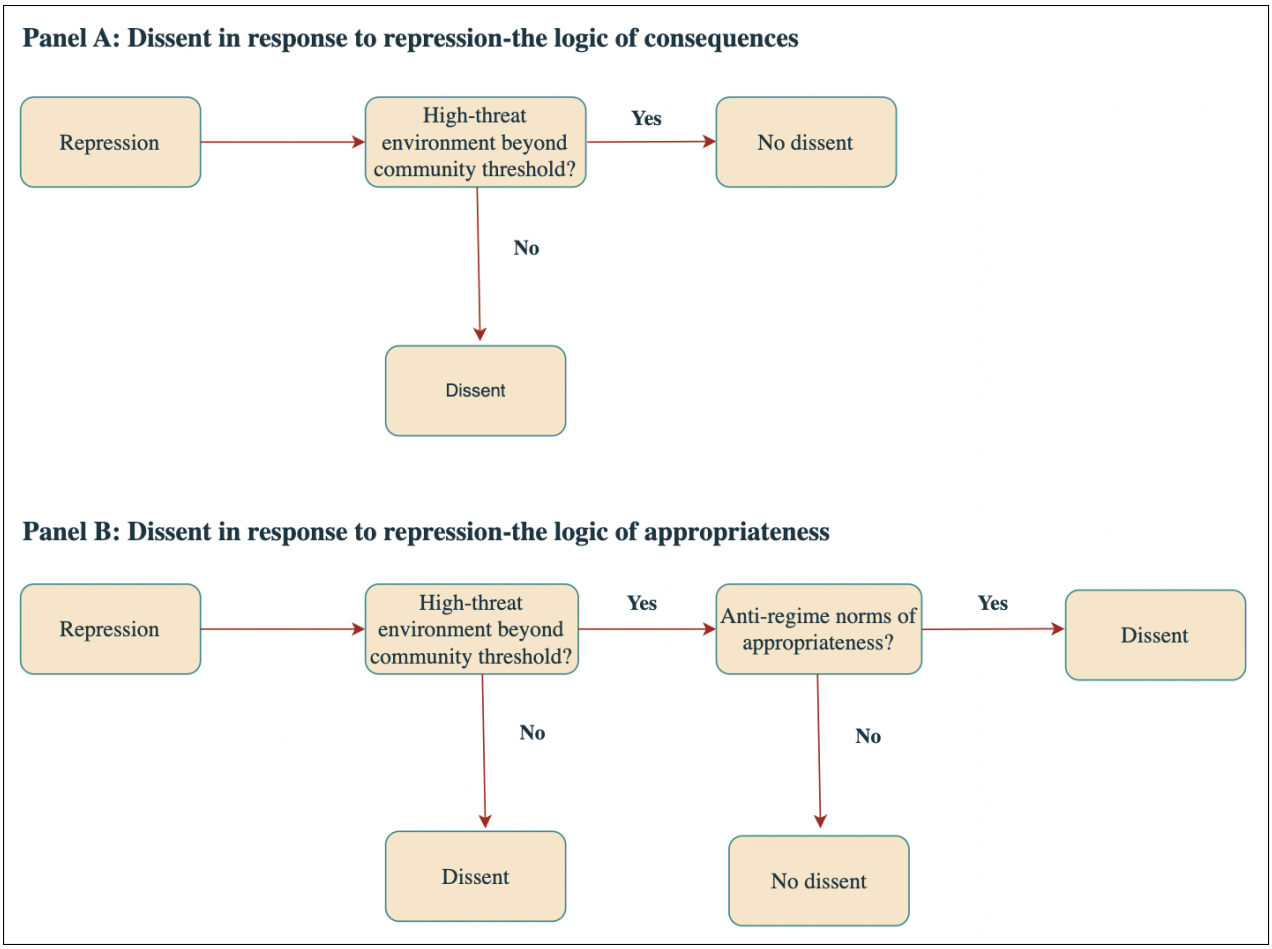

Figure 2: Explaining the repression-dissent nexus. The logic of consequences (Rozenas and Zhukov, 2019; Zhukov, 2023) vs. the logic of appropriateness

the *moral* costs of inaction, which include the disutility of both preference falsification and distancing from the group archetype (Bonomi et al., 2021; Kuran, 1997; Sambanis and Shayo, 2013; Shayo, 2009).

When do individuals follow the logic of appropriateness? We identify two necessary conditions. First, the collective memory of repression must be strong enough to override traditional risk-reward calculations. Thus, our argument applies to scenarios of indiscriminate political violence that are capable of forging communal identities in opposition to the perpetrators and their successors (Bautista et al., 2023; Lupu and Peisakhin, 2017; Rozenas and Zhukov, 2019). As Young (2019) shows, episodes of extreme violence resonate more strongly in the decision-making process and overshadow other information when citizens consider dissent [4]. Second, the availability of opportunities for dissent must be limited. In

[4]Even within communities that are targeted as such, the individual disadvantages of dissent may dominate the decision-making process, making dissent unlikely in high-threat environments. In this sense, our first necessary condition is also a scope condition: the model only works in extreme circumstances where

scenarios where opportunities for dissent are rare, potential dissidents tend to evaluate each opportunity more carefully, which means that they are more likely to also consider their moral obligations to their victimised community. Under scarcity, the decision not to participate in dissent on a given occasion may mean not only postponing the opportunity for future dissent, but possibly foregoing it altogether, which implies a high costs from the lost expressive value of dissent (Kuran, 1997).

3 Historical background

In the final stages of the Second World War, the Allies reluctantly granted the Soviet Union a controlling interest in Romania. This meant a takeover by the Moscow-backed communists, beginning with the installation of the puppet government of Petru Groza in March 1945 and the abolition of the monarchy in favour of a People's Republic in December 1947 (Deletant, 2001, Chapter 2). The one-party communist regime was formalised with the adoption of the Constitution of 13 April 1948, which was a facsimile of the Soviet Constitution of 1936 (Selejan-Gutan, 2016, pp.17-18). At the heart of this document was Article 32, which stated that citizens had the right to associate and organise, provided that their activities did not violate the democratic order. This was the legal pretext used to justify some of the most brutal forms of repression in the name of safeguarding democracy.

The communist regime then developed a Gulag system of labour camps, penal colonies and extermination sites designed to spread terror among the "ideological enemies of the people" (Deletant, 2001). Built on the Stalinist model, the Gulag was designed to systematically exterminate those who challenged the regime through a myriad of methods ranging from physical violence to starvation, forced labour and degrading living conditions (Deletant, 2018, Chapter 7). Initially, the Gulag consisted of 74 facilities with a capacity of only about 15,000 people. It soon developed into a dense network of 44 prisons for political prisoners, 61 extrajudicial investigation, storage and subjugation sites, 72 forced labour camps, 63 deportation centres, 10 psychiatric institutions, 93 mass graves and political assassination sites, and several penal colonies (Institutul de Investigare a Crimelor Comunismului și Memoria Exilului Românesc, 2013, pp.1-2).

The repression was carried out primarily by the Romanian secret police, the Securitate (Deletant, 2016, chapters 1-2), considered the "tip of the sword" of the regime (Boldur-Lățescu, 2005, p.22). Estimates suggest that, including civilian informers, the Securitate comprised some two million Romanians, almost 10% of the country's population, making it one of the largest institutions of its kind, second only to the East German Stasi and the

community values override individualistic ones.

Soviet KGB[5].

When these prisons and the small forced labour camps that surrounded them proved inadequate to the scale of the Securitate's actions, the government resorted to creating penal colonies where tens or even hundreds of thousands of citizens were sent to serve extrajudicial sentences on mass construction projects such as the Danube-Black Sea Canal (Deletant, 2018, Chapter 7). By 1960, some 520,000 young people had passed through these camps and colonies (Tismăneanu, 2006, pp.201-202). The communist regime was also responsible for the expulsion of more than 44,000 families to other regions, usually strategically located in barren areas, where they had to live in inhumane conditions, and for the administrative punishment of 82,700 people (Tismăneanu, 2006, pp.289-298). Some estimates put the total number of political prisoners at over 1.1 million, of whom around 500,000 died (Boldur-Lățescu, 2005, p.18). Others mention that the repression may have affected at least 2 million people (Frunza, 1990).

After 1965, the regime moved towards de-Stalinisation, replacing mass repression with targeted violence, totalitarian surveillance and ideological indoctrination (Tismaneanu, 1999). However, this was by no means an era of liberalisation. Instead, under the personalist rule of Nicolae Ceausescu, the regime mixed elements of socialism with ultra-nationalism, along the lines of North Korea's Juche philosophy (Deletant, 2016). Crucially, the Securitate prevented the formation of new opposition movements, as the pre-existing ones had been completely destroyed in the Gulag (Deletant, 1993, 1994). As a result, Romania was among the countries in Central and Eastern Europe with the fewest opportunities for dissent and therefore the fewest protests.

In December 1989, after a series of relatively peaceful revolutions in Central and Eastern Europe, the anti-communist Revolution in Romania took place against the backdrop of a gruelling domestic economic crisis. It was the only violent revolution against communism in Europe, with more than 2,000 people severely injured and nearly 1,000 killed (Petrescu, 2014).

3.1 Proof of concept

Before testing our argument using an causally identified research design, we provide preliminary qualitative evidence in support of our theory. We conducted an online survey of participants in the 1989 Romanian Revolution, asking them what factors shaped their involvement in active combat. The purpose of the survey was threefold. First, to assess

[5]The experimental methods of torture used by the Securitate have remained in the memory of Romanians as some of the most inhumane acts of the government, where so-called re-education through torture was pursued in some Gulag facilities (e.g. Suceava, Pitesti, Gherla, and Targu Ocna).

