

# Ink and Ire: The Revolutionary Impact of Russian Literature

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## Abstract

Can the pen become the sword? This paper examines how Russian literature, disseminated through *Sovremennik* magazine – a literary journal founded by Alexander Pushkin, the “father of Russian literature” – catalyzed violent dissent against the Czarist regime. Functioning as a platform for political discourse in its later years, *Sovremennik* fueled revolutionary fervor against the Czar. Using the birthplaces of individuals who had chance encounters with Pushkin as an instrument for the magazine’s diffusion, we provide evidence of a causal relationship. The magazine served as a gateway for even more radical underground publications and cultivated a market for revolutionary ideas.

“I read everything printed in  
Sovremennik to the last line, more than  
once...”

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*Vladimir Lenin*

“Life imitates Art far more than Art  
imitates Life.”

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*Oscar Wilde*

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# 1. INTRODUCTION

Throughout history, the written word is believed to be a potent force for sparking political action and even violence, with iconic texts like *The Communist Manifesto* calling for a violent revolution. Similarly, Thomas Paine's *Common Sense* is believed to have fueled the American Revolution (Bailyn, 1967) and Harriet Beecher Stowe's novel *Uncle Tom's Cabin* is linked to the American Civil War (Parfait, 2016). Even today, many novels, essays, manifestos, and journalistic reports are written to inspire and mobilize political movements worldwide. While literature's impact is often considered self-evident, scholars have long offered a contrasting view, suggesting its influence is limited when compared to overarching historical, economic, and cultural forces (Anderson, 1983; Bourdieu, 1979; Williams, 1977). According to this view, literature serves primarily as a reflection of prevailing cultural and institutional transformations rather than a driving force behind them. This debate can be traced back to at least the contrasting perspectives of Weber (1922) and Marx (1859). For example, Weber (1922) emphasizes the agency of ideas, asserting that "ideas have, like switchmen, determined the tracks along which action has been pushed" (Weber (1922), p. 280).<sup>1</sup> In contrast, Marx's structuralist perspective posits that "the mode of production of material life conditions the social, political, and intellectual life" (Marx (1859), p. 21). While our findings do not dismiss the importance of structural forces, they emphasize the independent role of ideas in driving political change and even social unrest, with literature serving as a critical medium for their transmission. This raises a key question: can the written word serve as a weapon for political mobilization? Specifically, can the written word ignite political action and foster violent dissent?

In this paper, we offer evidence that literature can act as a platform for fostering political violence against the state. Our findings reveal that Russian literature – regarded as one of history's most significant literary achievements – played a role in sparking violent dissent against the Czar. We show that the dissemination of Russian literature throughout the Russian Empire unleashed a wave of left-wing political violence, ultimately contributing to the conditions that led to the Czar's assassination and setting off revolutionary actions

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<sup>1</sup>In Weber's metaphor, societal evolution is like trains on predetermined tracks, with "switchmen" redirecting train tracks at critical junctions. Ideas serve as these "switchmen," shaping the specific paths societal actions take.

against subsequent regimes for decades to come.

This phenomenon reflects a broader historical pattern, where cultural media have functioned as critical agents of political and social upheaval. Recent research by [Ang \(2023\)](#) provides evidence that a motion picture in the 20th-century United States acted as a catalyst for racial violence. At the same time, [Esposito, Rotesi, Saia, and Thoenig \(2023\)](#) show that cinema, despite its divisive content, can also contribute to national cohesion. Building on this recent scholarship, we extend the analysis to 19th-century Russia, where literature – then the primary cultural medium – served not only as a mirror reflecting societal tensions but also as an active driver of political action and even violence. As the remark attributed to Abraham Lincoln to Harriet Beecher Stowe suggests – “So you’re the little woman who wrote the book that made this great war!” – the written word has long been recognized as a potent force for stirring political and social upheaval ([Newman, 2015](#)). Our findings contribute to the long – standing debate on the power of the written word, highlighting its role – like that of cinema – in spreading ideas that incite violence.

To trace the impact of Russian literature, we focus on *Sovremennik*, a watershed publication established and championed by Alexander Pushkin, widely considered the Russian Empire’s literary titan ([Debreczeny, 1997](#)). Over three decades, *Sovremennik* transformed substantially, becoming a “thick” literary journal that not only published but also introduced literary icons like Leo Tolstoy, firmly positioning itself at the center of Russian literary and intellectual life. Celebrated for publishing the literary works of luminaries such as Dostoevsky and Gogol, the magazine initially was rooted in a tradition of literature as a purely artistic endeavor. However, following the sudden death of its founder, Pushkin, in a duel – a charismatic figure who had strongly pushed for its early spread – the magazine underwent a series of transformations, notably during the mid-19th century when it came under the editorial leadership of Nikolay Nekrasov and later Nikolay Chernyshevsky. Their tenure marked a decisive turn toward socially and politically radical discourse, exploring topics like the abolition of serfdom and political reforms. The magazine’s radical reputation attracted imperial scrutiny when Dmitry Karakozov, a 26-year-old revolutionary who attempted to assassinate Czar Alexander II, was reportedly found in possession of a copy of *Sovremennik*. Czar Alexander II reacted by issuing a decree banning *Sovremennik*.

This historical moment suggests why *Sovremennik* magazine is uniquely suited for exploring the connection between literature and political violence. Several other factors also make the context valuable. First is the significance of the magazine as a conduit for disseminating Russian literature across the Russian Empire. As one commentator put it, “Probably no other magazine in Russia influenced the country’s literary and social life as much as *Sovremennik* (“Contemporary”). Established by one of the most influential Russian poets, Alexander Pushkin, in 1836, it published the first works of Ivan Turgenev and Fyodor Dostoevsky. *Sovremennik* discovered Leo Tolstoy.” (Timofeychev, 2018). The writings in *Sovremennik* largely escaped outright bans and complete censorship due to their often subtle and carefully crafted critiques, effectively circumventing the censor boards. The magazine rapidly disseminated across the vast expanse of the Russian Empire, from the western reaches of modern-day Poland to the eastern shores of the Sea of Japan, serving as a nationwide platform for the diffusion of Russian revolutionary thought. Second, 19th-century magazine literature was a crucial platform for Russian writers to experiment with and shape novel literary forms, disseminating their work throughout the Russian Empire and connecting the intellectual elite of the period through a shared cultural discourse. Gogol, a pioneering literary figure of the era, encapsulated the significance of the medium as follows: “Magazine literature, this lively, fresh, talkative, sensitive literature, is as necessary for the sciences and the arts as communication routes are for the state, as fairs and exchanges are for merchants and trade.” Finally, the detailed subscription data at the *uzed* (county) level, covering the period when the magazine adopted its most revolutionary stance, offers a unique opportunity to assess the influence of Russian literature on violent dissent across the Russian Empire. The widespread reach of *Sovremennik* magazine, which extended to more than 800 counties across the Russian Empire, offers both breadth and a level of granularity seldom available in other research contexts.

This granular evaluation is made possible by anchoring our study in a large-scale data collection and digitization endeavor. We harness a constellation of historical datasets that depict the intellectual and political landscape of the Russian Empire, the majority of which are being utilized for the first time in economic and quantitative studies. First, we curate and consolidate a trove of literary texts published over the entire course of the magazine’s existence, from its inception in 1836 by Alexander Pushkin to its final issue, which was

banned by a decree of the Russian Czar in 1866. Using this corpus, we perform a sentiment analysis akin to a historical ‘Google Trends,’ mapping the intellectual currents of the 19th-century Russian intelligentsia during the Golden Age of Russian literature. Second, we map the spatial diffusion of the magazine by detailing subscriber data across the Russian Empire during a politically volatile time from 1859 to 1861 – the zenith of the great reform era – when the magazine adopted its most audacious political posture under the leadership of Chernyshevsky. To the best of our knowledge, we are the first to chart the geographical dissemination of 19th-century Russian literary culture through the prism of the written word in a systematic empirical analysis. Last, we derive our political violence measure from *The Books of Russian Sorrow*, employing the 14 volumes series to track incidents of left-wing revolutionary violence against the Czarist regime, thus allowing for examining how exposure to this literature influenced political violence.

A central challenge in isolating the causal effect of literature on political violence is that its dissemination often mirrors pre-existing audience preferences and socio-political conditions. This pattern – where cultural media reflects underlying audience characteristics – has been noted in various domains, including entertainment platforms (DellaVigna & La Ferrara, 2015), educational programming (La Ferrara, 2016), and cinema (Ang, 2023). Similarly, in our context, the diffusion of Russian literature through the *Sovremennik* magazine is likely endogenous: counties with higher educational attainment and cultural capital may have a larger base of subscribers to the magazine, who might also exhibit a greater propensity for political violence. Conversely, counties characterized by conservative, pro-Czar values or strong economic ties to the Czarist regime are likely to have lower subscription rates, reflecting a diminished likelihood for political violence. As a result, OLS estimates of the link between magazine subscriptions and political violence may be biased, as the underlying county characteristics could either exaggerate or dampen the observed relationship between literature exposure and political violence.

To mitigate these identification challenges, we digitize and compile detailed records of Alexander Pushkin’s interactions with the public, leveraging the extensive documentation provided in *Pushkin and His Entourage* by Chereiskii (1988). This collection, which systematically chronicles and authenticates approximately 2,500 encounters between Pushkin and individuals from diverse social backgrounds across the Russian Empire, offers a distinct

dataset to study Pushkin’s cultural and societal interactions in the period preceding the magazine’s pivot to political themes.<sup>2</sup> Despite Alexander Pushkin’s untimely death in a duel just 13 months after founding the magazine, his extensive social network across the Russian Empire offers a valuable lens through which to examine the early diffusion of *Sovremennik*. Pushkin’s letters reveal deliberate attempts to promote his magazine, showcasing how he actively engaged with the public to extend its reach.

However, even Pushkin’s interactions might be endogenous. For example, given his prominence, he may have engaged primarily with individuals closely aligned with the Czar’s regime and less inclined toward revolutionary action. To address concerns about the endogeneity of Pushkin’s meetings, we employ an instrumental variable strategy that leverages birthplaces of individuals who had one-off encounters with Pushkin as an instrument for the magazine’s geographic dissemination.<sup>3</sup> Our identification approach specifically compares the birthplace counties of individuals who had one-off encounters with Pushkin to counties without such interactions. These one-off interactions with Pushkin occurred well before the magazine transitioned to political activism under Chernyshevsky’s editorship.<sup>4</sup> Several pieces of evidence lend support to the validity of this instrument. First, the one-off encounters instrument is uncorrelated with a wide range of observed baseline county characteristics, including pre-treatment cultural, economic and political activity. Second, the instrument does not predict past political violence or unrest, further suggesting its exogeneity with respect to observed confounders. Turning to evaluating potential unobserved confounders, third, the instrument exhibits no statistical association

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<sup>2</sup>Given Pushkin’s profound influence on Russian cultural life and literature, both as a writer and a public figure, the collection *Pushkin and His Entourage* by Chereiskii (1988) represents a meticulous scholarly endeavor to document interactions involving Pushkin with the public, ranging from his formal meetings to casual exchanges, with individuals spanning the social spectrum—from prominent intellectual to ordinary citizens. By cross-referencing archival materials such as original letters, diaries, interviews with descendants, and government records, Chereiskii (1988) documents and authenticates about 2,500 encounters of the public with Pushkin. The collection, comprising textual accounts of Pushkin’s meetings, plays a role in preserving and providing context for the wide-ranging societal interactions that characterized his life and influence.

<sup>3</sup>By analyzing the detailed textual documentation accompanying each interaction, we can isolate the variation arising from Pushkin’s one-off chance encounters with the public. Our approach extracts and validates these one-off encounters from textual data using a state-of-the-art text annotation protocol with the GPT language model (Ash & Hansen, 2023). For a detailed discussion on the development and application of the classifier for Pushkin’s encounters, based on the GPT large language model, and its validation against alternative models such as (Lewis et al., 2019) and manual validation, see Appendix B. For recent discussions and applications of such methods, see Ash and Hansen (2023), Djourelouva, Durante, Motte, and Patacchini (2024), and Alabrese, Capozza, and Garg (2024).

<sup>4</sup>As an example, *Uncle Tom’s Cabin*, as referenced above in the quote by Abraham Lincoln as a catalyst for the American Civil War, was translated into Russian and published in *Sovremennik* during Chernyshevsky’s editorship.

with other historical cultural networks, such as those associated with Empress Catherine the Great, known for her patronage of the arts and establishing a cultural infrastructure across the Russian Empire. Fourth, to assess whether our instrument is confounded by the intensity of the transport network, we manually digitized a comprehensive 1850s road atlas of the Russian Empire, including within-county minor roads corresponding to the *Sovremennik* era. Leveraging this dataset, we constructed centrality and road density metrics as outlined by (Becker, Pfaff, Hsiao, & Rubin, 2023). Our analysis shows no statistically significant relationship between the instrument and county-level transport networks or overall road connectivity that might have independently influenced the magazine's diffusion.

The Instrumental Variable (IV) estimates indicate that a 10% increase in *Sovremennik* subscribers corresponds to a 7% rise in the likelihood of an attack against the Czar, relative to the sample mean. Our findings remain consistent across a variety of dependent and independent variable definitions and functional forms, and when we employ an alternative instrumental variable, we conduct randomization inference tests and adjust for spatial correlation.<sup>5</sup>

While data limitations prevent a comprehensive exploration of mechanisms, the evidence points to at least one prominent channel. Specifically, *Sovremennik* seems to have cultivated a market for revolutionary ideas by simultaneously increasing the supply of such ideas and cultivating a readership inclined toward increasingly subversive literature. This is supported by the emergence of banned radical publications in counties with higher *Sovremennik* subscriptions, suggesting the magazine acted as a gateway for even more radical thought. This environment also fostered the readership of other literature, such as Dostoevsky's magazine *A Writer's Diary*. Alongside fostering demand for literature, *Sovremennik* also appears to expand its supply. Geocoding the birthplaces of Russian writers over time and linking them to the magazine shows that its spread coincided with a rise of a new wave of writers, including those advocating violent political change. Using an

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<sup>5</sup>We also show that the Pushkin one-off meetings does not predict pre-existing economic, military, and cultural structures, including the number of major commercial centers, military establishments, and cultural or religious institutions such as taverns and monasteries. We also explicitly control for the pre-treatment density of writers, scientists, university professors, artists, politicians, musicians, and even 'prominent personalities' before the magazine's advent, sequentially adding these variables to our baseline regressions, and find that our results remain essentially unchanged. Overall, these identification checks suggest we are not conflating the influence of *Sovremennik* with omitted cultural, economic, geographic, or intellectual confounders.

event study design, we show that the magazine increased the probability of new writers being born by 30%, following the magazine's turn to political themes. This dual effect of *Sovremennik* in boosting both demand (readers) and supply (writers) for the written word likely intensified the influence of politically charged texts. Other potential mechanisms, such as expansion in literacy or increased demand for peaceful political change, do not appear to account for the observed results.<sup>6</sup>

This paper connects with several strands of literature. First and foremost, our paper relates to the rich and still flourishing literature on the causes and consequences of cultural change (Acemoglu & Robinson, 2012; Alesina & Giuliano, 2010; Blanc, 2023; Giuliano & Nunn, 2021; Gorodnichenko & Roland, 2017; Michalopoulos & Xue, 2021). Recently, Bisin and Verdier (2024) offers a novel framework in which cultural change is a gradual process driven by the accumulation of “civic capital” that incrementally feeds into institutional adaptation. Conversely, Acemoglu and Robinson (2024) proposes that cultural shifts can be more abrupt, with distinct “cultural configurations” emerging from a given “cultural set” that drive large-scale social transformation. Our evidence aligns more with this latter framework, showing that literature can push cultural configurations toward more extreme ideological positions and even catalyze political violence. By offering empirical evidence from a formative period in global literary history, we advance the scholarly agenda of integrating literature and economic studies (Bourguignon, Dixit, Leruth, & Platteau, 2024), demonstrating how Russian literature influenced state and society.