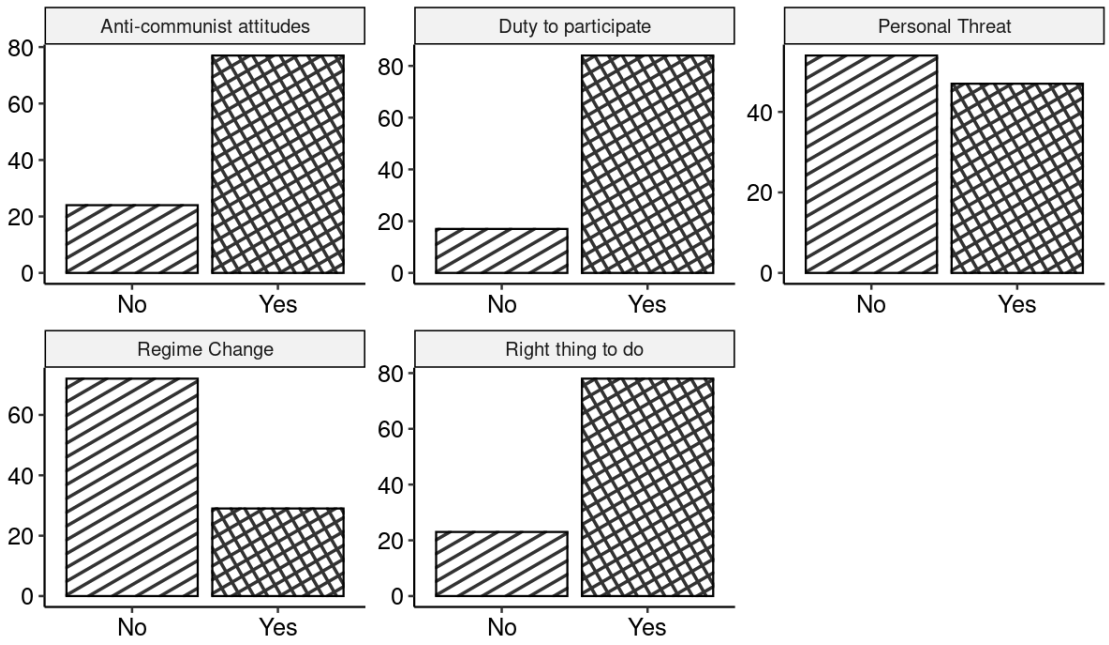

Figure 3: Determinants of the decision to participate in the Revolution of 1989
Note: The different graphs in this Figure show the responses to the question "Did you take part in the revolution because of X*?"*

whether respondents considered the period between 16 and 25 December to be a high-risk environment. Second, to assess whether dissidents took the high-risk environment into account when deciding to dissent and, if so, whether it was a central concern. Third, to determine whether identity considerations rooted in anti-communist norms influenced their decision to dissent. When taken together, we aim to show that dissidents in December 1989 against despite acknowledging the detrimental POS, due to normative considerations. These responses provide a proof of concept for our theory and validate our empirical setting as a typical case suitable for further empirical investigation.

We reached people via Facebook, through community groups of self-proclaimed revolutionaries, one of the most widespread and active platforms for those still alive to communicate. We first selected all groups moderated by people who were known participants in the Revolution and had no legal history of falsifying their status, and then cross-validated their appropriateness in qualitative interviews. The survey was designed and administered through Qualtrics and remained active between 20-25 November 2023. For each respondent, we manually verified their actual involvement in the events of December 1989, first by confirming their status as revolutionaries against publicly available lists, and then by checking existing case files from the Ministry of Justice to see whether they had been or were currently being prosecuted for allegedly falsifying their participation in the Revolution in order to gain

material benefits, a common practice in Romania. We dropped one observation because we could not verify their status and one because of their legal history.

Figure 3 shows the results of this small survey, with N=101, roughly 2% of the people actively involved in the Revolution. The overall conclusion is that the majority of respondents appear to have acted according to a logic of appropriateness rather than that of consequences. In deciding whether or not to take part in the Revolution, most of them weighed up whether it was the right thing to do and whether they had a duty to take part, and the answer was overwhelmingly yes to both questions. Fewer respondents, but still a significant majority, confirmed that anti-communist norms were part of their identity, in line with our theory of why people rely on normative considerations when deciding whether or not to engage in dissent. Crucially, most respondents came from outside Timisoara, the city where the Revolution broke out, and therefore had time to learn about the regime's reprisals against the demonstrators.

On the other hand, responses were divided as to whether dissidents were concerned about the personal threat posed by dissent. However, for the majority of those who calculated the risks of political action, these considerations seemed to be outweighed by considerations of appropriateness. Respondents who considered the level of threat generally opted to act regardless of the likely outcome. Finally, and crucially for demonstrating that risk-reward profiles were not central to their decision-making process, a large majority did not consider regime change to be possible, yet were willing to incur the costs of dissent. This rules out the possibility that the Romanian population had an extraordinarily high threshold for tolerated violence, which fuelled their action with the ultimate goal of overthrowing the regime. As the in-depth interviews we conducted in parallel showed, many were willing to sacrifice themselves to make a statement.

Most of these semi-structured interviews took place between October and December 2023. Their purpose was not to achieve information saturation on the topic, but to further confirm instances where dissidents in high-risk environments operate within the logic of appropriateness. In particular, we wanted to go one step further and show that the reason why anti-communist norms were so salient and engendered a logic of appropriateness was a history of extreme political violence in the form of the Gulag.

First, the interviews directly show that the memory of political violence has shaped how citizens identify themselves. In the words of one protester who mobilised against the regime in the early days of the Revolution: "After what they [the communists] did to my family, I finally had a chance to get them" (Interview, 25 October 2023). Similarly, a protester who took to the streets of Bucharest long after the regime's willingness to use indiscriminate repression had become public knowledge told us: "The communists made life hell for years,

how could I watch, how could I look my children in the eye after that?" (Interview, 27 October 2023). Another protester from Timisoara was even more direct: "We were not there for more bread, we were there for justice" (Interview, 22 December 2023).

Second, we found that while risk considerations remained in the minds of citizens, the idea of living with the memory of a missed opportunity overrode any rational calculation; in other words, dissent was the situationally appropriate option. As one protester in Bucharest put it: "I could have died, but so could some of them. That was good enough for me." (Interview, 3 November 2023). The idea that personal sacrifice was taken into account despite the fact that there was nothing remotely certain about the Revolution's ability to remove the dictator was a common theme. One protester from Arad, the second city where the Revolution broke out, explicitly linked the decision to dissent to his family's experience in the Gulag: "They sent my grandfather, who was a supporter of the Peasants [National Peasants' Party], to the Canal. My grandmother was left alone with five children, they were poor, but they were still harassed because they were bourgeois. Bourgeois, but without bread... When I had the opportunity to do something, I felt I owed it to them" (Interview 20 November 20-23). Similarly, a protester from Timisoara revealed: "My family was sent to Bărăgan [mass deportation colony], I wanted to shout their pain, my own didn't matter" (Interview 26 October 2023).

4 Research design

4.1 Data

We compiled an original dataset at LAU2 level[6] for all localities in Romania (i.e. communes, towns, and municipalities). We geolocated each labour camp, extermination site and mass graveyard that made up the Romanian Gulag and identify which of the 3,181 localities hosted such facilities[7]. For this purpose, we rely on the list of such facilities drawn up by the Presidential Commission for the Study of the Communist Dictatorship (Tismăneanu, 2006), which allows us to determine their precise latitude and longitude coordinates.

There is a measurement challenge in using the Presidential Commission's list, namely its

[6]The term LAU2 refers to the 'Local Administrative Units' at the lowest level within the EU statistical system, which serve as the basic geographical units for collecting regional statistics and analysing regional policies. These units are considered as the granular building blocks on which the larger NUTS (Nomenclature of Territorial Units for Statistics) framework is built.

[7]We limit our scope to the most extreme units, namely labour camps and assassination sites with their associated mass graves. Unlike detention centres, which held political opponents and conventional criminals at the same time, the camp system was specifically designed to be the epitome of state-sponsored political violence. The decision to group these types of sites together is motivated by their shared history of memorialisation, as these are the types of sites that the population understood to constitute the Gulag.

Panel A. Distribution of Gulag facilities

Panel B. Distribution of severe injuries

Figure 4: Geography of the Romanian Gulag

potential lack of completeness. Although considerable efforts have been made to validate the location of each site of repression through historical and ethnographic work, it is tacitly accepted that some mass graves and assassination sites will remain unaccounted for. Therefore, some localities may not be counted as 'treated units', not because the treatment was not carried out, but because we have no information that it was carried out. However, as these Gulag facilities were concealed and non-salient, they should have no effect on the construal of anti-communist norms and should therefore not bias our estimates. Nevertheless, to reduce the risk of missing data being spatially correlated, we include grid cell fixed effects in our estimation, which absorb the time-invariant effects of geographic features, including forest cover and mountainous topography, that had provided opportunities for the resistance movement in the late 1940s and early 1950s (Miroiu, 2010).

Our independent variable is a binary indicator that takes the value 1 for a LAU2 locality that hosts a Gulag facility and 0 for those that do not. In total, there are 148 such facilities throughout Romania, with some localities hosting several of them. The geographical distribution of the Romanian Gulag is shown in Panel A of Figure 4. We show the results are robust to using an alternative operationalisation: the continuous distance from a locality to the nearest Gulag facility (Tables A2,A4).

Why do we think this independent variable is meaningful for measuring the impact of repression on dissent? Our assertion is that communities living with the experience (and subsequent memory) of political violence are more likely to understand the harmful nature of the regime, to develop anti-regime attitudes, and, under certain conditions, to translate these attitudes into dissent. The Gulag facility thus serves as a mnemonic device, a symbolic

representation of the physical and psychological abuse experienced in the community[8].

For our dependent variable, we use the number of people severely injured during the 1989 revolution from each locality[9]. To do this, we use the list compiled by Surdea-Hernea (2023), which contains the place of birth of each person injured by the communist repressive apparatus in December 1989, allowing us to match each entry in the list with the corresponding LAU2 locality. The geographical distribution of severe injuries sustained during the Revolution is shown in Panel B of Figure 4.

We believe that the number of severe injuries is an appropriate measure of dissent during December 1989 for two reasons. First, being severely injured, as opposed to simply participating, meant active involvement in protests, which required explicit expressions of dissent to the secret police or army. Formally, the odds of false positive for (severe) injuries are very low. Second, the number of participants, a more traditional measure, is less credible because of the sizeable waves of *fake* revolutionaries who tried to take advantage of being considered participants without actually taking part in the events, or even being part of the repression apparatus, in order to gain tax benefits (Stan, 2013). The list of those severely injured is simply of better quality and not subject to bias from the between-locality variation in attempts to be falsely labelled as participants. We show that the results are similar when using a binary indicator of whether at least one severely injured person comes from a particular locality (Tables A3,A4).

[8]Previous work has shown that the memory of violence sometimes makes communities more committed to the violent regime through a mechanism of cognitive dissonance (Homola et al., 2020). We argue that this did not happen here because of the historical break in the way political violence was administered, from the totalitarian model of the pre-1965 period to the ideological terror and targeted repression that followed. This unique sequencing allowed people to falsify their preferences until a window of opportunity opened up.

[9]One concern is that the number of injuries captures both the incentive to protest and the pre-existing distribution of state capacity for repression, which may be correlated with anti-communist sentiment. If the latter is true, and the variable captures the dominant feature, then we would not be measuring dissent but repression itself. Two facts argue against this interpretation. First, the size of the repressive apparatus was primarily related to the size of the local population, which is not an indicator of the presence of Gulag facilities before 1965 (Deletant, 1994, 2016).Second, in the only place where anti-communist sentiment was present before December 1989 during that year, Timisoara, the number of Securitate agents deployed actually decreased slightly rather than increased, which would be unlikely if the repressive response were concentrated in (latent) opposition hot spots. A more comprehensive discussion of the unfolding of these events is presented in section 6.

Table 1: Summary statistics

	Hosted a Gulag facility		
Variable	**No**	**Yes**	**p-value**
Severe injuries	0.37	6.00	< 0.001
Population density	94.29	379.15	0.013
Distance to the railway	8.01	9.11	0.3
Distance to a water source	21.16	17.36	< 0.001
Former Habsburg province	826 / 3,050 (27%)	52 / 131 (40%)	0.002
Population density in 1933	65.42	64.14	0.037
Distance to Bucharest	236.20	249.74	0.2
Distance to Timisoara	326.99	343.54	0.3

We include a number of covariates that allow us to describe the political geography of Romanian localities[10]: distance to the nearest point of the railway network; distance to the nearest water source; distance to Timisoara and Bucharest, the two main urban centres relevant for the developments in December 1989; population density of each LAU2 unit based on the 1977 census, and population density before 1945 at NUTS3 level. Table 1 provides summary statistics, separated by treatment status.

4.2 Causal identification

We leverage spatial variation to show that the presence of a Gulag facility in their locality made Romanian citizens more likely to participate in direct confrontation with the regime during the 1989 Revolution, thereby increasing the likelihood of injury. For the causal effect to be well-identified, the distribution of Gulag facilities must be as-if-random (Kocher and Monteiro, 2016, pp. 954-955); that is, after statistical adjustment for critical antecedents, it must be independent of the conditions that preceded the creation of the Gulag which also influenced patterns of mobilisation in 1989.

First, under a selection-on-observables assumption, we show that the factors considered in the authorities' decision to select the location(s) of the Gulag were primarily logistical, unrelated to the spatial distribution of political preferences in pre-1945 Romania. We estimate regressions that account for these factors and introduce a number of statistical techniques to deal with spatial noise and the threat of unobservables (Kelly, 2019, 2020; Oster, 2019).

[10]We show that the results are not affected by omitting these variables, some of which could be argued to be post-treatment variables through which a part of the effect is indirectly propagated.

Second, we employ an IV strategy that leverages exogenous variation in the distribution of Gulag facilities that is driven by distance to similarly situated units[11].

4.2.1 Selection on observables

The Gulag was established in locations where previous regimes had built prisons and internment camps (Institutul de Investigare a Crimelor Comunismului și Memoria Exilului Românesc, 2013, pp.230-233). As these were built in parallel by Romanian, Austro-Hungarian, Russian and Ottoman administrations throughout the 19^{th} and early 20^{th} century, it is unlikely that the decision on where exactly to build such structures was systematically correlated with the characteristics of the various populations and, in particular, with anti-socialist attitudes. This is all the more true since, before the end of the Second World War, communism or socialism had almost no organic tradition in the Romanian-speaking provinces (Tismaneanu, 2003, Chapter 2). Moreover, the individual files of dissidents sent to the Gulag do not indicate any intention to distribute prisoners among particular facilities; on the contrary, prisoners with similar backgrounds and from the same regions were sometimes sent to opposite parts of the country, depending on the uncoordinated decisions of local decision-makers (Institutul de Investigare a Crimelor Comunismului și Memoria Exilului Românesc, 2013, pp.233-289).

One concern is that the continued presence of Gulag facilities in a locality could be conflated with regional developments that correlate with anti-communist attitudes (Kelly, 2020, p.4). To address this challenge, we add grid-cell fixed effects to the estimation, which we compute following the approach of Doucette (2022, pp.8-9). Alternatively, one could use administrative unit fixed effects (e.g. NUTS3 fixed effects), but the counties during the communist era were created after most of the repression in the Gulag had already taken place and differ significantly from the pre-World War II territorial organisation; their introduction could lead to post-treatment bias (Pepinsky et al., 2023, pp.2-4). Similarly, using pre-War administrative units is not possible because of major territorial changes before and after 1945. We also include a second-degree polynomial in latitude and longitude to control for directional gradients (Kelly, 2020, p.4). In spirit, this makes our approach similar to the two-dimensional geographic regression discontinuity design introduced by Dell (2010), assuming that the Gulag forms a set of discontinuities.

To exclude the possibility that the heterogeneity in the number of severe injuries in the 1989 Revolution was driven by the ease of participation relative to Timisoara and Bucharest, the focal points of dissent, we control for the distance to these urban centres, as well as the

[11]Distance-based instruments are well established in the historical persistence literature (Caicedo, 2021; Becker and Pascali, 2019; Dittmar, 2011; Nunn, 2008).

distance to the nearest point from the Romanian railway network and to water sources. Next, to eliminate the risk that the number of injuries is driven by even more distant historical events, we control for whether a municipality was part of the Habsburg Empire, a known predictor of institutional (dis)trust in the region (Becker et al., 2016). Finally, to reject the alternative explanation that urbanisation is the main cause of the number of injuries by mechanically increasing the likelihood of participation, we control for population density according to the 1977 census, the last before the Revolution, as well as for population density in 1933 to adjust for long-term trends.

4.2.2 IV estimation

We use a specific feature of the Romanian Gulag to restrict the variation in the spatial distribution of labour camps to a credibly exogenous part. Due to the limited capacity of the resistance movement, the number of Gulag facilities needed outside the regular prison system was limited, and the pace of opening new facilities declined as repression became more effective in the late 1950s (Deletant, 1993, 2001). Most of the new camps were only built for specific political projects (e.g. the Danube-Black Sea Canal) in cases where no camps were available in the same region as the project[12].

Therefore, we use the distance from each municipality to the nearest Gulag facility as a predictor of whether a municipality itself hosted such a facility. We show that this distance is strongly correlated with the main independent variable according to the most stringent statistical tests available (Lee et al., 2022; Stock and Yogo, 2005). To be a valid instrument, it must also satisfy an exclusion restriction: the distance from a municipality to the nearest facility should not affect how many people were severely injured during the 1989 Revolution, except through reducing the probability that a municipality itself hosted a facility.

The major concern is that people living near Gulag facilities would become more aware of overall repression in the country and thus develop stronger anti-regime attitudes, making them more likely to participate in the Revolution and thereby be injured, regardless of whether the facility was in their locality. To alleviate concerns, we show that the effect of labour camps on the injury count is very local, losing significance 10 km outside the boundaries of a municipality (Figure 6).

Another concern is that the distance to a Gulag is correlated with the distribution of the resistance movement in the first years after the communist takeover. To check this, we

[12]Conceptually, if the decision to establish a labour camp in municipality X is driven by logistical and political reasons, we eliminate the latter by focusing on the part of the decision that is influenced by the existence of regime alternatives. The assumption behind this is that the communist regime, when faced with the choice of whether to establish a camp between two municipalities with similar characteristics, will boil down to rationally picking the one without immediate substitutes.

.

Table 2: Relationship between Gulag geography

DV: Existence of Gulag facility in a locality						
	(1)	(2)	(3)	(4)	(5)	(6)
Distance to resistance movement	0.001	0.001	0.001	0.001	0.001	0.001
	(0.978)	(0.749)	(0.786)	(0.757)	(0.822)	(0.818)
Covariates	✗	✓	✓	✗	✓	✓
Moran eigenvectors	✗	✗	✓	✓	✓	✓
Grid cell FEs	✗	✗	✗	✓	✓	✓
Entropy balancing	✗	✗	✓	✓	✓	✗
Spatial lags	✗	✗	✗	✗	✗	✓
N.	3181	3180	3180	3180	3180	3180

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

review historical literature that identifies such resistance movements in the first years of the Petru Groza government, and compile a list of those that were active before the main phase of the Gulag establishment (Brişcă, 2004; Dobre et al., 2003; Ioniţoiu, 1996; Onişoru, 2003). We then geolocate the resistance movements from the list, match them to our main dataset, and run a series of regression models to test for any correlation between the locations of these movements and the locations of Gulag facilities. We show such correlations be absent according to Table 2, thus strengthening the confidence we have in our exclusion restriction.

More broadly, the instrument could be related to spatial characteristic that made it easier for citizens to participate in the Revolution. This is similar to the challenge faced under the selection-on-observables assumption, and we address it by including the battery of spatial covariates in both stages of IV estimation.

5 Results

5.1 Selection-on-observables

Table 3 presents the estimates under the selection-on-observables assumption. The dependent variable for all six model specifications is the number of severe injuries from a locality during the Revolution, with a mean value of 0.605. All coefficients are significant at conventional levels, based on p-values calculated for Conley standard errors with a 50 km kernel. The results remain significant when using grid-cell clustered errors (Table A1). Column (1)

shows a bivariate correlation between the presence of a Gulag facility and injuries during the Revolution. The estimates in Column (2) then introduce the covariates discussed in Section 4. Starting with Column (2), the coefficient remains stable to the introduction of additional covariates, indicating robustness.

Table 3: Selection-on-observables results

DV: Number of severe injuries from a locality (Mean=0.605)						
	(1)	(2)	(3)	(4)	(5)	(6)
Gulag facility	5.627*	2.095***	1.953***	1.725**	1.984***	2.002***
	(0.052)	(0.050)	(0.007)	(0.021)	(0.006)	(< 0.001)
Covariates	✗	✓	✓	✗	✓	✓
Moran eigenvectors	✗	✗	✓	✓	✓	✓
Grid cell FEs	✗	✗	✗	✓	✓	✓
Entropy balancing	✗	✗	✓	✓	✓	✗
Spatial lags	✗	✗	✗	✗	✗	✓
R^2 Adj	0.024	0.320	0.345	0.346	0.303	-
N.	3181	3180	3180	3180	3180	3180
Moran's I	-0.002	-0.007	-0.012	-0.017	-0.008	-
Oster's' δ	-	1.62	1.76	1.76	1.78	-

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Columns (3)-(6) introduce entropy balancing as a pre-processing algorithm before the regression. Using a prespecified set of covariates, entropy balancing generates a set of weights for the observations in the sample such that the covariate distributions of the treatment and control groups in the processed data match exactly on all prespecified moments (e.g. mean, variance) (Hainmueller, 2012)[13]. In Columns (3)-(4), we reweight the observations according to their distance from the so-called "Romanian martyr cities", a list of places from which an above-average number of revolutionaries come, to mitigate the risk of a selection-intro treatment effect. In Column (5), we reweight observations based on spatial characteristics, which serves as a main robustness check against spatial noise being the source of our causal effect. In addition, Columns (3)-(6) include Moran eigenvectors (Dray et al., 2006), and Columns (4)-(6) include grid cell fixed effects.