Second, our paper relates to the literature on mass media and conflict. We contribute to the existing body of literature by systematically exploring the impact of literature — an art form long thought to shape politics— on political violence. While previous research has primarily focused on the impact of mass media, such as radio and television, on conflict (Adena, Enikolopov, Petrova, Santarosa, & Zhuravskaya, 2015; DellaVigna, Enikolopov, Mironova, Petrova, & Zhuravskaya, 2014; Durante & Zhuravskaya, 2018; Enikolopov, Makarin, & Petrova, 2020; Voigtländer & Voth, 2024; Yanagizawa-Drott, 2014), as well as on the role of social networks (Bursztyn, Egorov, Enikolopov, & Petrova, 2019;

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<sup>6</sup>The violence against the Czar and his regime was directly carried out by members of the Russian intelligentsia, particularly the *raznochintsy*, non-noble educated elite. It is for this reason, the magazine spread is also uncorrelated with peasant unrest. This observation aligns with a broader literature suggesting that revolutions are often spearheaded and often even carried out by individuals with high levels of human capital (Jha & Wilkinson, 2023; Squicciarini & Voigtländer, 2015).

Satyanath, Voigtländer, & Voth, 2017), schooling (Cantoni, Chen, Yang, Yuchtman, & Zhang, 2017; Voigtländer & Voth, 2015), or film (Ang, 2023; Esposito et al., 2023), our research redirects attention to the role of literature, an often-neglected pre-mass media source of ideological dissemination, showing how literature can lead to violent political repercussions. Our research builds on this perspective by providing empirical evidence that Russian literature played a significant role in mobilizing dissent and political action. This underscores the power of written word as a form of media capable of swaying public sentiment and inciting political dissent.

Third, our study contributes to the foundational dialogue on the forces that shape pivotal moments in world history: structure or agency. This debate often pits proponents of deep structural forces – economic, political, and the like (Anderson, 1983; Bourdieu, 1979; Moore, 1993; Skocpol, 1979) – against those who emphasize the agency of individual actors or ideas (Mahoney & Snyder, 1999). While we acknowledge the power of structure, our research complements with a burgeoning body of empirical work that supports the notion that ideas have played a pivotal role in shaping the trajectories of nations. Joel Mokyr, for instance, contends that the Enlightenment ideas were a prerequisite for the Industrial Revolution (Mokyr, 2005, 2011). In a similar vein, subscribers to Diderot’s encyclopedia in France have been observed to be a crucial predictor of future growth (Squicciarini & Voigtländer, 2015).<sup>7</sup> We contribute to this literature by showing how a literary platform can foster some of history’s most significant political transformations, notably the collapse of the Czarist regime and the subsequent Communist Revolution.

Last, we contribute to the literature on culture and institutions within the context of Russian economic history (Zhuravskaya, Guriev, & Markevich, 2021). While the majority of this research concentrates on the Soviet era e.g., (Qian, Markevich, & Naumenko, 2025; Rozenas & Zhukov, 2019; Toews & Vézina, 2020), notable exceptions do examine the economic consequences of events such as the abolition of serfdom (Bugge & Nafziger, 2021; Markevich & Zhuravskaya, 2018). Our findings underscore the broader implications of cultural forces in shaping long-term institutional and political outcomes, particularly in the *relatively* understudied period of Russian history. Consequently, our analysis sheds

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<sup>7</sup>More recent empirical work has also emphasized the important role of ideas and educated elites driving political and economic change (Acemoglu & Robinson, 2024; Bai & Jia, 2016; Bai, Jia, & Wang, 2024; Jha & Wilkinson, 2023; Maloney & Valencia Caicedo, 2022).

light on the intellectual shifts within the Russian elite preceding the Stalinist era. The *Sovremennik* corpus serves as a historical “Google Trends,” mapping the intellectual currents that influenced 19th-century Russian intelligentsia.

The rest of the paper is organized as follows: Section 2 provides the historical context, focusing on the history of Russian literature, the central role of Alexander Pushkin, and the evolution of the magazine he founded. Section 3 introduces the data. Section 4 details our empirical methodology, followed by Section 5, which discusses the main findings and main identification checks. Section 6 discusses the mechanisms. Finally, Section 7 concludes by summarizing our results and their broader implications.

## 2. HISTORICAL BACKGROUND

**Golden Age of Russian Literature.** The Golden Age of Russian Literature, though brief, is distinguished by an extraordinary surge in literary output, with many of its most significant works produced during the lifetime of one of its most celebrated figures, Leo Tolstoy (1828-1910). As an integral part of the European Enlightenment tradition, Russian literature of this time was characterized not only by its formal and poetic inventiveness but also by its moral concerns and preoccupation with social injustice. Oftentimes, it served as an arena for public debates in a region plagued by stringent censorship, a legacy pre-dating the establishment of a well-defined literary tradition and even the Russian Empire itself. A pivotal moment in the history of Russian literature came with the publication of Radishchev’s “Journey from Saint Petersburg to Moscow.” in 1790. This book, a scathing critique of the Russian Empire, was described in its epigraph as “an enormous, disgusting, hundred-mawed and barking monster”. This tradition of literary critique laid the groundwork for Alexander Pushkin (1799-1837), who, often hailed as the father of the Golden Age, established a more subtle yet equally reflective literary tradition. This era gave birth to a plethora of world-renowned works, ranging from Pushkin’s “Eugene Onegin” to Tolstoy’s “War and Peace”. The political undertones of these works evolved from being allegorical in the first half of the century to reaching the polemical heights of Radishchev’s style in the latter half, particularly evident in the socially critical literature of the 1860s. Importantly, Pushkin was not only a pioneer in this literary mode but also a key promoter. Less than a year before his abrupt death, he founded one of Russia’s most important magazines,

Sovremennik.

In the decades following its inception, *Sovremennik* became a haven for writers who are now considered literary giants, including Dostoevsky, Tolstoy, and Gogol. However, it was in the early 1950s, under the editorial leadership of Nikolay Nekrasov and Nikolai Chernyshevsky, that the journal underwent its most transformative phase, embracing socialist ideas and championing political change. Under this new leadership, the journal became a platform for socio-political discourse, advocating for democratic and economic reforms and the abolition of serfdom. [Figure I](#) captures this evolution, showcasing a pronounced and sustained rise in terms associated with democracy, economic reforms, and the abolition of serfdom right around the change in the journal's editorship in 1854.

**“Sovremennik” and Magazine Literature.** The *Sovremennik* magazine, conceived by Alexander Pushkin as his grand project to disseminate Russian literature throughout the empire, was founded just 13 months prior to his death ([Izmailov, 1969](#)). As a result, only four issues were published during Pushkin's lifetime, with the fifth dedicated to his demise. Pushkin's letters indicate that he actively promoted the magazine among his acquaintances (see Panel B of [Table A4](#)).

The *Sovremennik* magazine was published in Saint Petersburg and distributed across the Russian Empire on a subscription basis, primarily among the educated elite, including the gentry, intellectuals, and progressive professionals. Initially issued quarterly from 1836 to 1843, it later shifted to a monthly publication schedule until its ban 30 years later. Following Pushkin's death in 1837, Petr Pletnev managed the publication until 1846. That year, the magazine was sold to Nikolay Nekrasov and Petr Panaev, ushering in a distinct and crucial shift—from discussions on fashion and art to vocal and even vigorous critiques of social injustices across the Empire. Nekrasov's poetry had a distinct social orientation, and under his editorship, the magazine drifted towards more radical positions.<sup>8</sup> This trend intensified when Nekrasov brought Nikolay Chernyshevsky, a key social utopian of the era and a member of the revolutionary-democratic movement, into the magazine's management. However, the impact of Chernyshevsky and *Sovremennik* appears to have extended

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<sup>8</sup>At this time, a second faction of liberal writers, including Turgenev and the early Leo Tolstoy, contributed to *Sovremennik*, coexisting with radical socialists. They addressed themes like injustice, often in a more literary style. However, by the 1860s, these liberal voices were increasingly overshadowed by more radical writers within the magazine, reflecting the growing influence of socialist and revolutionary ideas.

beyond literary circles, culminating in a fateful event in 1866: Dmitry Karakozov, then a young revolutionary, attempted to assassinate Czar Alexander II, an act that led to a swift ban on the magazine decreed by the Czar himself (Kucherov, 1953).

This event did not mark the end of *Sovremennik*, and its printed copies continued to be percolate years later. Vladimir Lenin, born four years after the magazine's closure, considered Chernyshevsky and his works published in *Sovremennik* as his key influences: "My favorite author was Chernyshevsky. I read everything printed in *Sovremennik* to the last line, more than once... He plowed me up more profoundly than anyone else." (Valentinov, 1968).

**Political violence in Russian Empire.** Political violence became a recurrent factor in the Russian Empire following the unsuccessful assassination attempt by Karakozov, which triggered a wave of conservative reaction. This reaction included, as noted earlier, the closure and severe censorship of critical press outlets. In response, the Czarist crackdown further fueled political violence from radical-left revolutionaries, who thrived on underground literature and revolutionary publications, with *Sovremennik* emerging as a prominent example following its ban (Offord, 1979). Inspired by the writings of Chernyshevsky, the Narodnik Movement gradually became disillusioned with peaceful methods of advocating for political change (Pipes, 1974). By 1879, this disillusionment led to the formation of a new populist party called 'Narodnaya Volya' (People's Will), which adopted violent attacks on the Czarist regime as a core strategy. They unleashed a wave of violent attacks against the Czarist regime. Fifteen years after Karakozov's failed assassination attempt, in 1881, members of Narodnaya Volya, aiming to incite revolution, succeeded in completing Karakozov's mission by assassinating Emperor Alexander II, marking a pivotal moment in the struggle between the revolutionaries and the Czar's regime (Ascher, 1988).

The political violence reached its zenith in the early 20th century, marked by the emergence of the combat organization of the Socialist-Revolutionary Party and the intensifying struggle between the secret police (Okhrana) and secret revolutionary political organizations. High-profile victims of bombings and shootings included Grand Duke Sergei Alexandrovich Romanov, several Ministers of Foreign Affairs and Interior Ministers, and thousands of lower-ranking government officials (Radkey, 1958). It is in this context that

one of the main sources used in this study, the *Book of Russian Sorrow*, becomes relevant. Published by the political antagonists of the left revolutionaries led by Vladimir Purishkevich – these 14 volumes, released serially from 1908 to 1914, catalog and describe the deaths of Czarist officials, detailing the place, date and circumstances of their killings, along with their professional positions – based largely on newspaper reports. The volumes aim to portray these officials as martyrs who died for the Czar and for their faith’, as well as fighting an internal enemy’. This book provides us with an extensive geolocated catalog of political violence, allowing for a detailed analysis of the patterns of revolutionary attacks across the Russian Empire. To contextualize this period of political unrest, [Figure II](#) presents a timeline of the key historical events relevant to the period under investigation, while [Figure III](#) offers examples of a *Sovremennik* magazine issue and an excerpt from the *Book of Russian Sorrow*.

### 3. DATA AND DESCRIPTIVE STATISTICS

**Sovremennik Corpus.** To trace the trajectory of discourse over the 30-year period of *Sovremennik*’s publication, we compiled and processed all texts from the magazine, constructing a comprehensive corpus for descriptive analysis. Our primary data grouping is by year of publication, resulting in a time series that captures the evolution of themes within the magazine. To categorize the content based on its proximity to various topics, we employ multiple text analysis methods. Our baseline approach combines dictionary-based techniques with word embedding methods, a methodology that has recently gained considerable traction in economic literature ([Ash & Hansen, 2023](#)). To summarize, our methodology involves the creation of several short, carefully curated dictionaries that encapsulate three socio-political themes: democratic institutions, economic structure, and the primary political issue of the time-serfdom and peasantry. To ensure the robustness of our corpus, we also validated it by examining the frequency of the most common functional words in the Russian language. As a subsequent step, we trained a *word2vec* model ([Mikolov, Chen, Corrado, & Dean, 2013](#)) on the *Sovremennik* text corpus. Utilizing this model, we expanded our initial dictionaries by incorporating additional terms with the highest cosine similarity to our original dictionaries while excluding any ambiguous terms. This process allowed us to refine our thematic categorization, ensuring a more ro-

bust analysis of the socio-political discourse within the magazine. [Table A1](#) in Appendix A illustrates two representative excerpts from *Sovremennik*: one from its early apolitical phase under the editorship of Pushkin and another from its later period of political activism. These excerpts highlight the significant shift in tone and content as the magazine evolved from Pushkin's time to the era of its most radical stance under Chernyshevsky's leadership. The first excerpt in [Table A1](#) is from Gogol's *The Nose*, which showcases absurdist satire through the surreal story of a nose escaping its owner. The second, from Chernyshevsky's *What Is to Be Done?*, profoundly influenced left-wing ideology, sparking debates on revolution and the status quo through the perspective of its central character, Vera. According to Lenin's own writings, this novel had a profound influence on his political consciousness ([Valentinov, 1968](#)).

**Revolutionary Pamphlets.** We argue that *Sovremennik* served as a gateway to more revolutionary banned underground literature. This literature frequently called for direct action and defiance against Czarist authorities. To provide an illustration, [Table A2](#) in Appendix A presents a representative excerpt from banned underground pamphlets, showcasing how these texts encouraged rebellion against the Czar and shaped the political discourse of the era. The analyzed pamphlets include materials actively used during the early mass strike movements and labor conflicts in Russian industry. These agitation materials, including leaflets and proclamations, were central to revolutionary efforts in late Imperial Russia. By directly targeting workers, they helped channel discontent into organized labor protests, fostering a more cohesive and enduring resistance against the Czarist regime.

**Data on *Sovremennik* Subscriptions.** Our primary explanatory variable details subscriber numbers at the county level, covering more than 800 counties throughout the Russian Empire. This crucial dataset originates from the *Sovremennik* authors, with Nikolai Chernyshevsky publishing these figures in several issues from 1860 to 1862. For the years 1859, 1860, and 1861, the aggregated annual subscriber counts were 5,500, 6,598, and 6,658, respectively. Chernyshevsky compiled this data from the Saint Petersburg post office's newspaper dispatch list. His objective, akin to our analysis but constrained by the statistical tools available at the time, was to evaluate regional 'reading enthusiasm' and the journalistic impact of the magazine. We geocoded the counties integrating it with the map

provided in [Essler and Markevich \(2020\)](#).

**Data on Political Violence.** We digitize and consolidate data on political violence from the *Book of Russian Sorrow*, a compilation of biographical articles about victims of radical left attacks. The victims listed include state officials of varying ranks, from the emperor to the lowest police ranks. An illustration of one such attack can be viewed in [Figure A1](#) in Appendix A. To extract and geolocate data on these attacks, we processed the texts from the collection, isolating paragraphs that describe acts of political violence. We then used the OpenAI API to extract detailed information on attacks, manually validating each attack and geocoding the locations. This novel dataset comprises over 600 attacks geographically distributed across the Russian Empire, providing a detailed view of political violence. Panel A of [Figure IV](#) presents a detailed mapping of the early 20th-century attacks. The spatial distribution in Panel B shows that these incidents cluster in areas with higher magazine circulation, suggesting a potential link between the spread of *Sovremennik* and the geographic diffusion of violent dissent. The corresponding temporal trends on attacks against the Czar are displayed in [Figure A2](#) (Appendix A).

**Data on Pushkin Encounters.** To construct our instrumental variable, we draw upon a unique academic monograph that meticulously documents approximately 2,500 of Pushkin's encounters. These interactions, derived from historical written records, encompass a wide range of connections, from prominent and well-documented relationships to brief and incidental meetings. The following examples illustrate some of these 'incidental meetings', which we call 'one-off' as recorded in the monograph:

- LARIN Ilya (Illarion) Ivanovich - a retired firework technician in Kishinev. Played the role of a buffoon in the society of officers, among whom Pushkin was also present.
- PETERSON - St. Petersburg piano tuner. Feb. 12. 1837 The guardianship paid him the poet's debt of 85 rubles.

We illustrate how these one-off encounters were identified by employing the GPT large language model, with results validated against alternative models (e.g., [Lewis et al. \(2019\)](#)) and corroborated through manual checks. The baseline classification scheme of these one-off birthplace encounters is presented in Panel A of [Table A4](#). The nature of such one-off

encounters is well approximated by the length of the article, which we use in our robustness checks. To extract geographical variation from this database and construct our instrumental variable, we adopted an approach inspired by the literature on early adopters instruments, such as in [Enikolopov et al. \(2020\)](#). We determined and geocoded the birthplace of each individual Pushkin met, where we used the birthplace of one-time Pushkin meets as an instrument. When in one of the few cases, it was impossible to determine birthplace, we use their place of residence. Thus, we were able to manually assign a county to almost all of the roughly 2,500 observations.<sup>9</sup> We refine this one-off instrument by applying stricter criteria that exclude potentially endogenous encounters. A stylized depiction of the construction process of this birthplace of Pushkin encounters instrument is shown in [Figure V](#).