[13]An important property of entropy balancing is doubly robustness to linear regression: if either one of the selection models or the regression model for the outcome is well specified, the estimated effect will be consistent (Zhao and Percival, 2016)

For the first five specifications, we compute Moran' I for the residuals, a statistical measure of spatial autocorrelation (Kelly, 2019, 2020). Since the values are close to 0, we can proceed with a meaningful interpretation of the coefficients. On average, the presence of a Gulag facility in one's locality increases by 2 the number of people from that locality severely injured during the Revolution, more than three times the mean value of the dependent variable. However, as the first five specifications are estimated using linear models, spatial interactions between units could remain an issue. Column (6) serves as a robustness check, estimating the same specification as in Column (3) via maximum likelihood estimation of a spatial simultaneous autoregressive lag model. Spatial weights for this model are computed using a K-nearest neighbours algorithm, assuming that the distribution of Gulag facilities is influenced by at most 10 localities in the same region.

Next, we implement the sensitivity analysis algorithm developed by Oster (2019), which measures the degree of selection on unobservables relative to observables that would be required to explain away an effect (pp. 191-196). This protocol assumes that the relationship between the independent variable and unobservable factors can be estimated from the relationship between that variable and the observable factors as revealed by the movements of R^2 (Oster, 2019, p.187)[14]. To cancel out the effect of the presence of a Gulag facility on severe injuries, the effect of unobservables would have to be 1.62-1.78 times higher than that of observables, an unlikely scenario given that our main models already include 49 synthetic variables that captures every possible spatial pattern (Dray et al., 2006).

[14]We assume a maximum value of R^2 of 1.5 times the maximum value in Column (5), a more conservative approach than the 1.3 suggested by Oster.

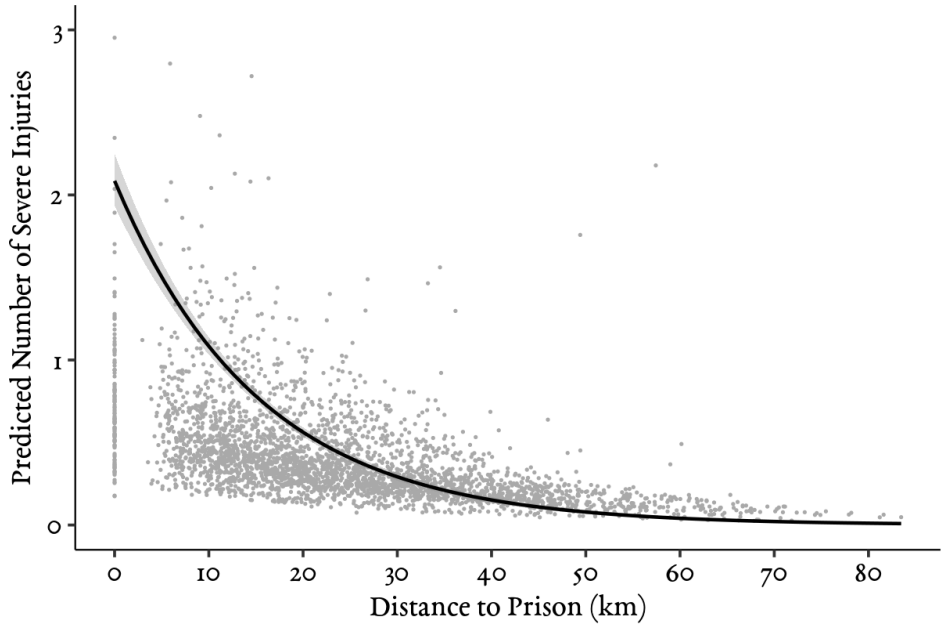

Figure 5: Effect of continuous distance to Gulag facilities on the number of severe injuries

Finally, we test whether the continuous distance from a Gulag facility is a negative predictor of severe injury, to complement the main result. Because the number of injuries is a count variable bounded below by 0, we run a Poisson regression including all covariates, fixed effects and Moran eigenvectors. Figure 5 shows the predicted relationship: localities closer to a Gulag facilities have a higher number of severely injured citizens in December 1989.

We then move to the IV results, reported in Table 4. The first stage of the estimation suggests that, regardless of the covariates and FEs included, distance to another Gulag facility negatively predicts the presence of such a facility in a locality. In other words, as discussed earlier, the communist regime established new camps only when there was no other camp in operation in a given geographic region. How strong is this relationship? First, the F-statistics are significantly above the Stock-Yogo critical value for maximum acceptable bias relative to the OLS estimator (Stock and Yogo, 2005). Second, the coefficients remain statistically significant after adjusting according to the valid t-ratio approach developed by Lee et al. (2022), where the F-statistic must be above 104.7 to ensure significance at the 5% level compared to OLS.

Moving to the second stage, we find, again across a variety of specifications, that variation in the presence of Gulag facilities driven by logistical concerns, a credible exogenous variable, is strongly predictive of an increase in the number of severe injuries in these locations. The magnitude of the effect is larger than under selection-on-observables, but there is more

Table 4: IV results

Second stage DV: Number of severe injuries from a locality					
	(1)	(2)	(3)	(4)	(5)
Gulag facility (fitted)	6.161***	2.393**	2.506**	2.384**	2.600**
	(¡0.001)	(0.033)	(0.019)	(0.021)	(0.027)
First stage DV: Presence of Gulag facility					
Distance to facility	-0.005***	-0.005***	-0.007***	-0.0001	-0.0001
	(< 0.001)	(< 0.001)	(< 0.001)	(< 0.001)	(< 0.001)
Covariates	$\mathcal{X}$	✓	✓	✓	✓
Moran eigenvectors	$\mathcal{X}$	$\mathcal{X}$	✓	✓	✓
Grid cell FEs	$\mathcal{X}$	$\mathcal{X}$	$\mathcal{X}$	✓	✓
N.	3181	3180	3180	3180	3180
Cragg − Donald F statistic	421.88	420.44	437.33	444.69	444.69

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

uncertainty around the point estimates. Nevertheless, all estimates are significant at the 95% level.

The main threat to validity, which would be consistent with the increased size of the effects in Table 4 compared to Table 3, is that memories of repression from neighbouring communities are also cultivated within each community, thus constructing a composite effect of indirect victimisation in one's own community and spillovers from neighbouring regions. To address this, we examine the strength of the effect induced by the presence of Gulag facilities. Specifically, we create a set of binary indicators to determine whether a locality had a Gulag facility in its vicinity. We then control for the presence of the facility in each locality in our main regression models after including the binary indicators. For the exclusion restriction to hold, the effect of the new independent variables should be insignificant. Figure 6 confirms that our instrument passes this hoop test: once we control for the presence of a Gulag facility in a locality, the presence of one in the neighbourhood is not statistically significant, largely indistinguishable from the null, and its sign is not stable.

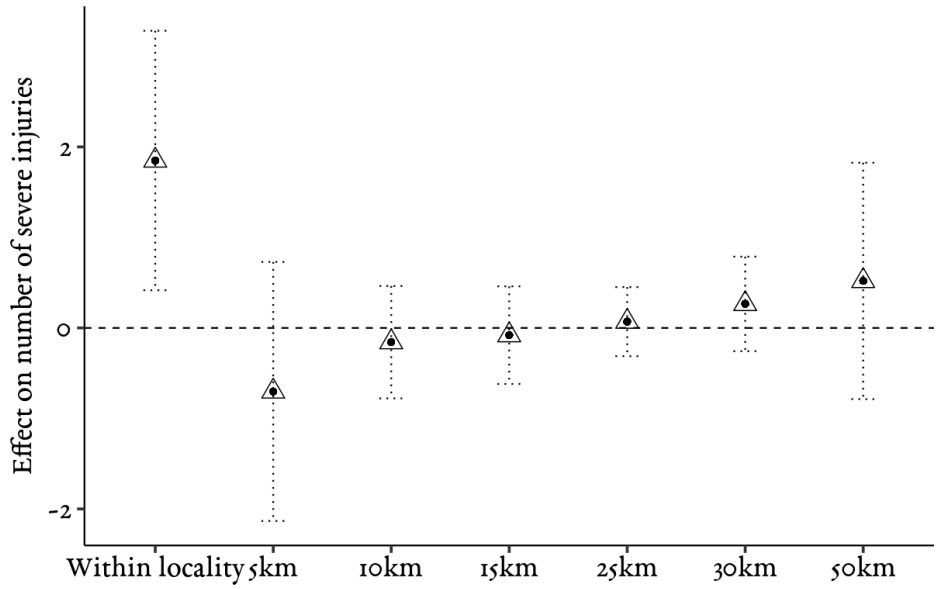

Figure 6: Effect of Gulag facilities in the vicinity of a locality

We further confirm this by measuring the distance from each locality to the nearest grid cell, outside the grid cell to which it belongs, and checking whether this area was a high repression area, defined as hosting at least 2 Gulag facilities. We then control for this binary variable in both the OLS and IV regressions; its coefficient is insignificant and the main estimates remain virtually unchanged (Tables A7-A9).

Table 5: Alternative IV results

Second stage DV: Number of severe injuries from a locality					
	(1)	(2)	(3)	(4)	(5)
Gulag facility (fitted)	6.332***	2.474**	2.749**	2.207**	2.686**
	(< 0.001)	(0.038)	(0.011)	(0.039)	(0.019)
Covariates	$\mathcal{X}$	✓	✓	✓	✓
Moran eigenvectors	$\mathcal{X}$	$\mathcal{X}$	✓	✓	✓
Grid cell FEs	$\mathcal{X}$	$\mathcal{X}$	$\mathcal{X}$	✓	✓
N.	3181	3180	3180	3180	3180
Cragg − Donald F statistic	66.23	66.85	437.33	69.62	69.62

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Next, we look at an alternative instrument for the presence of Gulag facilities, which interacts three logistical considerations that the regime likely took into account when deciding

where to locate new units: i) the distance from other facilities, ii) the difference in elevation between a locality and its neighbours, and iii) the distance to the nearest railway network. This more stringent instrument thus exploits (quasi-) immutable characteristics of the terrain that are likely to have been relevant to the regime. Table 5 shows the results of estimating this new IV setup with a 2SLS estimator, confirming the previous results, including the magnitude of the causal effect.