**Data on the Road Network and Correspondence Network of Catherine II.** To conduct placebo tests examining whether Pushkin’s one-off meetings simply reflect pre-existing historical cultural networks or a country’s transport connectivity, we collect, consolidate, and digitize two novel datasets.

The first dataset involves a significant effort to digitize the extensive road network of the Russian Empire. This was achieved using the Postal Map of the European Part of the Russian Empire and the Caucasus Region (Saint Petersburg, 1852), a nine-sheet atlas created by Captain Tyutikov of the Corps of Topographers. This map, engraved by personnel of the Military-Topographic Depot, depicts the road network during the time of *Sovremennik* (1850s). We manually digitized the atlas to create a detailed shapefile, capturing the entire road network, including *uezd* (minor) roads, which offers a representation of the Empire’s connectivity. [Figure A3](#) provides an overview: Panel A shows a segment of the raw road network as presented in the original atlas, while Panel B displays the digitized version.

The second dataset documents the extensive network of correspondence of Catherine II, one of the key figures in the European Enlightenment. Collected by digital historians in [Kahn and Rubin-Detlev \(2021\)](#), it includes detailed spatial and relational information

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<sup>9</sup>The geography of Pushkin’s personal encounters was widespread and largely shaped by his diverse social groups and the extensive people he met across the Russian Empire, often moving from place to place forced by exile, during his relatively short and eventful life. As [Lotman \(1995\)](#) notes, “Pushkin’s ability to adapt, moving from one circle to another, and seeking communication with completely different people” was a defining trait of his persona. ”

on her epistolary exchanges. Catherine II corresponded actively with prominent thinkers and leaders of the time, including Voltaire, Diderot, and Frederick the Great, providing regional variation for placebo tests as the ego-network of another prominent individual besides Pushkin.

**Wikimedia Data.** We utilized the [Wikidata](#) project to extract information on all known writers born in the Russian Empire from 1700 onwards. Data retrieval was performed using a specialized query language developed by Wikimedia. This process allowed us to collect details such as the author's name, birthplace, birth and death years, and the geographical coordinates of their birthplace. Given Wikidata's extensive overlap with Wikipedia, incorporating both the full range of Wikipedia's information and additional details, this method effectively captures the geographical distribution of writers whose cultural impact is significant enough to warrant their inclusion in the encyclopedia.

In our second use of Wikidata, we have developed a detailed dataset of elites and notable figures, mapped at a highly granular geographic level. This dataset includes information on more than 20,000 individuals born from 1,700 onward. The dataset covers a broad spectrum of professions, with writers being the most prevalent, followed by politicians, painters, poets, university teachers, actors, translators, journalists, military personnel, historians, scientists, and composers. In total, it encompasses over 1,000 distinct professions. We categorize these professions into broader groups and use them as controls to assess the robustness of our findings.

**Descriptive Statistics.** [Table A3](#) in Appendix A presents descriptive statistics for our outcome variables and the main variables of interest. The first two rows display the attacks at the extensive margin (baseline) and intensive margin, which we use in our robustness checks. On average, about 30% of Russian Empire counties experienced at least one attack, with an average of about one attack per county and a standard deviation of approximately 2 attacks. [Table A3](#) reports the one-off encounter instrumental variable, which identifies the birth counties of individuals who had one-off encounters with Pushkin. On average, there is approximately one one-off encounter with an individual per county, with significant variability across counties. The summary statistics for the additional variables, encompassing control variables and those pertinent to the analysis of mechanisms, are

detailed in the other panels of [Table A3](#). Beyond the broad geographic distribution of Pushkin’s encounters, Panel A of [Table A4](#) reveals the substantial diversity among the people he interacted with. To effectively capture this diversity, we employ a novel GPT-based text annotation approach, overcoming the traditional challenges of text analysis as outlined in [Ash and Hansen \(2023\)](#), and apply it to all encounters recorded in [Chereiskii \(1988\)](#).<sup>10</sup> We uncover significant variation in Pushkin’s interactions, ranging from encounters with peasants to nobles and spanning a broad spectrum of social and political figures, including loyalists, revolutionaries, liberals, and conservatives. Not only did Pushkin engage with a diverse range of individuals, but there is also qualitative evidence indicating that he actively promoted the magazine during these interactions. Panel B of [Table A4](#) details instances where he directly advocated for the *Sovremennik* magazine in the course of these encounters. Building on this foundation, we next introduce our empirical methodology.

**Text Analysis of *Sovremennik*.** These quantitative findings on the shift in revolutionary discourse are mirrored in our descriptive analysis of the *Sovremennik* magazine corpus, which covers the entirety of the magazine’s lifespan. As depicted in [Figure I](#) (Panels A and B), we trace the evolution of its content over several decades, revealing trends that align with our empirical results. We make several key observations regarding these trends. First, Pushkin’s direct influence on the magazine was minimal, as his death in 1837, shortly after its founding, prevented him from shaping its content. Our instrument-based on Pushkin’s circle or brief interactions-cannot directly account for the link between subscriptions in the late 1950s, when the magazine became highly political, and the associated rise in political violence. Second, as shown in [Figure I](#), the magazine’s content in the years following Pushkin’s death in the 1840s was notably less political, suggesting that early subscribers that may be linked to Pushkin circle were unlikely to be predominantly from regions with heightened anti-government sentiment.

Third, as we approach the pivotal period surrounding the abolition of serfdom in 1861-when our key explanatory variable, *Sovremennik* subscriptions, is observed-there is a sharp

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<sup>10</sup>Specifically, we employed GPT-4o-mini for text annotation (similar to [Djourelouva et al. \(2024\)](#); [Alabrese et al. \(2024\)](#)), but we also validated the classification with alternative methods such as the BART classifier ([Lewis et al. \(2019\)](#)) and further checked the robustness with a CBOW model pre-trained on Russian Wikipedia. Manual validation further confirmed the reliability of our GPT classification. For more details on the GPT classification, see Appendix B.

shift in the magazine’s political and social discourse. During this time, topics such as democracy, workers’ rights, and economic issues increasingly take center stage, reflecting the magazine’s growing focus on social and political matters (Figure I). This period coincides with the era from which our subscriber data originates, suggesting that the magazine’s potential role in influencing political violence could be attributed to its increasingly political content, particularly its shift towards advocating for political change. This also aligns with the magazine’s potential role in fostering the uptake of underground publications advocating for socialist revolutionary change, as observed earlier.

#### 4. EMPIRICAL METHODOLOGY

To begin tracing the effect of *Sovremennik* on political violence, we estimate the equation of the following form:

$$\text{Political Violence}_{1900-1914,i} = \beta_1 \text{Sovremennik Exposure}_{1859-1861,i} + \beta_2 \mathbf{X}_i + \gamma_s + \epsilon_i \quad (1)$$

where  $\text{Political Violence}_{1900-1914,i}$  is a binary variable equal to 1 if there is an attack against the Czarist regime in the county and 0 otherwise in the baseline specification. Alternate definitions of the dependent variable, such as the number of attacks at the intensive margin, are performed as part of robustness checks.  $i$  indexes counties and  $s$  represents states or provinces.

$\text{Sovremennik}_{1859-1861,i}$  in baseline regressions is the logarithm of the number of *Sovremennik* subscribers plus 0.1. While this functional form is presented to illustrate the results, our conclusions remain robust across a range of alternative specifications. This includes transformations of the dependent and independent variables such as logarithmic transformations with a plus 1 adjustment and inverse hyperbolic sine (IHS) transformations. We also apply Poisson regressions, following (Chen & Roth, 2024), to derive percentage interpretations and estimate separate effects for intensive and extensive margins as suggested in recent work.

The vector  $\mathbf{X}_i$  includes control variables such as the distance to Moscow, the distance from Saint Petersburg, linear controls for latitude and longitude, the share of serfs before abolition, the logarithm of population density, and the logarithm of the number of writers

born before *Sovremennik* was established. Standard errors are clustered at the more conservative province (*Gubernia*) level, although the results only gain in precision when we cluster at the level of identifying variation at the county (*uezd*) level or when employing Conley spatially correlated standard errors to account for potential cross-county dependencies.  $\gamma_s$  are state or province fixed effects.

An OLS estimation of  $\beta_1$  is likely to give biased estimates. This is because unobserved characteristics of the counties, such as social preferences, might drive individuals to both subscribe to the *Sovremennik* magazine and participate in acts of political violence. For example, counties with a higher proportion of the population receiving patronage from the Czarist regime may be both less inclined to subscribe to the magazine and less likely to rebel against the Czar.<sup>11</sup>

To speak to these endogeneity concerns, we draw upon the detailed record of Alexander Pushkin’s interactions with the public, comprising about 2,500 encounters documented in Chereiskii (1988), and utilize these to construct an instrument for the spread of *Sovremennik*. The use of Pushkin’s meetings to construct the instrumental variable is particularly compelling, given his travel through politically significant and insignificant counties and areas of varying wealth. Crucially, Pushkin’s premature death in a duel, occurring almost two decades prior to the magazine’s shift toward political activism, reduces the likelihood that the birthplaces of individuals from these interactions are associated with unobserved variables linked to political violence (Evdokimova, 1999). Still, we rely on the birthplaces of one-off meetings that are most likely to represent chance interactions between individuals and Pushkin. We further impose an even stricter criterion by excluding one-off encounters that may be considered endogenous, such as those involving relatives or politically significant individuals like revolutionaries (e.g., the Decembrists) or liberals. Figure V visualizes our instrument.

Using the birthplaces of individuals who had one-off meetings with Pushkin as an instrument for the diffusion of *Sovremennik* during its most politically charged phase (1859–1861)

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<sup>11</sup>The four-decade time-lag between the exposure variable and the outcome variable, while shorter than that in many seminal studies, still raises concerns about “time-varying persistence” giving rise to potential endogeneity (Fouka, 2020). However, we demonstrate that our results are robust to different exposure years. Given that we have three years of *Sovremennik* subscriptions available, we use each year separately and their average in the baseline. The results remain consistent with the baseline findings that uses average exposure across the three years. We also provide an instrumental variable ‘solution’ to mitigate this issue, which we describe next.

yields the following first-stage equation:

$$\begin{aligned} \text{Sovremennik Exposure}_{1859-1861,i} = & \gamma_1 \text{One-Off Pushkin Encounters}_{1799-1837,i} \\ & + \gamma_2 \mathbf{X}_i + \delta_s + \varepsilon_i \end{aligned} \quad (2)$$

where One-Off Pushkin Encounters refer to the birthplaces of individuals whom Pushkin met only once, excluding potentially endogenous meetings. [Figure V](#) visually illustrates how the One-Off birthplace instrument was constructed.

For our instrument to provide an unbiased estimate of the causal effect, it must satisfy both relevance and exogeneity. The relevance condition is relatively straightforward: as the founder of the magazine, Pushkin is well-documented to have actively promoted *Sovremennik* during his encounters. A few illustrative examples are detailed in [Table A4](#), Panel B of the Appendix. The first-stage results, particularly the F-statistics, suggest the instrument's relevance, exceeding the conventional rule-of-thumb threshold of 10 ([Stock & Yogo, 2005](#)). Recent work recommends higher thresholds, such as 15, to address finite-sample biases ([Andrews, Stock, & Sun, 2019](#)). As can be seen from our [Table I](#), Panel B, our instrument exceeds both these conventional thresholds. The strength of this first-stage relationship is most clearly seen in [Figure A5](#) of Appendix A, where the scatter plot highlights the strong positive association between Pushkin's one-off encounters and magazine subscribers.

**Exogeneity.** For the IV strategy to provide a valid causal estimate of the impact of *Sovremennik* magazine on political violence, Pushkin's one-off meetings must also satisfy the exogeneity assumption. The key concern is whether the one-off meetings instrument is uncorrelated with omitted factors linked to local-level support for political violence. While direct testing of the exogeneity assumption is not possible, several pieces of evidence support the validity of our instrument. First, the one-off encounters instrument does not show any significant correlation with baseline county characteristics, such as pre-treatment levels of taxes on peasants, the proportion of serfs, the density of schools, fraction of minority populations, and number of cultural sites like monasteries and taverns. The results are detailed in [Figure VI](#). This suggests that the instrument is likely to be orthogonal to observable factors that might influence political violence. Second, the instrument does not predict historical patterns of political violence, as reported in [Table A5](#) of Appendix A.

This indicates that the birthplace counties of individuals involved in Pushkin’s one-off meetings were not predisposed to violence before the founding of the magazine.

While these findings support exogeneity with respect to observable measures, concerns about unobserved confounders remain. For instance, one-off encounters with Pushkin could inadvertently capture unobserved historical cultural or geographic networks. To address these concerns, we conduct two placebo tests.

1. **Cultural Networks:** The instrument exhibits no significant correlation with other historical cultural networks, such as those linked to Empress Catherine the Great, celebrated for her patronage of the arts and her far-reaching cultural legacy, including the establishment of the Hermitage Museum. These results, presented in Column (1), Panel A of [Table II](#), indicate that the variation driven by Pushkin’s one-off encounters is not conflated with pre-existing cultural networks. Furthermore, Panel B of [Table II](#) demonstrates that the One-Off instrument is uncorrelated with pre-treatment cultural hubs, including density of taverns and monasteries, places of cultural and religious gatherings (Columns 1 and 2).

2. **Geographic Infrastructure:** The one-off encounters also do not predict transport networks or overall county connectivity, which could independently facilitate the magazine’s geographic spread. Using the network centrality measure proposed by ([Becker et al., 2023](#)) and constructing a novel dataset on roads in the Russian Empire, we find no significant correlation between this metric and the one-off encounter instrument. As shown in Column (2), Panel A of [Table II](#), the results suggest that pre-existing infrastructure does not confound the instrument. Similarly, pre-treatment factors, including factories and military installations, are uncorrelated with the one-off instrument, as detailed in Panel B of [Table II](#), Columns (3) and (4). Collectively, these findings support the exogeneity of the one-off encounters instrument, mitigating concerns about potential bias arising from observed and unobserved confounders.

## 5. MAIN RESULTS

**Impact on Political Violence.** We commence presenting our main results by reporting the Ordinary Least Squares (OLS) estimates of Equation (1). The OLS estimates, reported in [Table I](#), Panel A, Columns (1) and (2), reveal a statistically significant relationship be-

tween *Sovremennik* subscriptions and political violence. Notably, this effect is evident at both the extensive margin, as shown in Columns (1) and (2), and the intensive margin, with the number of attacks detailed in [Table I](#), Panel A, Columns (3) and (4). However, these OLS estimates are likely susceptible to potential endogeneity: the propensity for *Sovremennik* magazine subscriptions could be influenced by preexisting county characteristics. For instance, counties with stronger pre-existing governmental control may be less inclined to subscribe to *Sovremennik* and also less likely to experience political violence, which could introduce a negative bias in these OLS estimates.

Although the incorporation of an extensive array of controls—including the pre-treatment density of writers, geographical proximities to Moscow and Saint Petersburg, as well as province-fixed effects mitigates these concerns, the potential for unobserved bias persists. This may be due to the potential non-random distribution of *Sovremennik* magazine across the counties of the Russian Empire, where counties with lower subscription rates may have also been less likely to experience political violence. To address endogeneity concerns, we employ the birthplaces of Pushkin’s one-off meetings as an instrument, estimating two-stage least squares (2SLS) results reported in Panel B of [Table I](#). The extensive margin results reveal that a 10% increase in *Sovremennik* subscribers corresponds to a 0.019 percentage point rise in the probability of an attack against the Czarist regime, representing a 7% increase relative to the mean probability of such attacks. On the intensive margin, the results indicate that the same 10% increase in *Sovremennik* subscriptions is linked to 0.15 additional attacks per county.

Earlier, Column (1), Panel A of [Table II](#), showed that variation driven by birthplaces of Pushkin’s One-Off encounters is independent of pre-existing cultural networks such as that of Empress Catherine the Great or overall level of infrastructure in the county. Panel B of [Table II](#) further demonstrates no significant correlation with pre-treatment cultural hubs, such as taverns and monasteries (Columns 1 and 2), or key infrastructure like factories and military installations (Columns 3 and 4). Our main results hold even when controlling for Catherine’s network in the 2SLS regressions, as shown in Column (3), Panel A of [Table II](#), or when accounting for overall road density in the county, reported in Column (4), Panel A of [Table II](#), which we construct by digitizing the entire road network within the Russian Empire.

The 2SLS estimates are more than twice the magnitude of the OLS estimates. This discrepancy likely reflects the combined effects of measurement error and selection bias. Counties with stronger governmental control or pro-Czarist sentiment may have been systematically less likely to subscribe to *Sovremennik* and less prone to engage in political violence, introducing a negative bias into the OLS estimates. The limited availability of subscription data, restricted to 1859–1861, may exacerbate measurement error and selection in OLS estimations. Specifically, the absence of subscribers who unsubscribed prior to or subscribed after this period likely increases the prevalence of false negatives—counties affected by *Sovremennik* but misclassified as untreated. In contrast, false positives, such as counties mistakenly classified as treated, are unlikely given the reliability of subscription lists. Under the framework of [Angrist and Rubin \(1996\)](#), such an imbalance between false negatives and false positives biases OLS estimates toward zero. Consistent with [Black, Berger, and Scott \(2000\)](#), who argue that OLS and IV estimates can serve as bounds for the true parameter, we find that both estimators remain positive and significant in all specifications. This suggests that the true coefficient is greater than zero.

**Robustness Checks.** In the Appendix A, we report a large number of robustness checks that validate our main results, which we briefly summarize here. First, as alluded to earlier we assess whether our results are sensitive to the definition of the dependent variable, which in our primary specification is whether there was at least one politically violent attack in the county. Consistent with recent literature advocating for robustness checks that differentiate between extensive and intensive margin effects, and to verify the stability of results using Poisson regressions, we demonstrate in [Table A6](#) of Appendix A that our results are robust to applying recent approaches suggested in [Chen and Roth \(2024\)](#). Our results hold consistently across both the extensive and intensive margins, and remain robust to alternative functional forms of the dependent variable.

Second, following the approach of [Ang \(2023\)](#), who used the presence of a theater in a state prior to the release of movie *The Birth of a Nation* to instrument its diffusion, we construct an alternative instrument for the spread of *Sovremennik* by utilizing the presence of a library in a county before its shift to political themes. Libraries served as key initial venues where the magazine was read, making pre-treatment libraries analogous to theaters in the diffusion of movie *The Birth of a Nation*. The corresponding results are reported

in [Table A7](#) in Appendix A. The 2SLS estimates are very close to what we estimated using the Pushkin One-off meetings instrument, suggesting a strong relationship between *Sovremennik* subscriptions and political violence against the Czar.<sup>12</sup>

Third, we conduct randomization inference tests by scrambling county-level *Sovremennik* subscription data to create a null distribution for the relationship between *Sovremennik* subscriptions and political violence against the Czar. As illustrated in [Figure A6](#) in the Appendix, the observed results fall in the extreme tail of the null distribution, suggesting that our findings are unlikely to result from random chance.

Fourth, to further validate our findings beyond the balance tests, we compiled and digitized a novel dataset on elite occupations, including individuals such as professors, scientists, and musicians born before the magazine's inception. This dataset helps address concerns about latent factors that might jointly determine creative capital and political violence. To mitigate this concern, we sequentially control for the *pre-treatment* number of politicians, soldiers, scientists, university professors, artisans, and musicians in each county. As reported in [Table A8](#) of Appendix A, the results remain consistent with our main findings. Fifth, the four-decade gap between the exposure and outcome variables introduces potential endogeneity concerns related to time-varying persistence ([Fouka, 2020](#)). To mitigate this, in addition to our instrumental variable strategy, we also utilize different exposure years to find that our results are not sensitive to the specific year of *Sovremennik* subscriptions for which we have data. We have subscriber data for the years 1859, 1860, and 1861, during which the magazine reached its most radical stance. In our baseline regressions, we average these years; however, as shown in [Table A9](#) of Appendix A, our results continue to hold across different specifications, regardless of the specific year of *Sovremennik* subscriptions chosen. Sixth, we assess the robustness of our results by adjusting the available time frame of the dependent variable. When we limit the analysis to the first or second half of violent attacks recorded in the *Book of Sorrow* or exclude peak attack days, our results remain similar. This analysis, presented in [Table A10](#) of Appendix A, shows no noticeable change with respect to our baseline. Likewise, sequentially dropping potentially outlier provinces one at a time yields similar results, as depicted in [Figure A7](#).

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<sup>12</sup>The near doubling of the 2SLS coefficient estimate compared to OLS may stem from measurement error and selection bias. For instance, pre-treatment libraries might better capture the actual diffusion of *Sovremennik* than the available subscription data.

The coefficient estimates remain similar, regardless of which province is excluded from our regression.

Lastly, we speak to the possibility that spatial correlations among counties might explain our results. As a baseline, we conservatively cluster standard errors at the province level (rather than the county level, which would align with the variation in our instrument). To further account for spatial dependencies, we employ Conley standard errors (Appendix Table A11) and vary the geographic scale of fixed effects. The results remain robust across these specifications, holding consistently whether we use smaller or larger regions as fixed effects (Appendix Table A12). Taken together, these robustness checks reinforce the validity of our main results.

## 6. MECHANISMS

**Market for Revolutionary Ideas.** Although data limitations preclude an exhaustive analysis of potential mechanisms, the evidence identifies at least one prominent pathway underlying the results. *Sovremennik* seems to have created a market for revolutionary ideas by simultaneously expanding their availability (supply) and cultivating an audience predisposed to engage with progressively radical literature (demand). Specifically, we find that *Sovremennik* subscriptions are associated with fostering a readership increasingly demanding revolutionary literature. Counties with higher *Sovremennik* subscriptions exhibit a greater presence of left-wing underground revolutionary publications. Unlike *Sovremennik*, which advocated for social and political change through subtler rhetoric that sometimes implied violence, these banned underground publications openly called for rebellion. As reported in Table III, the 2SLS estimates imply that a 10% increase in *Sovremennik* subscriptions is associated with a 3.34 percentage points increase in the probability of a county hosting a revolutionary publication. This effect represents a substantial 25% increase relative to the mean probability (13%) of having such a revolutionary publication.<sup>13</sup> These findings suggest that *Sovremennik* might have played a role in increasing political violence by promoting revolutionary underground publications that advocated for violent

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<sup>13</sup>Once again, the IV estimates are substantially larger than the OLS estimates. This divergence likely reflects OLS bias stemming from measurement error and selection. Limited subscription data for certain years amplifies false negatives, misclassifying affected counties as untreated, a bias that our One-Off instrument helps mitigate.

political change. The influence of *Sovremennik* may have shaped the broader literary environment beyond driving demand for banned radical literature. Evidence in Panel A of [Table IV](#) indicates that counties with higher *Sovremennik* subscriptions saw a subsequent rise in readership of literary magazines like Dostoevsky's *A Writer's Diary* two decades later. This suggests that *Sovremennik* fostered a demand for literature, some of which explicitly advocated for political rebellion. Using hand-recorded subscriber lists for the Dostoevsky magazine, we consolidated and digitized these records to construct this outcome variable for subscribers of *A Writer's Diary* across the Russian Empire [Figure A4](#) in displays the raw subscriber data.

Not only is *Sovremennik* associated with a rise in demand for literature, but it also appears to have driven an increase in the supply of literary works. The observed increase in revolutionary underground literature in regions exposed to *Sovremennik* may be tied to a broader expansion in literary output. Evidence in Panel B of [Table IV](#) supports this interpretation, showing a significant increase in the number of writers born in regions with greater exposure to *Sovremennik*.

This pattern is corroborated by panel evidence: Using records of Russian writers born since 1700, we find that regions exposed to *Sovremennik* experienced a substantial increase in writers born following the magazine's dissemination. Specifically, we employ a synthetic difference-in-differences model from [Arkhangelsky, Athey, Hirshberg, Imbens, and Wager \(2021\)](#), which improves robustness by reweighting regions to achieve parallel pre-trends and incorporates a synthetic control framework to provide tighter treatment-control comparisons. These results in levels are presented in Panel A of [Figure VII](#), while the results from the event study design are reported in Panel B of the same figure. In both cases, we observe a pronounced trend break after the magazine's shift to political themes, aligning with the earlier instrumental variable results.

**Alternative Mechanisms.** While data constraints limit our ability to exhaustively explore alternative mechanisms, we offer evidence that two potential channels are unlikely. First, the spread of *Sovremennik* did not significantly increase future literacy among the peasant class or expand school enrollment. As shown in Panel A of [Table V](#), neither future literacy levels nor the number of schools per 1,000 people appears to explain the observed results. This observation aligns with a broader idea suggesting that political and economic

change is often spearheaded and even carried out by individuals with high levels of human capital. Violence against the Czar was driven by members of the Russian intelligentsia, particularly the *raznochintsy* – educated individuals from non-noble backgrounds – rather than by the broader, recently educated peasant class. Thus, it is unsurprising that we observe no significant effect on literacy. This aligns with Nabokov (1981), who described the majority of Russians as being “left out in the cold, in a veil of slow snow beyond the amber-bright windows.” While *Sovremennik*’s reach was limited, economic research underscores the pivotal role played by such elites, consistent with evidence from the French Revolution (Jha & Wilkinson, 2023). Second, the magazine does not seem to increase demand for peaceful political reform. Using voting data from the Russian Empire’s first democratic franchise extension just before the Bolshevik revolution in 1917, we find no significant effect of *Sovremennik* subscriptions on support for the Bolsheviks or the liberal reform party. These results, shown in Panel B of Table V, suggest that the magazine’s influence was specific to violent political change rather than broader and peaceful political change.

**Impact on the Communist Revolution.** Building on the paper’s epigraph, which suggests that *Sovremennik* may have played a role in the Bolshevik Revolution, it is plausible that the magazine contributed not only to the rise in political violence but also to the broader emergence of revolutionary figures. To maximize statistical power, our analysis encompasses all known revolutionaries, though a focus on the Bolshevik subsample could yield similar insights. As shown in Table VI, counties with higher *Sovremennik* subscriptions have a notably higher number of revolutionaries born, particularly those who were around 20 years old during the magazine’s peak radical period in the late 1850s. This suggests that *Sovremennik*’s influence may have played a critical role in shaping the revolutionary fervor of the generation that came of age during its peak.

## 7. CONCLUSION

Our findings suggest that literature can play a role in fostering political violence. The reach and influence of *Sovremennik* across the Russian Empire provide a compelling example of how written works can contribute to violent opposition against an autocratic state. Leveraging the magazine founder’s one-off interactions, which occurred before the publication adopted a political stance, and using the birthplaces of individuals from these encounters

as an instrument, we argue that the observed results are causal. The instrument is uncorrelated with historical cultural or transport networks and does not predict past political violence, reinforcing the validity of our identification strategy.

Our findings are consistent with the view that *Sovremennik* contributed to cultivating a market for revolutionary ideas. Our findings indicate that *Sovremennik* subscriptions encouraged the production of censored underground revolutionary publications while also correlating with a rise in writers and revolutionaries in regions with greater exposure to the magazine. This suggests that *Sovremennik* facilitated the expansion of the market for revolutionary ideas, likely contributing to the escalation of political violence. In contrast, our results cannot be explained by general expansion in literacy and schooling or a growing demand for nonviolent political change.

The implications of our study are manifold. First, it underscores the transformative power of literature as a medium that can transcend mere artistic expression to become a force for political change. Second, it contributes to the broader discourse on the role of media in shaping political outcomes, suggesting that literature, much like modern mass media, could impact public sentiment and catalyze collective action. Third, and more broadly, it provides further empirical support for the agency-centric view of history, highlighting the role of ideas in shaping historical events.

We conclude that the pen, indeed, can be not just mightier than the sword but can actually be an instrument – a call for swords in itself. The written word, as evidenced by the Russian literature during its Golden Age, had the power to spark the flames of political violence. As we continue to witness the impact of media on political landscapes around the world, the lessons drawn from Russian literature remain relevant, reminding us of the enduring influence of the written word. Future studies could explore the influence of contemporary literature and other artistic mediums, such as opera and music, on political dissent and the mobilization of social movements. This line of inquiry may shed light on how modern cultural institutions continue to shape politics and inspire collective action in today's sociopolitical landscape.

## REFERENCES

- Acemoglu, D., & Robinson, J. A. (2012). Why nations fail: The origins of power, prosperity, and poverty. *Crown Business*.
- Acemoglu, D., & Robinson, J. A. (2024). Culture, institutions, and social equilibria: A framework. *Journal of Economic Literature*.
- Adena, M., Enikolopov, R., Petrova, M., Santarosa, V., & Zhuravskaya, E. (2015). Radio and the rise of the Nazis in prewar Germany. *The Quarterly Journal of Economics*, 130(4), 1885–1939.
- Agitacionnye materialy. (1895–1904). <https://www.hist.msu.ru/Labs/Ecohist/DBASES/LEAFLET/index.htm>. (Agitacionnye materialy obshchestvennykh dvizhenii, organizatsii i politicheskikh partii na nachal'nom etape massovogo rabocheho protesta v Rossii (1895-1904 gg.) [Agitation Materials of Social Movements, Organizations, and Political Parties at the Initial Stage of Mass Worker Protests in Russia (1895-1904)])
- Alabrese, E., Capozza, F., & Garg, P. (2024). *Politicized scientists: Credibility cost of political expression on Twitter* (Tech. Rep.). CESifo.
- Alesina, A., & Giuliano, P. (2010). The power of the family. *Journal of Economic Growth*, 15(2), 93–125.
- Almelhem, A., Iyigun, M., Kennedy, A., & Rubin, J. (2023). Enlightenment ideals and belief in progress in the run-up to the Industrial Revolution: A textual analysis.
- Anderson, B. (1983). Imagined communities: Reflections on the origin and spread of nationalism. In *The new social theory reader* (pp. 282–288). Routledge.
- Andrews, I., Stock, J. H., & Sun, L. (2019). Weak instruments in instrumental variables regression: Theory and practice. *Annual Review of Economics*, 11, 727–753.
- Ang, D. (2023). The birth of a nation: Media and racial hate. *American Economic Review*, 113(6), 1424–1460.
- Angrist, G. I., & Rubin, D. (1996). Identification of causal effects using instrumental variables. *Journal of the American Statistical Association*, 91(434).
- Arkhangelsky, D., Athey, S., Hirshberg, D. A., Imbens, G. W., & Wager, S. (2021, December). Synthetic difference-in-differences. *American Economic Review*, 111(12), 4088–4118.

- Ascher, A. (1988). *The revolution of 1905: Russia in disarray* (Vol. 1). Stanford University Press.
- Ash, E., & Hansen, S. (2023). Text algorithms in economics. *Annual Review of Economics*, 15(1), 659–688.
- Bai, Y., & Jia, R. (2016). Elite recruitment and political stability: the impact of the abolition of china's civil service exam. *Econometrica*, 84(2), 677–733.
- Bai, Y., Jia, R., & Wang, R. (2024). Ideas mobilize leaders: The diffusion of communist ideology in China.
- Bailyn, B. (1967). *The ideological origins of the American Revolution*. Cambridge, MA: Harvard University Press.
- Becker, S. O., Pfaff, S., Hsiao, Y., & Rubin, J. (2023). Competing social influence in contested diffusion: Luther, Erasmus and the spread of the protestant reformation.
- Bisin, A., & Verdier, T. (2024). On the joint evolution of culture and political institutions: Elites and civil society. *Journal of Political Economy*, 132(5), 1485–1564.
- Black, D. A., Berger, M. C., & Scott, F. A. (2000). Bounding parameter estimates with nonclassical measurement error. , 95(451), 739–748. Retrieved from <http://www.jstor.org/stable/2669454>
- Blanc, G. (2023). The cultural origins of the demographic transition in France.
- Bourdieu, P. (1979). Symbolic power. *Critique of Anthropology*, 4(13-14), 77–85.
- Bourguignon, F., Dixit, A., Leruth, L., & Platteau, J.-P. (Eds.). (2024). *Literature and economics: A novel approach*. London: Routledge.
- Buggle, J. C., & Nafziger, S. (2021). The slow road from serfdom: labor coercion and long-run development in the former Russian Empire. *Review of Economics and Statistics*, 103(1), 1–17.
- Bursztyn, L., Egorov, G., Enikolopov, R., & Petrova, M. (2019). *Social media and xenophobia: evidence from Russia* (Tech. Rep.). National Bureau of Economic Research.
- Cantoni, D., Chen, Y., Yang, D. Y., Yuchtman, N., & Zhang, Y. J. (2017). Curriculum and ideology. *Journal of Political Economy*, 125(2), 338–392.
- Chen, J., & Roth, J. (2024). Logs with zeros? Some problems and solutions. *The Quarterly Journal of Economics*, 139(2), 891–936.
- Chereiskii, L. (1988). *Pushkin i ego okruzhenie*. Izdatel'stvo "Nauka", Leningradskoe otde-

lenie.