6 Causal mechanism analysis

Figure 7 provides a visual summary of the causal model underlying our argument. Section 5 provided cross-case evidence in support of $X \rightarrow Y$. We now proceed with a case study to validate the presence of the causal mechanism M through which we expect our previously identified effect to propagate[15].

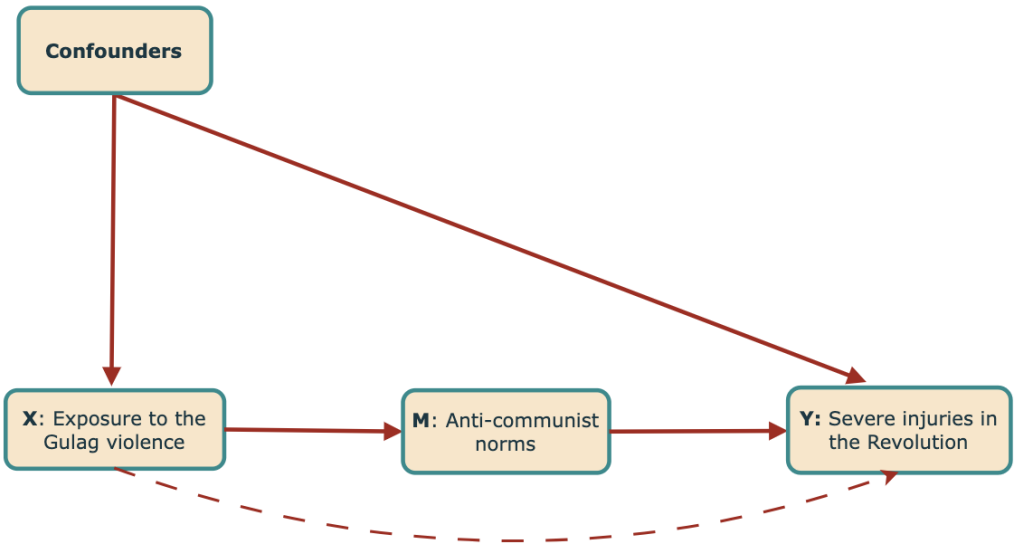

Figure 7: Causal model of our argument

We conduct process tracing in a *pathway case* where the causal condition of interest (i.e. the presence of a Gulag facility in one's locality) and the outcome (i.e. injuries during the Revolution from the locality) are both present, and the causal effect is of significant magnitude (Gerring, 2007, p.238-239). To learn which of the 3,181 localities in Romania can best serve as a pathway case, we estimate a causal forest, a machine learning algorithm that can predict conditional treatment effects (CATEs) for each observation (Wager and

[15]We do not rule out a possible direct effect of X on Y, but from an interpretive perspective the $X \rightarrow M \rightarrow Y$ pathway is the more interesting.

Athey, 2018). Following this procedure, and aided by theoretical considerations, we select Timisoara, the place where the Revolution began and one of the observations with the highest CATEs, and thus strongest causal effect.

We follow a Bayesian approach to process tracing, whereby we start with prior beliefs about the likelihood that a main hypothesis is true versus the likelihood that rival hypotheses are true, and update our posterior beliefs based on learning from observed new empirical evidence (Fairfield and Charman, 2017, 2022). We construct the main and rival hypotheses to be mutually exclusive, so that Bayes' rule can be applied to the disjoint sample spaces (Zaks, 2017, pp.353-355). We also ensure the hypotheses are exhaustive, so that confirmation of one and rejection of the other cover the entire theoretical space (Fairfield and Charman, 2017, pp.336-337).

Our main hypothesis H_{LOA} is that dissent during the Romanian Revolution was primarily motivated by anti-communist social norms that had been shaped by communal narratives that curated and cultivated the memory of violence from the Gulag era. If this hypothesis were true, then our causal mechanism M would be well identified within the proposed causal model. This, in turn, would imply that repression could encourage dissent even in high-threat environments, as long as dissent is socially constructed as the appropriate behaviour. The main rival hypothesis, H_{POS}, is that dissent was driven by the logic of consequences, ultimately boiling down to the strategic calculations of protesters for whom the potential benefits of expressing their grievances outweighed the costs of repression, as predicted by the POS theory. If we were to find evidence in favour of this hypothesis, then the explanation for the Romanian Revolution would be that, despite appearances, the POS did not constitute a high-threat environment for these dissidents, which would contradict our proposed theory of how the Revolution unfolded through the expression of norms.

Based on previous theoretical and empirical work on repression and dissent, H_{POS} should have a significantly higher probability than H_{LOA}. However, in light of our proposed causal model and the survey evidence discussed in Section 2, we believe it is reasonable to assume a "point of indifference" where the two hypotheses are equally likely (Fairfield and Charman, 2017). Therefore, we start with the following priors:

$$\begin{aligned} P(H_1) &= 0.5 \\ P(H_2) &= 0.5 \end{aligned} \tag{1}$$

6.1 Establishing a timeline

We begin by establishing a chronology of the Revolution in Timisoara, to see if the actual course of events is more consistent with either H_{LOA} or H_{POS}. The timeline draws primarily

on the local historical accounts of Costinaș (2016) and Mioc (2002).

Between 13 and 15 December 1989, the first signs of unrest appeared in Timisoara. Citizens belonging to the Reformed Church gathered in a peaceful vigil to support the local pastor, Laszlo Tokes, against the regime's politically motivated attempts to relocate him. This action came after stories of Tokes being stabbed in front of his wife and daughters by masked assailants, believed to be members of the Securitate, had spread through the city. The crowd was multi-ethnic, included people of different ages and, crucially, people with well-paid jobs who came with benefits in kind. Timisoara's communist mayor addressed the crowd and asked them to disperse, but this was unsuccessful and instead some members of the demonstration began chanting pro-democracy slogans.

As the protests continued on December 16, police used water cannons to disperse the crowds and then began using physical force, beating people who appeared to resist. As more people gathered, the communist mayor attempted to convince the core dissenters that he would reverse the decision to evict Pastor Tokes. By this point, however, the demonstrations had gained momentum, with people chanting for freedom, liberty, the fall of authoritarianism and, symbolically, Romania's former national anthem, which had been banned by the communists. On that day, many workers and students joined the movement against the dictator, which led to direct reprisals by both the police and the Securitate, who beat and killed dozens of demonstrators.

On 17 December, the regime's forces in Timisoara were armed with war munitions and ordered to engage in active combat with the demonstrators who had occupied the city's central squares while also attempting to break into the Communist Party headquarters. The protests now included a large proportion of workers from local factories, including higher-ups, who were chanting directly for the overthrow of the regime rather than for improved economic conditions, as had been the case in the very small strikes of the late 1970s and early 1980s. The first shots were fired at around 5pm near the Orthodox Cathedral, just outside the city centre, and one protester counted over 350 bodies on the ground.

Nicolae Ceausescu left the country on 18 December for a diplomatic visit to Iran and declared martial law in Timisoara. This ultimately did not reduce the scale of the protests, but increased their symbolism, as dissidents now carried national flags with the communist emblem cut out, sang patriotic songs that had been banned since 1947, and chanted slogans referring to the crimes of the communist regime, including the mass deportation of local people to the penal colony of Bărăgan, as well as the atrocities in the local detention center. Local protests by factory workers turned into a general strike, with the army killing dozens of workers who refused to return to work despite assurances of higher wages. As the death toll mounted, the Securitate was tasked with removing bodies from morgues and hospitals

and transporting them to Bucharest for disposal to hide the consequences of the violence. This dynamic continued the next day, but by this time martial law had completely failed and thousands of people gathered in the streets, even though the army and the Securitate were still using military equipment against them.

The next two days, 20 and 21 December, were the culmination of these local demonstrations. Nicolae Ceausescu gave a national speech condemning the events in Timisoara, which had begun to spread to neighbouring towns, and promised a series of economic reforms that would directly benefit the population and address what he saw as the discontent that was fuelling the dissent. Crowds in Bucharest, who had compulsorily gathered to watch the speech, began booing the dictator; similarly, dissidents in Timisoara, who had heard about the speech and the reactions from the live audience, continued their efforts against the local authorities. Tens of thousands of people had gathered throughout Timisoara, and the mayor, along with several army and Securitate generals, were tasked with negotiating with the dissidents.

On 21 December, trains full of workers from other parts of the country arrived in Timisoara in a last-ditch attempt by the regime to crush the protests. But when the workers saw that the demonstrators were not destroying the city, as their factory bosses had told them, they joined the rallies. In the afternoon, the dissidents organised themselves into the Romanian Democratic Front, with the aim of reforming the internal regime through democratisation. Seeing what was happening, a large number of the military laid down their arms and joined the demonstration. By the end of the day, the people of Timisoara declared themselves the first Romanian city free of communism. The Revolution continued throughout the country until Nicolae Ceausescu was executed on Christmas Day.

This chronology T provides enough background information to update our priors for the two hypotheses. Three elements are crucial. First, the protests were dominated by anti-communist messages rooted in democratic principles and the memory of historical repression, rather than by material matters or strategic considerations. Second, dissidents were unwilling to cooperate with the authorities, even when there might have been some personal benefit; this was true throughout the period, despite variations in the level of repression. Third, and most importantly, the size and scope of dissent increased over time, despite the rapid and significant increase in state-sponsored violence. The scope of the protest was monotonically increasing, not decreasing, in the level of repression. Even if the dissidents had an unprecedented threshold of tolerable violence, the increase in the size of the protests cannot be reconciled with the increase in violence. Taken together, these facts clearly point to a chronology that is more likely to occur in an environment where protesters are driven by norms and moral obligations rather than strategic considerations of the threat environ-

ment. In such cases, seeing people willing to sacrifice themselves in the name of shared anti-communist values could motivate others to follow their actions, as the early dissidents embodied the archetype of anti-communism to which community members aspired. Therefore, we conclude that $P(T|H_1) = 0.75$ and $P(T|H_1) = 0.25$, which means that we are three times more likely to observe this unfolding of events in a scenario operating by the logic of appropriateness, a conservative learning decision. As H_{LOA} and H_{POS} are mutually exclusive and exhaustive, we can compute:

$$\begin{aligned} P(T) &= P(T|H_1) \times P(H_1) + P(T|H_2) \times P(H_2) \\ &= 0.75 \times 0.5 + 0.25 \times 0.5 \\ &= 0.5 \end{aligned} \tag{2}$$

Based on these probabilities of the evidence, we compute the posteriors for hypotheses H_{LOA} and H_{POS} as:

$$\begin{aligned} P(H_1|T) &= \frac{P(T|H_1) \times P(H_1)}{P(T)} = \frac{0.75 \times 0.5}{0.5} = 0.75 \\ P(H_2|T) &= \frac{P(T|H_2) \times P(H_2)}{P(T)} = \frac{0.25 \times 0.5}{0.5} = 0.25 \end{aligned} \tag{3}$$

Following Fairfield and Charman (2017), we compute the weight of evidence (WoE) in favour of H_{LOA} compared to H_{POS}:

$$\begin{aligned} \text{WoE} &= 10 \times \log_{10}\left(\frac{P(H_1|E)/P(H_2|E)}{P(H_1)/P(H_2)}\right) \\ &= 10 \times \log_{10}\left(\frac{0.75/0.25}{0.5/0.5}\right) \\ &= 4.77 \end{aligned} \tag{4}$$

While this highlights that the logic of appropriateness seems more suitable to explain this episode of dissent based purely on the chronology of the Revolution, the WoE value is not sufficient to be confident in this conclusion. We therefore move on to the recovery of specific empirical evidence that could serve as a smoking gun in favour of H_{LOA}.

6.2 Further empirical evidence

The first step is to establish that H_{LOA} passes a hoop test, i.e. to demonstrate the presence of anti-communist norms of behaviour rooted in community values in Timisoara. The second step is to establish that H_{LOA} passes a smoking-gun test, i.e. to demonstrate that these

values were at stake for a significant proportion of dissidents during the events of December 1989.

The existence of anti-communist norms in Timisoara, shaped by communist violence and the Gulag experience in particular, is well documented by local historians (Costinaș, 2016; Neumann, 2007; Sitariu, 2004). From the outset, the Western part of Romania was one of the most resilient regions, as communism tried to stifle the inter-ethnic civic ethos that had been cultivated by the Habsburg Empire for over a century (Buzărnescu et al., 2004). Many citizens of German origin were sold by the communist regime to the Federal Republic of Germany for profit, while minority rights were suppressed to ensure a uniform attitude among citizens. This proved to be a failure over time, mainly due to the mobilising role of the remaining minority churches, which continued to foster communitarian values until the Revolution, which was triggered precisely by an act of repression against a Hungarian ethnic (Mioc, 2002).

The Gulag experience, especially the mass deportations from Timisoara and its surroundings to the Bărăgan plain, which served as a penal colony, increased the hostility of the population towards the regime (Marineasa et al., 1996; Spijavca, 2004). Some of those who returned after several years of this extrajudicial punishment spread details of the violence they had been subjected to, prompting a student movement that attempted a large-scale protest in support of the 1956 Hungarian Revolution (Sitariu, 2004). This was the only protest of its kind in 1956 and was immediately crushed by the authorities, with dozens of students sentenced to prison, many of them to be executed in special political prisons that were part of the Gulag network, including in Timisoara (Sitariu, 2004).

Notably, anti-communist values were not a direct emanation of the economic discontent of the population, as Timisoara and western Romania in general remained relatively developed (Jurma, 1994). Moreover, the anti-communist protests of 1956 took place against a backdrop of rapid growth and improved access to health services and education. However, these material factors did not prevent demonstrators from explicitly demanding "Communists to leave the country" (Sitariu, 2004, p.48).

These attitudes remained latent for most of the following decades, especially after Nicolae Ceausescu took over the communist part of Romania and moved from the Gulag model to one based on selective terror by the Securitate. However, as soon as the Soviet Union announced its policy of openness and transparency under Gorbachev, underground movements quickly emerged in Timisoara. Throughout 1988 and 1989, they painted numerous graffiti with anti-regime messages on the Communist Party headquarters, and anti-Ceausescu manifestos were distributed throughout the city (Costinaș, 2016). Such acts of symbolic dissent intensified as the citizens of Timisoara became aware of the revolutionary wave spreading through Central

and Eastern Europe and became an integral part of the repertoire of emerging resistance throughout 1989. The manifestos, whose existence and circulation became an undeniable reality in October-November 1989, focused less on the disastrous economic situation and more on the need for a new political regime based on the ideals of freedom, democracy and genuine popular sovereignty (Costinaș, 2016).

Any rival hypothesis, such as H_{POS} would require that anti-communist social norms would be less important in the decision-making process of potential dissidents than the cost-benefit calculations they might make. Pragmatically, this would mean that the economic grievances of Timisoara's citizens were sufficiently high compared to the costs of violent repression and that the chances of improved material conditions as a result of dissent were positive. This is unlikely to have been the case for at least three reasons.

First, the citizens of Timisoara had access to Western media in the form of Radio Free Europe and the Voice of America, along with Yugoslav television and radio. They learned how the small strikes of miners and workers in the 1970s and 1980s had been crushed by the Ceausescu government and, therefore, that any attempt to negotiate with the communist authorities for better working conditions or welfare provisions would be fruitless. If we assume that people are rational, then the citizens of Timisoara, who had comparatively more information about the environmental threat as well as its negotiating tactics, should not have been the ones to trigger a revolutionary movement in December 1989. The fact that they did so proves that they acted against rational calculations, not because of them.

Second, even if a rational calculation had triggered the events of 15 December, this would not explain why the protests continued into the following week. In the first few days of the demonstrations, it was clear that the chances of the regime being overthrown were close to zero, the violence of the army and the Securitate was increasing in scope and scale, and yet more and more people were joining the crowds protesting against the regime. From a rational point of view, this made no sense, as more information about the high-threat environment and low chances of success should reduce participation, not increase it.

Third, the protesters directly rejected any compromise based on higher wages, pensions or benefits in kind and instead drew up a list of demands on political issues, including freedom of speech, assembly and religion (Costinaș, 2016). This is not to argue that the dire economic situation was not a distal condition for the Revolution, but rather that the straw that broke the camel's back was a normative offence committed by the regime, one that had nothing to do with the individual welfare of the citizens of Timisoara and that in no way changed the political opportunity structure. One of the most famous cases illustrating this is the story of Daniel Gavra, a local railway worker who lost his leg fighting against the Securitate. Gavra said he "lost a leg, but lit the first candle" because he was responsible for distributing

candles for Laszlo Tokes' vigil on 16 December (Elliott, 1990). Gavra's story quickly spread among the demonstrators, who continued to light candles while he was in hospital - proof of how quickly the community was able to embed the narrative of communist violence and retaliate in a unified way.

These points demonstrate that the logic of consequences cannot adequately explain the 1989 Revolution in Timisoara. On the other hand, the local history of anti-communism, shaped by the experience and memory of political violence, lends credence to the theory that in high-threat environments, the logic of appropriateness can lead people to engage in dissent in response to repression. The centrality of anti-communist norms is further highlighted by some of the interviews cited earlier in this paper, as for some revolutionaries from Timisoara the main driver of political action was to fight the criminal regime for what it had done, not to engage in regime change, which was highly unlikely, especially in the early days of the Revolution. Recognition of the potential martyrdom was also essential in the final stages of the demonstration, when the military realised that the people were not ready to return to the status quo, and for the decision of workers from other parts of the country, brought in by the communist regime, to fight alongside the people of Timisoara (Mioc, 2002). The messages spread by the anti-communist crowd reflected the content of earlier manifestos spread in the city in the first months of 1989. Particularly from 20 December onwards, dissidents listed "oppression", "tyranny", "lack of freedom" and "lack of dignity" before "poverty", as part of their communication of demands (Costinaș, 2016, pp.3-4).

We jointly use these pieces of evidence E to construct these new posterior probabilities for the two hypotheses. Assuming, rather conservatively, that $P(E|H_1) = 0.8$, and $P(E|H_1) = 0.1$, we immediately compute $P(E) = 0.625$. Therefore:

$$\begin{aligned} P(H_1|T, E) &= 0.96 \\ P(H_2|T, E) &= 0.04 \end{aligned} \tag{5}$$

Now, the weight of evidence is 9.03 dB, which indicates a significant and conclusive shift in odds in favour of H_{LOA}.

7 Conclusions

Why do some people engage in dissent in response to political violence, even in high-threat environments? To answer this question, we have proposed an extension of current theory to include the logic of appropriateness as an underlying rationale for political action in authoritarian regimes. That is, we have argued that while dissent has traditionally been analysed by quantitative scholars through the lens of rational choice, with dissidents weighing the

likely costs of repression against the benefits of overthrowing or weakening an authoritarian regime, this cannot explain all cases of dissent. In particular, it fails to explain why people would engage in protest against a violent regime, especially when the chances of those protests succeeding in remedying underlying grievances of the population are low.

In such cases, we argue that we must consider dissent as the appropriate response of people who bear the burden of victimisation to violence. If people have been socialised by various community organisations to view the regime as an out-group responsible for harming the community, then any opportunity to express their identity through action against the regime will be a significant action that complements any potential rational calculations.

To test our theory, we looked at how people from Romanian localities that hosted Gulag facilities, such as extermination centres or penal colonies, had more people who were severely injured during the anti-communist Revolution of 1989. Our results, which show that the presence of a Gulag facility in a locality increases the number of serious injuries by two on average, are robust to multiple causal identification strategies and model specifications, and are not sensitive to either observable or unobservable characteristics of localities. Bayesian process tracing in a pathway case then provides evidence that our results are driven precisely by the causal mechanism we theorised, anchored in the logic of appropriateness.

The main limitation of our paper is that our findings stem from a single country case study (Pepinsky, 2019). However, we manage to move away from traditional frameworks for studying the long-term effects of repression and the repression-dissent nexus, such as the Soviet Union (and its successor states) and East Germany. Given that most of the theoretical consensus was built on evidence largely from these two crucial cases, their external validity would be compromised as long as the characteristics of the two settings were significantly different from the average. Nevertheless, we can confirm two important findings of the existing literature. First, political violence, especially indiscriminate violence, has long-lasting effects that are fueled by communities. Second, repression can induce dissent, so the choice of authoritarian regimes to rely primarily on violence to coerce loyalty is unlikely to be optimal in the long run.

References

Alexei Anisin. Comparing protest massacres. *Journal of Historical Sociology*, 32(2):258–274, 2019.

Laia Balcells. The consequences of victimization on political identities: Evidence from spain. *Politics & Society*, 40(3):311–347, 2012.