- Ciccia, D., Clarke, D., & Pailañir, D. (2024, July). *SDID EVENT: Stata module providing Synthetic Difference-in-Differences (SDID) event-study estimators*. Statistical Software Components, Boston College Department of Economics. Retrieved from <https://ideas.repec.org/c/boc/bocode/s459354.html>
- Debreczeny, P. (1997). *Social functions of literature: Alexander Pushkin and Russian culture*. Stanford University Press.
- DellaVigna, S., Enikolopov, R., Mironova, V., Petrova, M., & Zhuravskaya, E. (2014). Cross-border media and nationalism: Evidence from Serbian radio in Croatia. *American Economic Journal: Applied Economics*, 6(3), 103–132.
- DellaVigna, S., & La Ferrara, E. (2015). Economic and social impacts of the media. In S. P. Anderson, J. Waldfogel, & D. Strömberg (Eds.), *Handbook of media economics*, vol. 1 (pp. 723–768). Amsterdam: Elsevier.
- Djourelouva, M., Durante, R., Motte, E., & Patacchini, E. (2024). Experience, narratives, and climate change beliefs. Available at SSRN 4680430.
- Dostoyevskaya, A. (1881). *List of subscribers to the "Diary of a Writer", the collected works of Fyodor Mikhailovich Dostoevsky and monetary settlements with subscribers*. Sankt-Peterburg: A.G.Dostoyevskaya.
- Durante, R., & Zhuravskaya, E. (2018). Attack when the world is not watching? US news and the Israeli-Palestinian conflict. *Journal of Political Economy*, 126(3), 1085–1133.
- Enikolopov, R., Makarin, A., & Petrova, M. (2020). Social media and protest participation: Evidence from Russia. *Econometrica*, 88(4), 1479–1514.
- Esposito, E., Rotesi, T., Saia, A., & Thoenig, M. (2023, June). Reconciliation narratives: The Birth of a Nation after the US Civil War. *American Economic Review*, 113(6), 1461–1504. doi: 10.1257/aer.20211633
- Essler, G., & Markevich, A. (2020). *Electronic Repository of Russian Historical Statistics, 18th - 21st centuries*. <https://ristat.org/>.
- Evdokimova, S. (1999). Pushkin's historical imagination. *Russian Press*.
- Fouka, V. (2020, December 30). *Time-varying persistence*. Broadstreet Blog. Retrieved from <https://broadstreet.blog/2020/12/30/time-varying-persistence/> (Accessed: 2024-09-13)

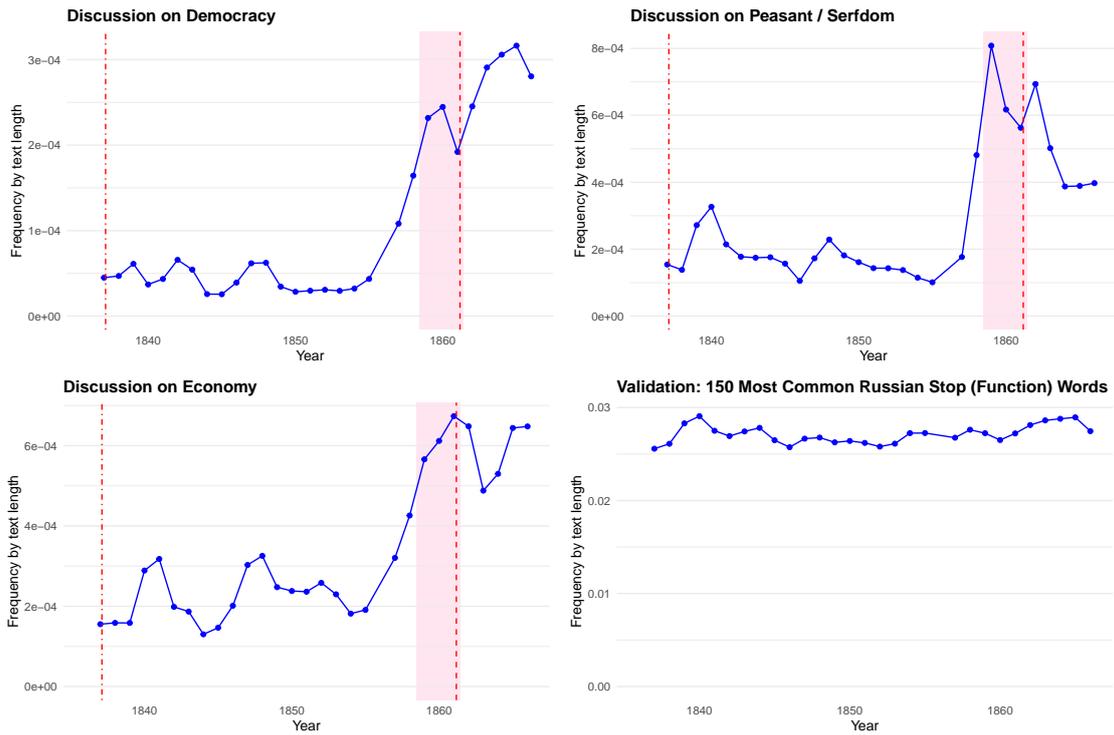
- Giuliano, P., & Nunn, N. (2021). Understanding cultural persistence and change. *The Review of Economic Studies*, 88(4), 1541–1581.
- Gorodnichenko, Y., & Roland, G. (2017). Culture, institutions, and the wealth of nations. *Review of Economics and Statistics*, 99(3), 402–416.
- Izmailov, N. (1969). *Pisma Poslednikh Let: 1834-1837, Pushkin Aleksandr Sergeevich*. Izd-vo "Nauka," Leningradskoe Otdelenie.
- Jha, S., & Wilkinson, S. (2023). Revolutionary contagion.
- Kahn, A., & Rubin-Detlev, K. (2021). *Catcor: Correspondence of Catherine the Great*. <https://catcor.seh.ox.ac.uk/>.
- Kessler, G. (2017). *Russian Empire Historical GIS Maps (1897)*. IISH Data Collection. Retrieved from <https://hdl.handle.net/10622/DN9QDM> doi: 10622/DN9QDM
- Kniga russkoi skorbi [The Book of Russian Sorrow]*. (1908–1914). Sankt-Peterburg: Izd. Rus. nar. soiuza im. Mikhaila Arkhangela.
- Kucherov, A. (1953). *NG Chernyshevsky on capitalism and Russia's shortcut to socialism*. Columbia University.
- La Ferrara, E. (2016). Mass media and social change: Can we use television to fight poverty? *Journal of the European Economic Association*, 14(4), 791–827.
- Lewis, M., Liu, Y., Goyal, N., Ghazvininejad, M., Mohamed, A., Levy, O., ... Zettlemoyer, L. (2019). *BART: Denoising sequence-to-sequence pre-training for natural language generation, translation, and comprehension*. Retrieved from <https://arxiv.org/abs/1910.13461>
- Lotman, Y. M. (1995). *A. S. Pushkin. Biografiya pisatelya [A. S. Pushkin. Biography of the Writer]*.
- Mahoney, J., & Snyder, R. (1999). Rethinking agency and structure in the study of regime change. *Studies in Comparative International Development*, 34, 3–32.
- Maloney, W. F., & Valencia Caicedo, F. (2022). Engineering growth. *Journal of the European Economic Association*, 20(4), 1554–1594.
- Markevich, A., & Zhuravskaya, E. (2018). The economic effects of the abolition of serfdom: Evidence from the Russian Empire. *American Economic Review*, 108(4-5), 1074–1117.
- Marx, K. (1859). *A Contribution to the Critique of Political Economy, translated from the German*

by SW Ryazanskaya. Progress.

- Michalopoulos, S., & Xue, M. M. (2021). Folklore. *The Quarterly Journal of Economics*, 136(4), 1993–2046.
- Mikolov, T., Chen, K., Corrado, G., & Dean, J. (2013). Efficient estimation of word representations in vector space. *arXiv preprint arXiv:1301.3781*.
- Mokyr, J. (2005). The intellectual origins of modern economic growth. *The Journal of Economic History*, 65(2), 285–351.
- Mokyr, J. (2011). *The gifts of Athena: Historical origins of the knowledge economy*. Princeton University Press.
- Moore, B. (1993). *Social origins of dictatorship and democracy: Lord and peasant in the making of the modern world* (Vol. 268). Beacon Press.
- Nabokov, V. (1981). *Lectures on Russian Literature* (F. Bowers, Ed.). New York: Harcourt Brace Jovanovich.
- Newman, J. (2015). Harriet Beecher Stowe and the “Book That Made This Great War”. In C. Hutchison (Ed.), *A History of American Civil War Literature* (pp. 3–16). Cambridge University Press. (Published online: 05 December 2015) doi: 10.1017/CBO9781316018773.002
- Offord, D. (1979). Dostoyevsky and Chernyshevsky. *The Slavonic and East European Review*, 57(4), 509–530.
- Parfait, C. (2016). *The publishing history of Uncle Tom’s Cabin, 1852–2002*. Routledge.
- Pipes, R. (1974). *Russia under the old regime*. Charles Scribner’s Son.
- Qian, N., Markevich, A., & Naumenko, N. (2025). *The causes of the Ukrainian famine* (No. 29089). (Forthcoming at the Review of Economic Studies)
- Radkey, O. H. (1958). *The agrarian foes of Bolshevism: Promise and default of the Russian socialist revolutionaries february to october 1917*. Columbia University Press.
- Rozenas, A., & Zhukov, Y. M. (2019). Mass repression and political loyalty: Evidence from Stalin’s ‘terror by hunger’. *American Political Science Review*, 113(2), 569–583.
- Satyanath, S., Voigtländer, N., & Voth, H.-J. (2017). Bowling for fascism: Social capital and the rise of the Nazi party. *Journal of Political Economy*, 125(2), 478–526.
- Skocpol, T. (1979). *States and social revolutions: A comparative analysis of France, Russia and China*. Cambridge University Press.

- Sovremennik [The Contemporary]. (1836–1866).
- Sovremennik [The Contemporary]. (1862). *Sovremennik [The Contemporary], kn. I [Book I]*, 167–198.
- Squicciarini, M. P., & Voigtländer, N. (2015). Human capital and industrialization: Evidence from the age of Enlightenment. *The Quarterly Journal of Economics*, 130(4), 1825–1883.
- Stock, J. H., & Yogo, M. (2005). Testing for weak instruments in linear iv regression. *Identification and inference for econometric models: Essays in honor of Thomas Rothenberg*, 80, 109–120.
- The Imperia Project, H. U. (2024). *Piadyshchev's geographical atlas*. <https://imperiia.omeka.fas.harvard.edu/piadyshchev>. (Accessed: August 20, 2024)
- Timofeychev, A. (2018, November). *4 newspapers that turned russia into a different country*. Retrieved from <https://www.rbth.com/history/329468-4-newspapers-that-changed-russia> (Accessed: January 9, 2025)
- Toews, G., & Vézina, P.-L. (2020). Enemies of the people.
- Valentinov, N. (1968). *Encounters with Lenin*.
- Voigtländer, N., & Voth, H.-J. (2015). Nazi indoctrination and anti-semitic beliefs in germany. *Proceedings of the National Academy of Sciences*, 112(26), 7931–7936.
- Voigtländer, N., & Voth, H.-J. (2024). *Highway to Hitler* (Tech. Rep.). American Economic Journal: Applied Economics.
- Weber, M. (1922). *Economy and society: An outline of interpretive sociology* (G. Roth & C. Wittich, Eds. & E. Fischhoff et al., Trans.). Berkeley: University of California Press. (1978 English translation of *Wirtschaft und Gesellschaft* originally published in 1921-1922)
- Williams, R. (1977). *Marxism and literature* (Vol. 114). Oxford University Press.
- Yanagizawa-Drott, D. (2014). Propaganda and conflict: Evidence from the Rwandan genocide. *The Quarterly Journal of Economics*, 129(4), 1947–1994.
- Zhuravskaya, E., Guriev, S., & Markevich, A. (2021). New Russian economic history. *Journal of Economic Literature*, forthcoming.

FIGURE I: Results of text analysis of the *Sovremennik* corpus



**Notes:** This figure illustrates our text analysis of the *Sovremennik* corpus. Each panel shows the evolution of the frequency of terms corresponding to the following topics: Democracy, Peasants/Serfdom, and Economy. Each dictionary consists of a combination of hand-selected terms, which were later enriched with the closest terms from a word embedding trained on the magazine corpus. The unit of observation is the year. Additionally, we present a validation exercise by plotting the distribution of the most common stop words (for example, *and*, *but*, *or*, *in*, *on*, *at*, *with*) in the Russian language over the observation period. We also present two vertical lines corresponding to two significant events. The first, a dot-dashed line, indicates the death of Alexander Pushkin, the founder of *Sovremennik*. The second, a dashed line, marks the abolition of serfdom in 1861.

FIGURE II: Sovremennik: Inception, Ban, and Key Events



**Notes:** The figure outlines the key historical events and context of our study, including the period from the first publication of *Sovremennik* to Dmitry Karakozov's failed assassination attempt on the Czar, which ultimately led to magazine's ban. The figure also highlights observations of politically motivated attacks from the *Book of Russian Sorrow*. For a detailed distribution of the political violent attacks recorded in our dataset, refer to Figure A5.

FIGURE III: Measuring Penetration of Russian Literature and Political Violence

**ПОСЛЕДНІЯ МИНУТЫ  
ПУШКИНА.**

Россія потеряла Пушкина въ ту минуту когда гений его, созрѣвшій въ опытахъ жизни, размышленіемъ и наукою, готовился дѣйствовать полною силою — потеря невозвратная и ничѣмъ не вознаградимая. Что бы онъ написалъ, еслибы судьба такъ незаметно не сорвала его со славной, едина начатой имъ дороги? Въ бумагахъ, послѣ него оставшихся, найдено много начатаго, весьма мало конченнаго; съ благоговѣнною любовію къ его памяти мы сохранимъ все, что можно будетъ сохранить изъ сихъ драгоценныхъ остатковъ; и они въ свое время будутъ изданы въ свѣтъ (\*). Здѣсь сообще-

(\*). Вскорѣ за полныхъ изданіемъ сочиненій, уже издана публика и теперь издаваемыхъ въ шести частяхъ по подпискѣ. Если вычитать все изданное въ рукописяхъ Пушкина, то конечно останется два хорошихъ тома, или и больше, если присоединить къ литературнымъ оригиналамъ всѣ матеріалы, приготовленные для Истории Петра Великаго. *Ж. Совремникъ*. 1837, № 1.

**КНИГА I  
1908 г.**

**Императоръ Александръ II**  
*Убитъ в С.-Петербурѣ 1 марта 1881 г.*

18 апреля 1881 г. Первопрестольная Москва пушечными выстрѣлами была оповещена о рожденіи у Великаго князя Николая Павловича сына-принца.  
Поэтъ В. А. Жуковский пріветствовалъ рожденіе Августейшаго Младенца, нареченнаго при крещеніи в Чудовомъ монастырѣ Александромъ, стихами, заключившими пророчество его будущаго величія и славы:

Судило, на все преданное готовой,  
Наставленный: достойнымъ счастьемъ быть,  
Великое с величьемъ споспѣть,  
Не трепетая, встреча рокъ суровый,  
И быть в дѣлахъ временъ своихъ красой.  
Лѣта пройдутъ, подвизникъ молодой,  
Отключиши младечества заботы,  
Онъ полетитъ в путь опыта и славы...  
Да встрѣтитъ онъ обильный чество все!  
Да славнаго участія славная будетъ!  
Да на чреде высокой не забудетъ  
Святѣйшаго изъ званій: человекъ!