Michal Bauer, Christopher Blattman, Julie Chytilová, Joseph Henrich, Edward Miguel, and Tamar Mitts. Can war foster cooperation? *Journal of Economic Perspectives*, 30(3): 249–274, 2016.

Maria Angélica Bautista, Felipe González, Luis R Martínez, Pablo Muñoz, and Mounu Prem. The geography of repression and opposition to autocracy. *American Journal of Political Science*, 67(1):101–118, 2023.

Sascha O Becker and Luigi Pascali. Religion, division of labor, and conflict: Anti-semitism in germany over 600 years. *American Economic Review*, 109(5):1764–1804, 2019.

Sascha O Becker, Katrin Boeckh, Christa Hainz, and Ludger Woessmann. The empire is dead, long live the empire! long-run persistence of trust and corruption in the bureaucracy. *The Economic Journal*, 126(590):40–74, 2016.

Gheorghe Boldur-Lățescu. *The communist genocide in Romania*. Nova Publishers, 2005.

Giampaolo Bonomi, Nicola Gennaioli, and Guido Tabellini. Identity, beliefs, and political conflict. *The Quarterly Journal of Economics*, 136(4):2371–2411, 2021.

Adrian Brişcă. *Rezistenţa armată din Banat, 1945-1949*. Institutul Naţional pentru Studiul Totalitarismului, 2004.

Ștefan Buzărnescu, Sorin Pribac, Micea Neagu, and Ana Buzărnescu. *Un model de interculturalitate activă. Banatul românesc*. Editura De Vest, Timişoara, 2004.

Felipe Valencia Caicedo. Historical econometrics: instrumental variables and regression discontinuity designs. *The handbook of historical economics*, pages 179–211, 2021.

Ruxandra Cesereanu. *Gulagul în conștiința românească: memorialistica şi literatura închisorilor şi lagărelor comuniste: eseu de mentalitate*. Polirom, 2005.

Volha Charnysh and Evgeny Finkel. The death camp eldorado: political and economic effects of mass violence. *American political science review*, 111(4):801–818, 2017.

Volha Charnysh and Leonid Peisakhin. The role of communities in the transmission of political values: Evidence from forced population transfers. *British Journal of Political Science*, 52(1):238–258, 2022.

Iosif Costinaș. Preludii la 16 decembrie 1989. In Cercetare și Informare Publică despre Revoluţia din Decembrie 1989 Centrului Național de Documentare, editor, *Întrebări cu și fără răspuns*. 2016.

Christian Davenport. State repression and political order. *Annual Review of Political Science*, 10:1–23, 2007.

Alexander De Juan, Christian Gläßel, Felix Haass, and Adam Scharpf. The political effects of witnessing state atrocities: Evidence from the nazi death marches. *Comparative Political Studies*, page 00104140231178736, 2022.

Dennis Deletant. The securitate and the police state in romania: 1948–64. *Intelligence and National Security*, 8(4):1–25, 1993.

Dennis Deletant. The securitate and the police state in romania, 1964–89. *Intelligence and National Security*, 9(1):22–49, 1994.

Dennis Deletant. *Teroarea comunistă în România: Gheorghiu-Dej și statul polițienesc, 1948-1965*. Polirom, 2001.

Dennis Deletant. *Ceausescu and the Securitate: Coercion and dissent in Romania, 1965-1989*. Routledge, 2016.

Dennis Deletant. *Romania under communism: Paradox and degeneration*. Routledge, 2018.

Melissa Dell. The persistent effects of peru's mining mita. *Econometrica*, 78(6):1863–1903, 2010.

Scott W Desposato, Gang Wang, and Jason Y Wu. The long-term impact of mobilization and repression on political trust. *Comparative Political Studies*, 54(14):2447–2474, 2021.

Jeremiah E Dittmar. Information technology and economic change: the impact of the printing press. *The Quarterly Journal of Economics*, 126(3):1133–1172, 2011.

Florica Dobre, Florian Banu, Camelia Duică, Silviu B. Moldovan, Elis Neagoe, and Liviu Ţăranu. *Bande, bandiţi şi eroi. Grupurile de rezistenţă şi Securitatea (1948-1968)*. Editura Enciclopedică, 2003.

Stephanie Dornschneider-Elkink and Bruce Edmonds. Does non-violent repression have stronger dampening effects than state violence? insight from an emotion-based model of non-violent dissent. *Government and Opposition*, 59(1):249–271, 2024.

Jonathan Doucette. Parliamentary constraints and long-term development: Evidence from the duchy of württemberg. *American Journal of Political Science*, 2022.

Stéphane Dray, Pierre Legendre, and Pedro R Peres-Neto. Spatial modelling: a comprehensive framework for principal coordinate analysis of neighbour matrices (pcnm). *Ecological modelling*, 196(3-4):483–493, 2006.

Mark Elliott. László Tőkés, Timisoara and the Romanian Revolution. *Occasional Papers on Religion in Eastern Europe*, 10(5), 1990.

Abel Escribà-Folch. Repression, political threats, and survival under autocracy. *International Political Science Review*, 34(5):543–560, 2013.

Tasha Fairfield and Andrew Charman. A dialogue with the data: The bayesian foundations of iterative research in qualitative social science. *Perspectives on Politics*, 17(1):154–167, 2019.

Tasha Fairfield and Andrew E Charman. Explicit bayesian analysis for process tracing: Guidelines, opportunities, and caveats. *Political Analysis*, 25(3):363–380, 2017.

Tasha Fairfield and Andrew E Charman. *Social inquiry and Bayesian inference: Rethinking qualitative research*. Cambridge University Press, 2022.

Victor Frunza. *Istoria stalinismului în România*. 1990.

John Gerring. Is there a (viable) crucial-case method? *Comparative political studies*, 40(3): 231–253, 2007.

Johannes Gerschewski. The three pillars of stability: Legitimation, repression, and co-optation in autocratic regimes. In *Comparing autocracies in the early Twenty-first Century*, pages 58–83. Routledge, 2015.

Lukas Haffert. The long-term effects of oppression: Prussia, political catholicism, and the alternative für deutschland. *American Political Science Review*, 116(2):595–614, 2022.

Anselm Hager and Krzysztof Krakowski. Does state repression spark protests? evidence from secret police surveillance in communist poland. *American Political Science Review*, 116(2):564–579, 2022.

Jens Hainmueller. Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political analysis*, 20(1):25–46, 2012.

Jonathan Homola, Miguel M Pereira, and Margit Tavits. Legacies of the third reich: Concentration camps and out-group intolerance. *American Political Science Review*, 114(2): 573–590, 2020.

Institutul de Investigare a Crimelor Comunismului și Memoria Exilului Românesc. The romanian penitentiary system between 1945 and 1989. Report, Institutul de Investigare a Crimelor Comunismului și Memoria Exilului Românesc, 2013.

Cicerone Ioniţoiu. *Cartea de Aur a rezistenţei româneşti împotriva comunismului*. Editura Hrisovul, 1996.

Gheorghe Jurma. *Descoperirea Banatului*. Editura Timpul, Reşiţa, 1994.

Immanuel Kant. *Groundwork of the Metaphysics of Morals*. Hackett, 3rd edition, 1993. ISBN 0-87220-166-X.

Morgan Kelly. The standard errors of persistence. *CEPR Discussion Paper No. DP13783*, 2019.

Morgan Kelly. Understanding persistence. *CEPR Discussion Paper No. DP15246*, 2020.

M Tahir Kilavuz, Sharan Grewal, and Robert Kubinec. Ghosts of the black decade: How legacies of violence shaped algeria's hirak protests. *Journal of Peace Research*, 60(1):9–25, 2023.

Matthew A Kocher and Nuno P Monteiro. Lines of demarcation: Causation, design-based inference, and historical research. *Perspectives on Politics*, 14(4):952–975, 2016.

Timur Kuran. *Private truths, public lies: The social consequences of preference falsification*. Harvard University Press, 1997.

Charles Kurzman. Meaning-making in social movements. *Anthropological Quarterly*, 81(1): 5–15, 2008.

David S Lee, Justin McCrary, Marcelo J Moreira, and Jack Porter. Valid t-ratio inference for iv. *American Economic Review*, 112(10):3260–3290, 2022.

Noam Lupu and Leonid Peisakhin. The legacy of political violence across generations. *American Journal of Political Science*, 61(4):836–851, 2017.

James G March. *Primer on decision making: How decisions happen*. Simon and Schuster, 1994.

James G March and Johan P Olsen. Institutional perspectives on political institutions. *Governance*, 9(3):247–264, 1996.

James G March and Johan P Olsen. The institutional dynamics of international political orders. *International organization*, 52(4):943–969, 1998.

Viorel Marineasa, Daniel Vighi, and Valentin Sămănţă. *Deportarea în Bărăgan*. Editura Mirton, Timişoara, 1996.

Marcus Miller and Jennifer C Smith. In the shadow of the gulag: Worker discipline under stalin. *Journal of Comparative Economics*, 43(3):531–548, 2015.

Marius Mioc. *Revoluția, fără mistere. Începutul revoluției române. Cazul László Tőkés*. Almanahul Banatului, 2002.

Andrei Miroiu. Wiping out 'the bandits': Romanian counterinsurgency strategies in the early communist period1. *The Journal of Slavic Military Studies*, 23(4):666–691, 2010.

Victor Neumann. Civismul timişoarei în anii naţional-comunismului. *Memorial 1989. Buletin ştiinţific şi de informare*, (2), 2007.

Anja Neundorf and Grigore Pop-Eleches. Dictators and their subjects: Authoritarian attitudinal effects and legacies. *Comparative Political Studies*, 53(12):1839–1860, 2020.

Nathan Nunn. The long-term effects of africa's slave trades. *The Quarterly Journal of Economics*, 123(1):139–176, 2008.

Gheorghe Onişoru. *Mişcarea armată de rezistenţă anticomunistă din Romania. 1944-1962*. Editura Kullusys, 2003.

Emily Oster. Unobservable selection and coefficient stability: Theory and evidence. *Journal of Business & Economic Statistics*, 37(2):187–204, 2019.

Wendy Pearlman. Emotions and the microfoundations of the arab uprisings. *Perspectives on Politics*, 11(2):387–409, 2013.

Wendy Pearlman. Narratives of fear in syria. *Perspectives on Politics*, 14(1):21–37, 2016.

Wendy Pearlman. Moral identity and protest cascades in syria. *British Journal of Political Science*, 48(4):877–901, 2018.

Thomas B Pepinsky. The return of the single-country study. *Annual Review of Political Science*, 22:187–203, 2019.