Какъ бы предугадывала великие дѣла будущаго Государя и его самоотверженіе, поэтъ желалъ ему:

Жить для всѣхъ в величьи народномъ,  
Для блага всехъ своею побойать.

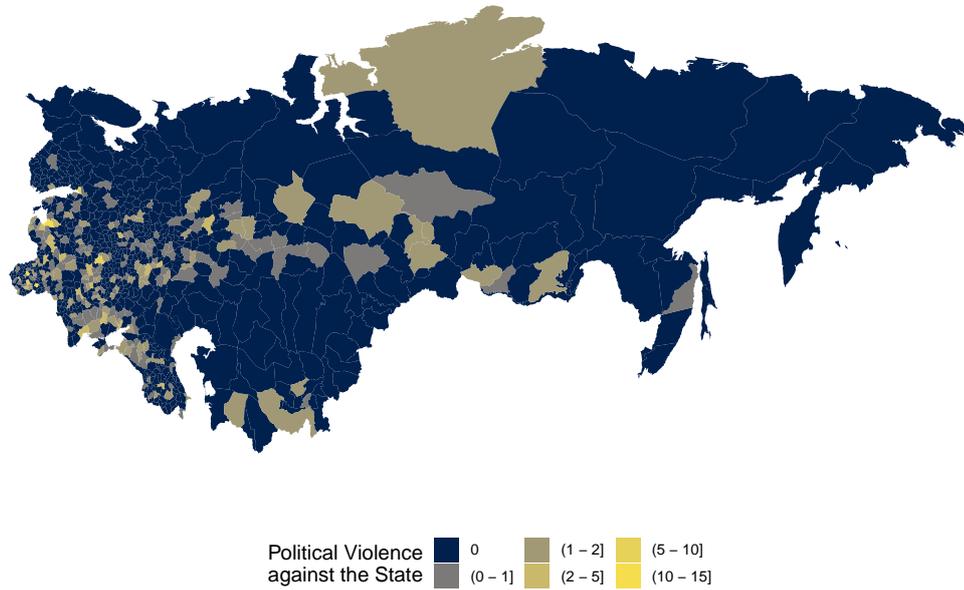
25 ноября 1825 г. в качествѣ Императора Александра I на Престо вступилъ Великій князь Николай Павловичъ, в Великій князь Александръ Николаевичъ былъ объявленъ Наслѣдникомъ.  
Воспитаніе и образованіе Наслѣдника было поручено капитану Меркелю, Святы Его Величества генералъ-майору Кавелину и поэту В. А. Жуковскому. Подъ этимъ наставленіемъ, строгимъ и вполномъ набоженіемъ верныхъ своему долгу людей протекла жизнь будущаго Императора до 20-лѣтняго возраста. Основаніемъ къ воспитанію и образованію него твердое желаніе Августейшаго Отца «воспитать в своемъ сынѣ человека, прежде чѣмъ сделать изъ него Государя», — «человѣка ученаго», утвержденнаго Императоромъ Николаемъ Павловичемъ, могъ способствовать тому, чтобы изъ царственнаго ученика вышелъ не ученый, а просвѣщенный человекъ. И действительно, къ концу назначеннаго для ученья срока семени добра и правды, твердости характера и рязарнаго вѣдѣнія, любви къ ближнему, къ малымъ своимъ и глубокаго сознанія долга и ответственности передъ Богомъ за будущее царствованіе надъ могучимъ русскимъ народомъ, — эти семена упали на добрую почву испита и здравнаго ума Наслѣдника.  
Спрямовывая отца в путешествіяхъ по государству, а также прощая по всей Россіи в 1837 г. со спеціальною целью пополнить свое книжное образованіе и воспитаніе нагляднымъ изученіемъ раз-



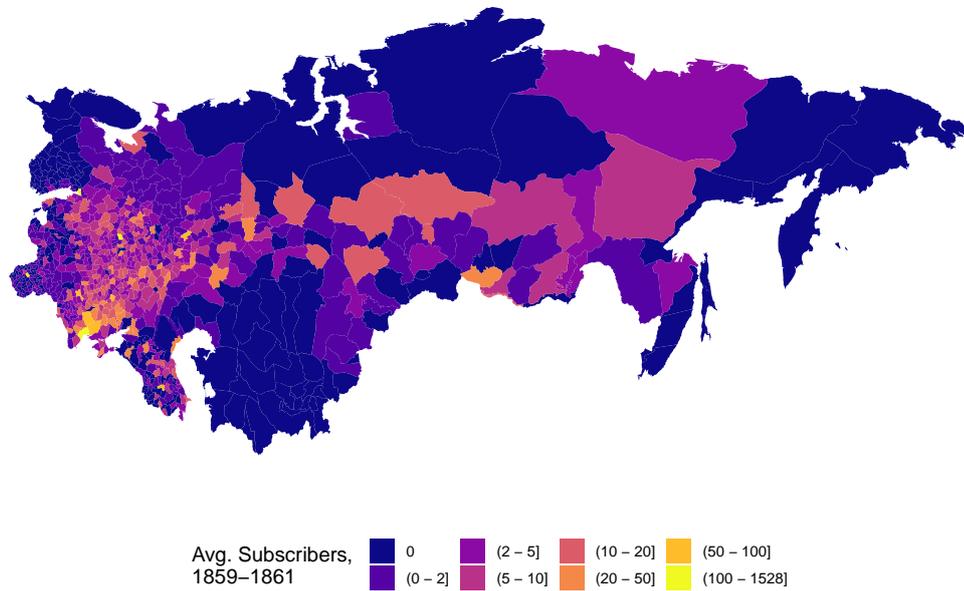
(A) A page from *Sovremennik*, published shortly after Pushkin's death, recounting his final moments.

(B) A page from the *Book of Russian Sorrow*, depicting the assassination of Alexander II.

FIGURE IV: Geographic Distribution of Violent Attacks and Magazine Subscriptions



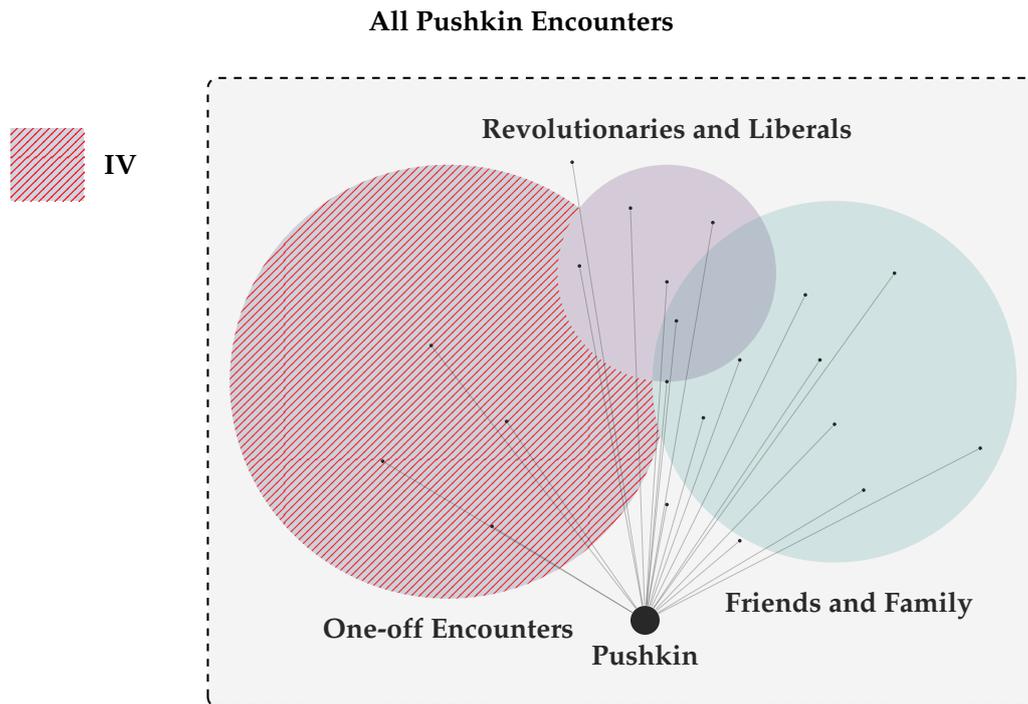
(A) The Number of Violent Attacks against the State



(B) The Average Number of Subscriptions of the "Sovremennik" Magazine

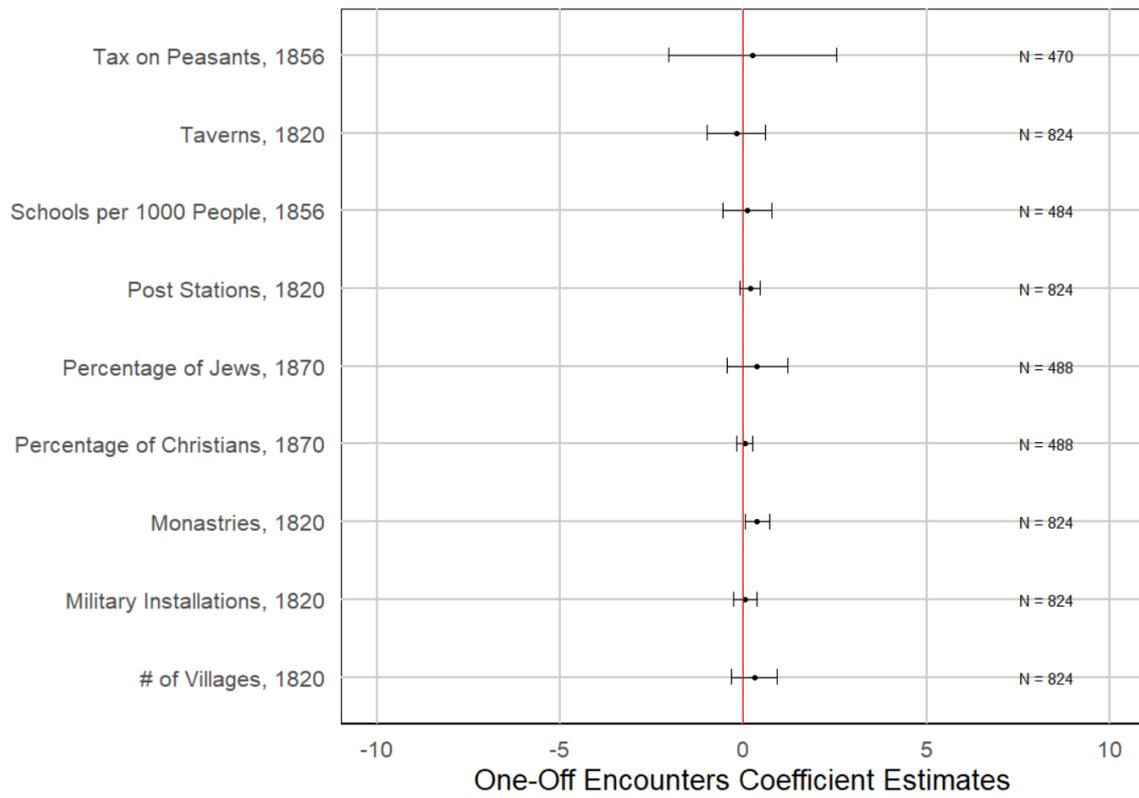
**Notes:** Panel A illustrates the geographic distribution of the number of violent attacks against the state, based on data extracted from *The Book of Russian Sorrow*. Panel B illustrates the geographic distribution of the number of subscribers to *Sovremennik*, averaged between 1859, 1860, and 1861. The variation is shown at the county (uezd) level.

FIGURE V: Alexander Pushkin's One-Off Encounters as an Instrument



**Notes:** This figure illustrates Alexander Pushkin's network, its composition, and the sample selection underlying our preferred instrumental variable. Our analysis relies on an exhaustive list of approximately 2,500 individuals Pushkin encountered during his lifetime, with information compiled by [Chereiskii \(1988\)](#). The composition of Pushkin's circle is derived from a text analysis of articles in [Chereiskii \(1988\)](#). Using a GPT-based classification, we categorize articles into specified categories. Our preferred instrument is constructed as a county-level count of the birthplaces of individuals Pushkin met only once—those with no documented affiliation to revolutionary or liberal circles.

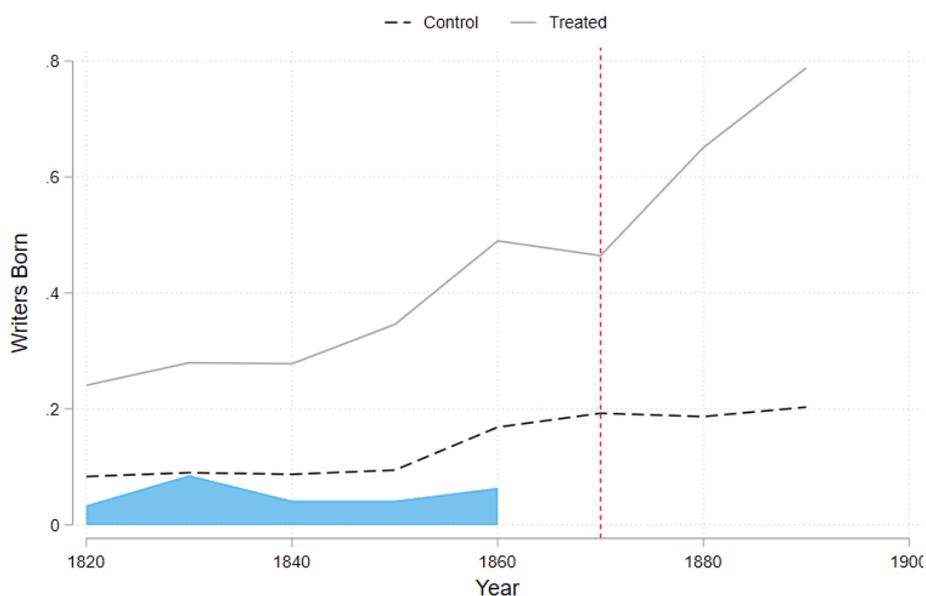
FIGURE VI: Balance Test



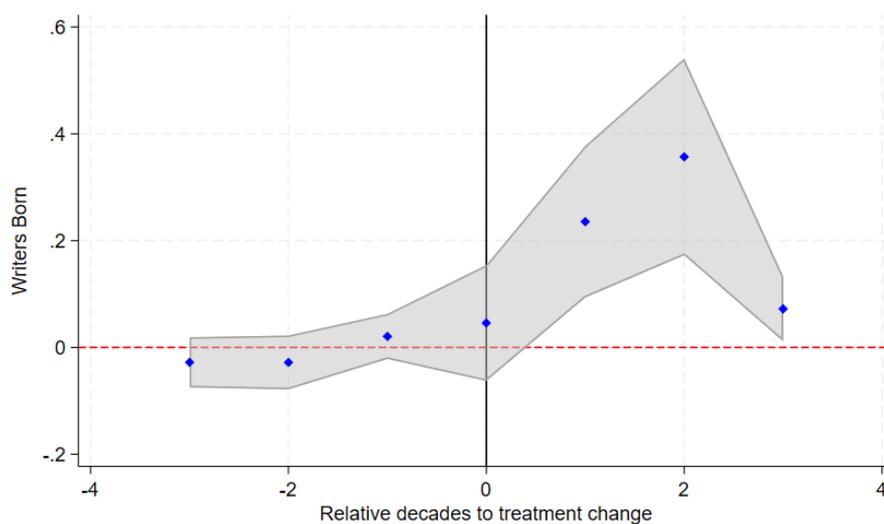
**Notes:** The figures report the balance test over district characteristics for our main instrument of one-off Pushkin encounters. Some variables are rescaled by factors of 10 and 100 for the visibility of estimations. Outcomes include pre-treatment establishments from 1820 Piadyshev atlas, Percentage of orthodox Christians and Jews among *uezd* population, as well as number of schools and tax on peasants (Obrok) rate.