Thomas B Pepinsky, Sara Wallace Goodman, and Conrad Ziller. Modeling spatial heterogeneity and historical persistence: Nazi concentration camps and contemporary intolerance. *American Political Science Review*, pages 1–10, 2023.

Dragoş Petrescu. *Entangled Revolutions: The Breakdown of the Communist Regimes in East-Central Europe*. Editura Enciclopedică, 2014.

Ruxandra Petrinca. Halfway between memory and history: Romanian gulag memoirs as a genre. *SLOVO Journal*, 29(1):2–30, 2017.

Oana Agnes Popescu-Sandu. *A vanishing act: Gulag narratives and their afterlife*. University of Illinois at Urbana-Champaign, 2009.

Arturas Rozenas and Yuri M Zhukov. Mass repression and political loyalty: Evidence from stalin's 'terror by hunger'. *American Political Science Review*, 113(2):569–583, 2019.

Arturas Rozenas, Sebastian Schutte, and Yuri Zhukov. The political legacy of violence: The long-term impact of stalin's repression in ukraine. *The Journal of Politics*, 79(4): 1147–1161, 2017.

Nicholas Sambanis and Moses Shayo. Social identification and ethnic conflict. *American Political Science Review*, 107(2):294–325, 2013.

Bianca Selejan-Gutan. *The Constitution of Romania: A contextual analysis*. Bloomsbury Publishing, 2016.

Moses Shayo. A model of social identity with an application to political economy: Nation, class, and redistribution. *American Political science review*, 103(2):147–174, 2009.

Mihaela Sitariu. *Oaza de libertate: Timisoara, 30 octombrie 1956*. Polirom, 2004.

Elena Spijavca. *Munci şi zile în Bărăgan*. Editura Fundaţiei Academia Civică, Bucureşti, 2004.

Lavinia Stan. Reckoning with the communist past in romania: A scorecard. *Europe-Asia Studies*, 65(1):127–146, 2013.

James H. Stock and Motohiro Yogo. Testing for weak instruments in linear iv regression. In Donald W.K. Andrews and James H. Stock, editors, *Identification and Inference in Econometric Models: Essays in Honor of Thomas J. Rothenberg*, chapter 5, pages 80–108. Cambridge University Press, 2005.

Vlad Surdea-Hernea. State violence and tax morale: Evidence from the anti-communist romanian revolution of 1989. *European Journal of Political Research*, 2023.

Charles Taylor. *Sources of the self: The making of the modern identity*. Harvard University Press, 1992.

Vladimir Tismaneanu. Understanding national stalinism: reflections on ceauşescu's socialism. *Communist and Post-Communist Studies*, 32(2):155–173, 1999.

Vladimir Tismaneanu. *Stalinism for all seasons: a political history of Romanian communism*, volume 11. Univ of California Press, 2003.

Vladimir Tismăneanu. Final report of the presidential commission for the study of the communist dictatorship in romania. Final report, Presidential Commission, Bucureşti, 2006.

Stefan Wager and Susan Athey. Estimation and inference of heterogeneous treatment effects using random forests. *Journal of the American Statistical Association*, 113(523):1228–1242, 2018.

Jacob Walden and Yuri M Zhukov. Historical legacies of political violence. In *Oxford Research Encyclopedia of Politics*. 2020.

Yuhua Wang. The political legacy of violence during china's cultural revolution. *British Journal of Political Science*, 51(2):463–487, 2021.

Lauren E Young. The psychology of state repression: Fear and dissent decisions in zimbabwe. *American Political Science Review*, 113(1):140–155, 2019.

Sherry Zaks. Relationships among rivals (rar): A framework for analyzing contending hypotheses in process tracing. *Political Analysis*, 25(3):344–362, 2017.

Qingyuan Zhao and Daniel Percival. Entropy balancing is doubly robust. *Journal of Causal Inference*, 5(1):20160010, 2016.

Yuri M Zhukov. Repression works (just not in moderation). *Comparative Political Studies*, page 00104140231152778, 2023.

Yuri M Zhukov and Roya Talibova. Stalin's terror and the long-term political effects of mass repression. *Journal of Peace Research*, 55(2):267–283, 2018.

A Additional evidence

Table A1: Grid cell clustered standard errors

DV: Number of severe injuries from a locality (Mean=0.605)						
	(1)	(2)	(3)	(4)	(5)	(6)
Gulag facility	5.626*	2.095**	1.954**	1.725**	1.984**	2.002***
	(0.053)	(0.012)	(0.026)	(0.050)	(0.017)	(¡0.001)
Covariates	✗	✓	✓	✗	✓	✓
Moran eigenvectors	✗	✗	✓	✓	✓	✓
Grid cell FEs	✗	✗	✗	✓	✓	✓
Entropy balancing	✗	✗	✓	✓	✓	✗
Spatial lags	✗	✗	✗	✗	✗	✓
R^2 Adj	0.024	0.320	0.345	0.346	0.303	-
N.	3181	3180	3180	3180	3180	3180

Notes: P-values for clustered standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Table A2: Continuous independent variable

DV: Number of severe injuries from a locality (Mean=0.605)						
	(1)	(2)	(3)	(4)	(5)	(6)
Gulag facility	0.028**	0.011**	0.030**	0.025*	0.023**	
	(0.034)	(0.034)	(0.014)	(0.051)	(0.024)	
Covariates	✗	✓	✓	✗	✓	✓
Moran eigenvectors	✗	✗	✓	✓	✓	✓
Grid cell FEs	✗	✗	✗	✓	✓	✓
Entropy balancing	✗	✗	✓	✓	✓	✗
Spatial lags	✗	✗	✗	✗	✗	✓
R^2 Adj	0.024	0.320	0.345	0.346	0.303	-
N.	3181	3180	3180	3180	3180	3180
Moran's I	-0.002	-0.007	-0.012	-0.017	-0.008	-
Oster's' δ	-	1.62	1.76	1.76	1.78	-

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Table A3: Binary dependent variable

DV: Number of severe injuries from a locality (Mean=0.605)						
	(1)	(2)	(3)	(4)	(5)	(6)
Gulag facility	0.259***	0.207***	0.199***	0.206***	0.209***	
	(¡0.001)	(¡0.001)	(¡0.001)	(¡0.001)	(¡0.001)	
Covariates	✗	✓	✓	✗	✓	✓
Moran eigenvectors	✗	✗	✓	✓	✓	✓
Grid cell FEs	✗	✗	✗	✓	✓	✓
Entropy balancing	✗	✗	✓	✓	✓	✗
Spatial lags	✗	✗	✗	✗	✗	✓

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Table A4: Binary dependent variable and continuous independent variable

DV: Number of severe injuries from a locality (Mean=0.605)						
	(1)	(2)	(3)	(4)	(5)	(6)
Gulag facility	0.001**	0.001**	0.002**	0.001	0.002**	
	(0.038)	(0.155)	(0.018)	(0.288)	(0.023)	
Covariates	✗	✓	✓	✗	✓	✓
Moran eigenvectors	✗	✗	✓	✓	✓	✓
Grid cell FEs	✗	✗	✗	✓	✓	✓
Entropy balancing	✗	✗	✓	✓	✓	✗
Spatial lags	✗	✗	✗	✗	✗	✓

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Table A5: Removing outliers in terms of Gulag facilities

DV: Number of severe injuries from a locality (Mean=0.605)						
	(1)	(2)	(3)	(4)	(5)	(6)
Gulag facility	5.627*	2.095***	1.953***	1.725**	1.984***	2.108***
	(0.052)	(0.002)	(0.007)	(0.021)	(0.006)	(¡0.001)
Covariates	✗	✓	✓	✗	✓	✓
Moran eigenvectors	✗	✗	✓	✓	✓	✓
Grid cell FEs	✗	✗	✗	✓	✓	✓
Entropy balancing	✗	✗	✓	✓	✓	✗
Spatial lags	✗	✗	✗	✗	✗	✓

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Table A6: Removing outliers in terms of Gulag injuries

DV: Number of severe injuries from a locality (Mean=0.605)						
	(1)	(2)	(3)	(4)	(5)	(6)
Gulag facility	0.937***	0.809***	0.733***	0.711***	0.787***	
	(¡0.001)	(¡0.001)	(¡0.001)	(¡0.001)	(¡0.001)	
Covariates	$\mathcal{X}$	✓	✓	$\mathcal{X}$	✓	✓
Moran eigenvectors	$\mathcal{X}$	$\mathcal{X}$	✓	✓	✓	✓
Grid cell FEs	$\mathcal{X}$	$\mathcal{X}$	$\mathcal{X}$	✓	✓	✓
Entropy balancing	$\mathcal{X}$	$\mathcal{X}$	✓	✓	✓	$\mathcal{X}$
Spatial lags	$\mathcal{X}$	$\mathcal{X}$	$\mathcal{X}$	$\mathcal{X}$	$\mathcal{X}$	✓

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Table A7: Closeness to a high-repression area, 3 facilities

DV: Number of severe injuries from a locality				
	(1)	(2)	(3)	(4)
Gulag facility	5.662**	2.074***		
	(0.053)	(0.002)		
Gulag facility (fitted)			6.52**	2.251**
			(0.046)	(0.042)
Closeness to high-repression area	-0.254	0.097	-0.274	0.091
	(0.460)	(0.361)	(0.433)	(0.404)
Covariates	$\mathcal{X}$	✓	$\mathcal{X}$	✓
N.	3181	3180	3180	3180

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Table A8: Closeness to a high-repression area, 2 facilities

DV: Number of severe injuries from a locality				
	(1)	(2)	(3)	(4)
Gulag facility	5.619**	2.069***		
	(0.053)	(0.002)		
Gulag facility (fitted)			6.082**	2.427**
			(0.022)	(0.032)
Closeness to high-repression area	-1.091	-0.489	-1.089	-0.489*
	(0.309)	(0.101)	(0.308)	(0.098)
Covariates	$\mathcal{X}$	✓	$\mathcal{X}$	✓
N.	3181	3180	3180	3180

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$

Table A9: Closeness to a high-repression area, 5 facilities

DV: Number of severe injuries from a locality				
	(1)	(2)	(3)	(4)
Gulag facility	5.649**	2.080***		
	(0.053)	(0.003)		
Gulag facility (fitted)			6.368**	2.278**
			(0.041)	(0.047)
Closeness to high-repression area	-0.174	0.105	-0.192	0.099
	(0.492)	(0.453)	(0.453)	(0.473)
Covariates	$\mathcal{X}$	✓	$\mathcal{X}$	✓
N.	3181	3180	3180	3180

Notes: P-values for Conley standard errors in brackets.
$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.01$