FIGURE VII: The Impact of Sovremennik On the Birth of New Generation of writers

Panel A: Synthetic Difference-in-Difference



Panel B: Synthetic Difference-in-Difference Event Study



**Notes:** The figures report the result of synthetic difference in difference estimator by Arkhangelsky et al. (2021) and synthetic difference-in-difference event study by Ciccia et al. (2024). This figure presents estimates of the effect of Magazine subscriber on the birth of writers in Russian Empire . Both report SDID estimates using the cluster bootstrap method as outlined in Algorithm 2 of Arkhangelsky et al. (2021). The dependent variable is the number of writers born in the decade in uezd. The treatment is a binary variable that equals to 1 if there was at least one Sovremennik subscriber in the uezd.

TABLE I  
 “SOVREMENNİK” SUBSCRIPTIONS AND VIOLENCE AGAINST THE STATE

	(1)	(2)	(3)	(4)
<b>Panel A. OLS results</b>				
<i>Dep. Var.:</i>	Political Violence			
	<i>N</i> of Attacks > 0		<i>N</i> of Attacks	
Number of subscribers, average 1859-61, log	0.0988*** (0.0104)	0.0807*** (0.0124)	0.5036*** (0.1071)	0.3884*** (0.0870)
<b>Panel B. Second-stage results</b>				
Number of subscribers, average 1859-61, log	0.1907*** (0.0471)	0.1969** (0.0817)	1.428*** (0.3653)	1.598** (0.6124)
Geographic controls	✓	✓	✓	✓
Main controls		✓		✓
Province FEs	✓	✓	✓	✓
Observations	824	824	824	824
Mean of dependent variable	0.28	0.28	0.70	0.70
F statistics (Kleibergen-Paap)	40.621	17.136	40.621	17.136
<b>Panel C. First-stage results</b>				
<i>Dep. Var.:</i>	Number of subscribers, log			
Number of Pushkin one-off encounters, log			0.3388*** (0.0532)	0.2000*** (0.0483)
Geographic controls			✓	✓
Main controls			✓	
Province FEs			✓	✓

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of One-off Pushkin encounters (plus 0.1), on a dummy variable for at least one act of political violence against imperial officials. Panel A shows OLS estimates (columns 1 and 2) and 2SLS second-stage estimates (columns 3 and 4). Panel B presents the first stage. Each specification includes province-level fixed effects. We introduce two sets of controls, which are used in odd and even columns respectively. In the first group, we control for geographic variables, such as distances to Moscow and Saint Petersburg, and linear controls for latitude and longitude. In the second set of controls, we employ the shares of serfs, the logarithm of the number of writers born before the *Sovremennik* launch, the logarithm of population density in 1858 and number of post stations. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE II  
 PLACEBO: (A) EPISTOLARY NETWORK OF CATHERINE THE GREAT (1762 - 1796), ROADS  
 NETWORK CENTRALITY, AND (B) PRE-TREATMENT ESTABLISHMENTS (1820)

	(1)	(2)	(3)	(4)
<b>Panel A: Epistolary Network of Catherine II &amp; Roads Network Centrality</b>				
<i>Dep. Var.:</i>	Catherine correspondents	Centrality score	Political Violence, 2SLS	
Number of Pushkin one-off encounters, log	0.0105 (0.0142)	0.3110 (0.2201)		
Number of subscribers, average 1859-61, log			0.1957** (0.0834)	0.1996** (0.0862)
Has Catherine correspondents			0.0239 (0.0648)	
Centrality score, log				-0.0017 (0.0043)
Geographic controls	✓	✓	✓	✓
Main controls	✓	✓	✓	✓
Province FEs	✓	✓	✓	✓
F statistics (Kleibergen-Paap)			17.090	16.036
Observations	824	824	824	824
Mean of dependent variable	0.09	3.93	0.28	0.28
<b>Panel B: Pre-treatment Establishments (1820); 2SLS, Second Stage (One-off Encounters IV)</b>				
<i>Dep. Var.:</i>	# of tavernas	# of monasteries	# of Factories	Has military installations
Number of Pushkin one-off encounters, log	-0.0036 (0.0037)	0.0183 (0.0153)	-0.0391* (0.0201)	0.0096 (0.0072)
Geographic controls	✓	✓	✓	✓
Main controls	✓	✓	✓	✓
Province FEs	✓	✓	✓	✓
F statistics (Kleibergen-Paap)	17.136	17.136	17.136	17.136
Observations	824	824	824	824
Mean of dependent variable	0.03	0.09	0.18	0.08

**Notes:** This table presents results from two placebo exercises. Panel A examines Catherine II's epistolary network and measure of network centrality of the road network. Column 1 shows OLS estimates of the effect of the logarithm of One-Off Pushkin encounters (plus 0.1), with a dependent variable of a dummy indicating whether a county contains locations of Catherine's letter recipients or the locations from where the letters were sent (Catherine Correspondents). Column 2 uses a similar approach but on the betweenness centrality of uezd in the road network score as a dependent variable. Columns 3 and 4 use the baseline instrument based on Pushkin encounters, with Catherine's network and centrality score added as controls. Panel B examines the presence and numbers of various establishments from the Piadyshv atlas of the Russian Empire as outcome variables, using the baseline IV strategy based on One-off Pushkin encounters. The list of military installation includes fortresses, military cordons, foreposts, guardhouses (karauls), and redoubts. We apply the full set of controls as in Table I and report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE III  
 "SOVREMENNİK" SUBSCRIPTIONS AND UNDERGROUND REVOLUTIONARY PAMPHLETS

	OLS		2SLS, second stage	
	(1)	(2)	(3)	(4)
	<i>Dep. Var.: Revolutionary Publications</i>			
Number of subscribers, average 1859-61, log	0.0726*** (0.0114)	0.0505*** (0.0105)	0.2825*** (0.0568)	0.3337*** (0.0988)
Geographic controls	✓	✓	✓	✓
Main controls	✓	✓	✓	✓
Province FEs	✓	✓	✓	✓
F statistics (Kleibergen-Paap)			40.621	17.136
Observations	824	824	824	824
Mean of dependent variable	0.131	0.131	0.131	0.131

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of One-off Pushkin encounters (plus 0.1), on a dummy variable for at least one agitation leaflet distributed by socialist and other leftist political organizations in 1895-1904. We present OLS estimates (columns 1 and 2) and 2SLS second-stage estimates (columns 3 and 4). Each specification includes province-level fixed effects and the same controls as in Column 2 and 4 of Table 1. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE IV  
MECHANISMS: EFFECT ON FUTURE LITERATURE DEMAND AND SUPPLY

	OLS		2SLS, second stage	
	(1)	(2)	(3)	(4)
<b>Panel A: Literature Demand</b>				
	<i>Dep. Var.: "A writer's diary" subscribers, 1881</i>			
Number of <i>Sovremennik</i> subscribers, average 1859-61, log	0.0848*** (0.0128)	0.0654*** (0.0134)	0.1931*** (0.0335)	0.1827*** (0.0662)
Mean of dependent variable	0.38	0.38	0.38	0.38
<b>Panel B: Literature Supply</b>				
	<i>Dep. Var.: Number of writers born after 1866, log</i>			
Number of <i>Sovremennik</i> subscribers, average 1859-61, log	0.3823*** (0.0483)	0.2584*** (0.0508)	0.9737*** (0.1702)	0.8303*** (0.2748)
Mean of dependent variable	-0.60	-0.60	-0.60	-0.60
Geographic controls	✓	✓	✓	✓
Main controls		✓		✓
Province FEs	✓	✓	✓	✓
F statistics (Kleibergen-Paap)			40.621	17.136
Observations	824	824	824	824

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of One-off Pushkin encounters (plus 0.1), on (Panel A) the logarithm of the number of writers born in each county after 1866, and on (Panel B) a dummy variable for at least one subscriber to *A writer's diary* (1881). We present OLS estimates (columns 1 and 2) and 2SLS second-stage estimates (columns 3 and 4). Each specification includes province-level fixed effects and the same controls as in Column 2 and 4 of Table 1. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE V  
ALTERNATIVE MECHANISMS: “SOVREMENNİK” SUBSCRIPTIONS AND FUTURE HUMAN  
CAPITAL AND 1917 ELECTION

	OLS	2SLS	OLS	2SLS
	(1)	(2)	(3)	(4)
<b>Panel A: Effect on Human Capital</b>				
<i>Dep. Var.:</i>	Literacy, 1897		Total county number of schools per 1000, 1894	
Number of subscribers, average 1859-61, log	0.0335 (0.2018)	1.054 (1.257)	-0.0036 (0.0032)	-0.0342 (0.0260)
F statistics (Kleibergen-Paap)		15.350		15.272
Observations	824	824	824	824
Mean of dependent variable	19.410	19.410	0.03	0.03
<b>Panel B: Effect on Elections</b>				
<i>Dep. Var.:</i>	Democrats Votes Share		Socialists Votes Share	
Number of subscribers, average 1859-61, log	0.0969 (0.4353)	1.793 (1.831)	-0.0142 (0.0089)	-0.0611 (0.0476)
Geographic controls	✓	✓	✓	✓
Main controls	✓	✓	✓	✓
Province FEs	✓	✓	✓	✓
F statistics (Kleibergen-Paap)		19.548		19.793
Observations	824	824	824	824
Mean of dependent variable	0.024	0.024	0.135	0.135

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of One-off Pushkin encounters (plus 0.1), on various human capital outcomes. Odd and even columns present OLS and 2SLS estimates, respectively. For panel A, in columns 1 and 2, the outcome variable is the literacy level in 1897. In columns 3 and 4, the outcome variable is the number of schools in counties in 1894, and in columns 5 and 6, it is the number of schools in counties in 1911. For panel B dependent variables are share of votes for democrats (kadets) and socialists (RSDRP(b)). For some uezd data on dependent variable is missing, in that case we replace it with 0 and control for indicator that data is missing. We employ the full set of controls in the same way as in Table I. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE VI  
IMPACT ON EMERGENCE OF FUTURE REVOLUTIONARIES

	OLS		2SLS, second stage	
	(1)	(2)	(3)	(4)
	<i>Dep. Var.: Revolutionary born after 1836</i>			
Number of subscribers, average 1859-61, log	0.0780*** (0.0116)	0.0576*** (0.0138)	0.2200*** (0.0456)	0.2610*** (0.0787)
Geographic controls	✓	✓	✓	✓
Main controls		✓		✓
Province FEs	✓	✓	✓	✓
F statistics (Kleibergen-Paap)			40.621	17.136
Observations	824	824	824	824
Mean of dependent variable	0.234	0.234	0.234	0.234

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of One-off Pushkin encounters (plus 0.1), on a dummy variable for at least one future revolutionary born in the given county after 1836. We present OLS estimates (columns 1 and 2) and 2SLS second-stage estimates (columns 3 and 4). Each specification includes province-level fixed effects and the same controls as in Column 2 and 4 of Table 1. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

# Appendix A: Additional Figures and Tables

FIGURE A1: Political Violence: Photograph of an Attack with Explosives



Notes: Scene following the 'failed' assassination attempt on Stolypin in 1906, an attack that resulted in 27 fatalities

FIGURE A2: Distribution of Attacks over Time

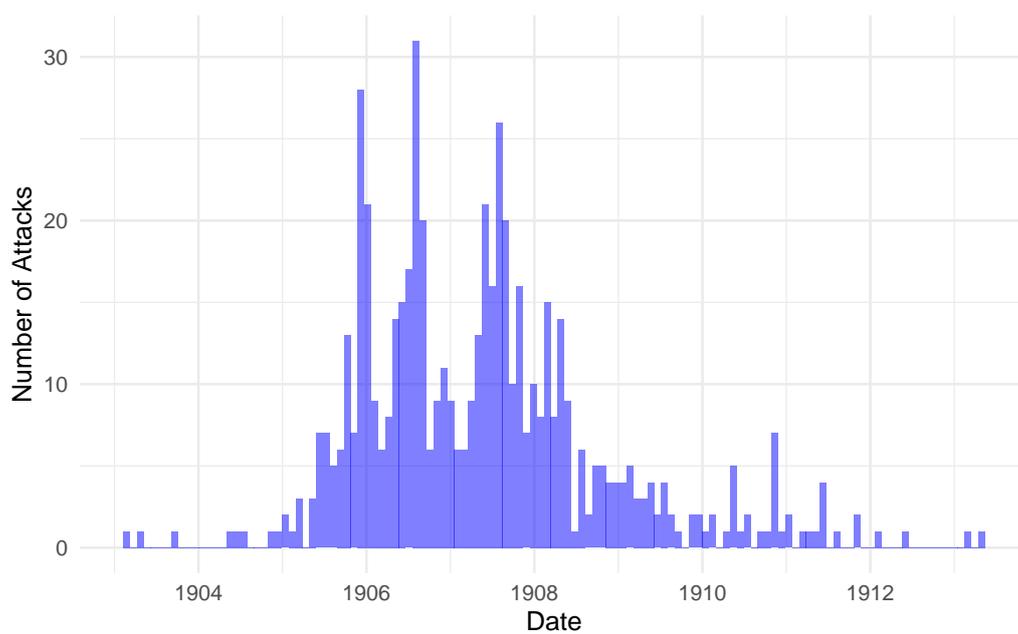
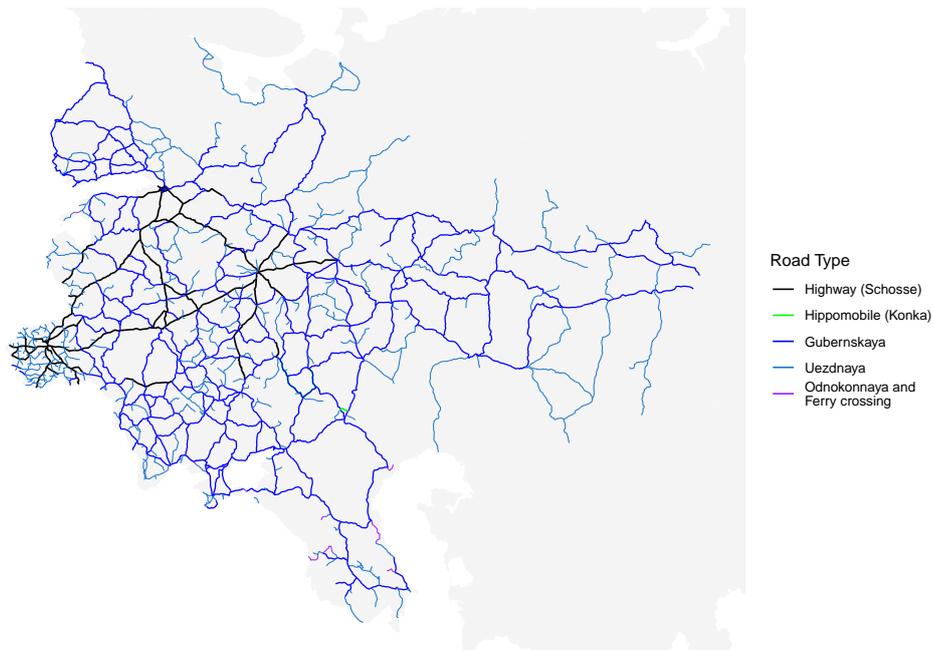


FIGURE A3: Digitizing Road Network



(A) The Fragment of Original Roads Map



(B) Extracted Network

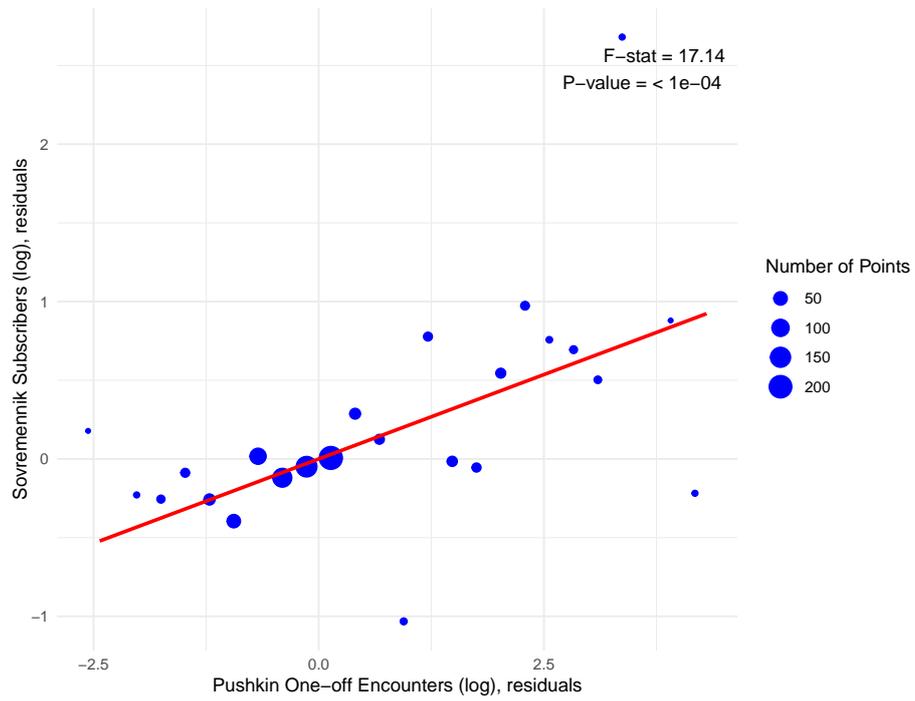
**Notes:** This figure shows the digitized road network of the Russian Empire, based on the Postal Map of the European Part of the Russian Empire and the Caucasus Region (Saint Petersburg, 1852). The shapefile was constructed by manually digitizing the atlas, capturing the entire network down to the granularity of uezd roads. Panel A depicts the original road network from the atlas, while Panel B presents the corresponding digitized version, illustrating the Empire's mid-19th-century connectivity during the time of *Sovremennik*.

FIGURE A4: Subscription Book of Dostoevsky's Magazine "A Writer's Diary" (1881)

№	Дата	Имя	Город	Цена
21	29	Ильинский	Львов	3 р.
22	29	Молотанов	Сувальск	3 р.
23	29	Кулсункин	Норвегия	3 р.
24	29	Кулсункин	Минск	3 р.
25	30	Мохоматов	Сувальск	3 р.
26	30	Закраев	Самара	3 р.
27	30	Орловцов	Иркутск	3 р.
28	30	Шинников	Полоцк	3 р.
29	30	Земля	Кострома	3 р.
30	1	Оболонский	Минский. М. Г.	3 р.
31	1	Платонов	Петровск	3 р.
32	1	Ковалев	Валки	3 р.
33	2	Иванов	М. В. Улья. Козловск	3 р.
34	2	Коваленко	Миргород	3 р.
35	2	Ланна	Гарскунский Кароиде	3 р.
36	2	Островский	Казань	3 р.
37	3	Торшкова	Москва	3 р.
38	3	Корень	Минск	3 р.
39	3	Курья	Варшава	3 р.
40	3	Кедров	В. Г.	3 р.
Итого				119 руб.

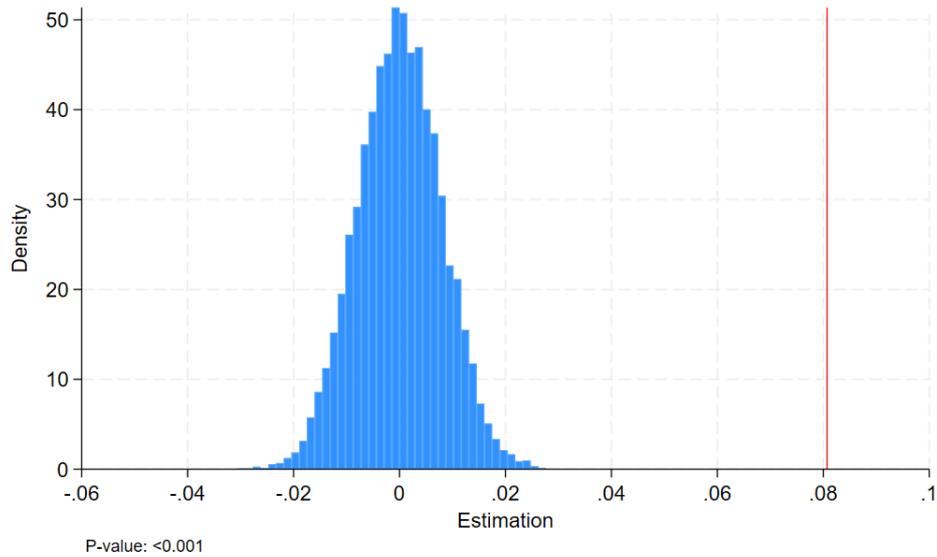
Notes: The picture of the Subscription Book for Fyodor Dostoevsky's magazine A Writer's Diary (1881), managed by writer's wife, Anna Dostoevskaya, with the names of subscribers and their cities.

FIGURE A5: First-stage Binned Scatter Plot, Pushkin "One-off" Encounters



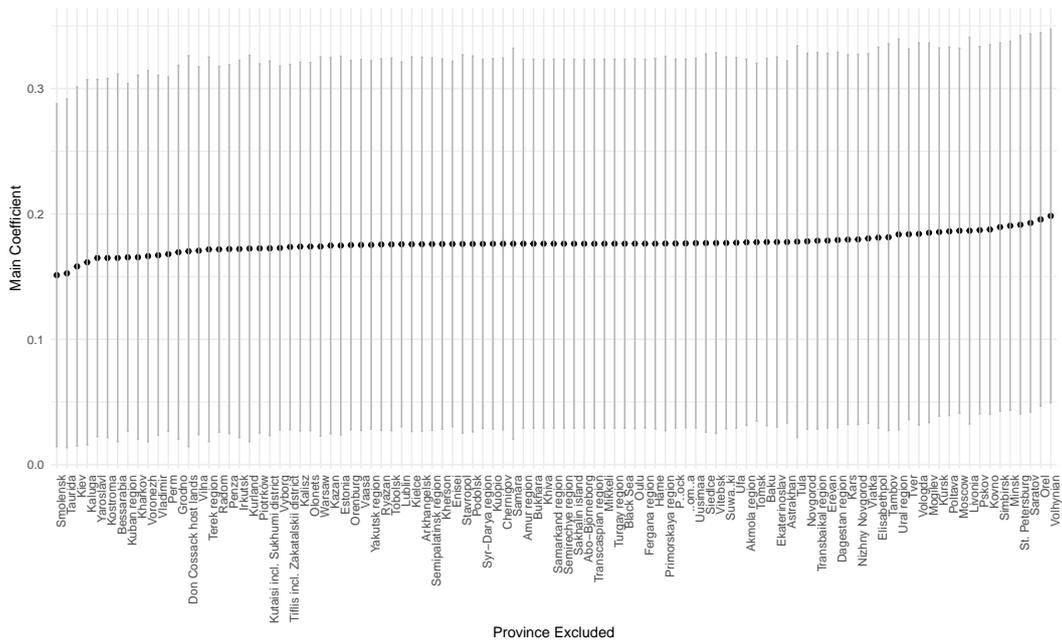
**Notes:** These figures present a binned scatter plot and linear fit illustrating the relationship used in our first-stage analysis: between the logarithm of the average number of subscribers between 1859 and 1861 (plus 0.1) and our instrumental variables based on birth counties of Pushkin one-off encounters.

FIGURE A6: Permutation Inference Test



**Notes:** The figure reports the results of permutation inference test of 10000 permutations. The histogram estimates the probability density function of the estimated coefficient under the null hypothesis that magazine distribution has no effect on the political violence. The line indicates the actual estimation of the coefficient.

FIGURE A7: Robustness Check: Baseline Specification, Main Coefficients Excluding One Province at a Time



**Notes:** The figure presents the regression coefficients from our main specification, analyzing the effect of *Sovremennik* on political violence. Each time, we exclude one province at a time, demonstrating that the results are not driven by any single province.

TABLE A1  
TWO EXCERPTS OF *Sovremennik* TEXTS

<b>Panel A: Art for Art Sake</b>	
N.V.Gogol "Nose", 1836	Then a rumor went round that Major Kovalyov's nose was out for a stroll, not on Nevsky Avenue but in Taurida Gardens, that it had been there for ages; that when Khosrev-Mirza lived there he marveled greatly at this strange freak of nature. Some students from the Surgical Academy went there. One aristocratic, respectable lady, in a special letter to the Superintendent of the Gardens, asked him to show her children this rare phenomenon, accompanied, if possible, with an explanation edifying and instructive for the young. All the men about town, the habitués of society parties, who liked to amuse ladies and whose resources had by that time been exhausted, were extremely glad of all these goings-on.
<b>Panel B: Art for Political Change</b>	
N.G. Chernyshevsky, "What Is to Be Done?", 1862	The Golden Age will dawn, Dmitry, we know that, but it still lies ahead. The Iron Age is passing, it has almost passed; but the Golden Age has not yet arrived. If, according to my abstract hypothesis, some strong need of this person (let's assume, only for the sake of an example, the need for love) were completely unsatisfied, or were ill satisfied, then I would say nothing against such a person's incurring a risk herself, but only that particular kind of risk, and certainly not any other risk, inflicted on that person by someone else. But if that person does find a sufficient satisfaction of that need, then she shouldn't subject herself to any risk. Let's suppose, in the abstract, that she doesn't wish to incur any risk. I say that she's right and sensible in not wishing to incur any; further, I say that anyone who subjects such a person to risk is acting in a stupid and senseless way. What can you possibly say to refute this hypothetical conclusion? Nothing! Understand, then, that you have no right.

**Notes:** This table presents two excerpts from books published in *Sovremennik* magazine. The first is from N. V. Gogol's absurdist comedy *The Nose*, where the plot revolves around a nose that escapes its owner and the reaction to this event in St. Petersburg. The second excerpt is from N. G. Chernyshevsky's novel *What Is to Be Done?*, renowned for its influence on left-wing philosophy and its impact on Lenin's ideas. Between the lines, it debates the possibility of revolution versus maintaining the status quo, with a focus on the role of the main character, Vera, in the society of that time.

TABLE A2  
A SAMPLE OF REVOLUTIONARY PAMPHLET

Union of Struggle for the Liberation of the Working Class, 1895	<p>TO THE WEAVERS OF THE LEBEDEVA FACTORY. Comrades! On December 20th you proved that the merciless pressure of the master has not yet completely crushed you, that Lebedev has not yet succeeded in making you his serfs. You proved that every patience has an end: you responded to his inhuman act with a strike. All year round you have been exhausted, trying to increase his wealth, and as a reward for your zeal, he presented you with a gift for the holiday: your earnings have been reduced by almost two and a half times. The grateful master did not even consider it necessary to keep his word and add a nickel to each ruble earned - why? After all, the weavers would meekly, at his first word, agree to endure need and hunger. When he clearly saw that the weavers, refusing to work until midnight, began to demand an increase in rates, the master found a good means against the recalcitrant ones - he set police dogs on them. On the night of December 22nd, the police illegally and without any reason detained many weavers - as a warning to others. Comrades, on the side of your robber - the owner was the strength of his capital, at his service was the Factory Inspector, the police, the gendarmes, on his side are also our Russian laws, which forbid workers to agree on their affairs and to jointly abandon work when it is no longer possible to work. On your side there was no friendly help from workers in other departments, to whom no one explained that they should support their comrades; not foreseeing such a case, you did not organize among yourselves a comradely workers' union in order to hold out during the strike with the money collected during the calm time. You had none of this; it is no wonder that, forced by hunger and cold, you temporarily submitted to the master's tyranny and work as much as he orders and for what price he wants. But do not forget that by friendly action at the first convenient opportunity you can easily achieve success. Prepare for the struggle and when it becomes possible, you must all, as one man, quit your work and calmly but firmly declare your wishes. Stand together, comrades, and courageously defend your interests. For the New Year, the Union of Struggle for the Liberation of the Working Class sends you its greetings and wishes for success and promises constant assistance.</p>
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**Notes:** This table presents the translation of one of the pamphlet distributed among workers of the factory. In this pamphlet the left-wing political organization calls worker to fight for their rights.

TABLE A3  
DESCRIPTIVE STATISTICS, COUNTY-LEVEL

Variables:	N	Mean	St. Dev.	Min	Median	Max
<b>Panel A: Outcome variables:</b>						
Political violence (extensive margin)	824	0.28	0.45	0	0	1
Political violence (intensive margin)	824	0.70	1.99	0	0	32
<b>Panel B: Explanatory and instrumental variables:</b>						
Num. <i>Sovremennik</i> subscribers	824	7.52	56.86	0.00	2.00	1,528.00
Num. Pushkin contacts	824	2.44	25.79	0	0	611
Num. Pushkin contacts (“One-off”)	824	1.22	12.70	0	0	297
Num. Pushkin contacts (no friends)	824	1.22	12.42	0	0	298
Num. Pushkin contacts (no relatives)	824	1.22	12.12	0	0	281
Catherine connections	824	0.10	0.30	0	0	1
Catherine correspondents	824	0.05	0.22	0	0	1
<b>Panel C: Mechanisms and Placebo:</b>						
Revolutionary publications (extensive margin)	824	0.13	0.34	0	0	1
Revolutionary publications (intensive margin)	824	4.09	27.01	0	0	492
Literacy (1897)	488	32.77	18.31	9.26	26.54	98.81
Num. schools (1894)	488	0.46	0.25	0.10	0.39	2.52
Num. schools (1911)	484	1.49	0.63	0.39	1.32	5.72
Num. factories (1820)	824	0.18	0.87	0	0	12
Num. military establishments (1820)	824	0.09	0.28	0	0	1
Num. tavernas (1820)	824	0.04	0.24	0	0	4
Num. monasteries (1820)	824	0.09	0.34	0	0	3
Num. writers born after <i>Sovremennik</i>	824	2.11	8.22	0	1	150
<i>A writer’s diary</i> subscribers (extensive margin)	824	0.38	0.49	0	0	1
<i>A writer’s diary</i> subscribers (intensive margin)	824	1.21	6.25	0	0	152
Revolutionaries	824	0.44	1.37	0	0	26
<b>Panel D: Main Controls:</b>						
Num. writers (pre-treatment)	824	0.69	3.66	0	0	71
Share of serfs	488	38.57	24.88	0.00	42.98	85.21
Pop. density 1858 (log)	476	3.93	0.90	−1.42	4.13	6.64
Num. post stations in county	824	4.23	4.43	0	3	52
Latitude (county centroid)	824	52.82	5.87	37.49	53.06	70.61
Longitude (county centroid)	824	42.17	22.79	17.96	37.28	175.82
Distance to Moscow	824	1,153.88	1,063.04	13.83	901.22	6,871.84
Distance St.-Petersburg	824	1,384.66	1,106.81	22.55	1,080.25	6,671.81
Num. all elites	824	4.02	23.93	0	1	517
Num. military elites	824	0.62	4.53	0	0	104
Num. scientists	824	1.00	4.81	0	0	97
Num. artists, musicians, theater	824	0.57	4.57	0	0	106

**Notes:** This table presents descriptive statistics of variables used in the main analysis. More detailed data descriptions are presented in Section 3 and data sources are listed in Appendix Table B1.

TABLE A4  
PUSHKIN CIRCLE: COMPOSITION AND CORRESPONDENCE

Panel A: Composition of Pushkin Circle					
Variables:	Hard to tell	No	Unlikely	Likely	Yes
One-off Encounters	34 (1.55%)	356 (16.2%)	586 (26.67%)	545 (24.81%)	676 (30.77%)
Relatives	546 (24.85%)	1397 (63.59%)	72 (3.28%)	42 (1.91%)	140 (6.37%)
Friends & Acquaintance	135 (6.14%)	244 (11.11%)	608 (27.67%)	959 (43.65%)	251 (11.42%)
Noble	931 (42.38%)	204 (9.29%)	214 (9.74%)	136 (6.19%)	712 (32.41%)
Peasant	601 (27.36%)	1529 (69.59%)	5 (0.23%)	5 (0.23%)	57 (2.59%)
Liberal	1889 (85.98%)	37 (1.68%)	127 (5.78%)	121 (5.51%)	23 (1.05%)
Conservative	1930 (87.85%)	88 (4.01%)	115 (5.23%)	45 (2.05%)	19 (0.86%)
Radical	1907 (86.8%)	158 (7.19%)	43 (1.96%)	65 (2.96%)	24 (1.09%)
Loyalist	2010 (91.49%)	92 (4.19%)	35 (1.59%)	43 (1.96%)	17 (0.77%)
Military	154 (7.01%)	1366 (62.18%)	18 (0.82%)	25 (1.14%)	634 (28.86%)
Creatives	189 (8.6%)	1236 (56.26%)	55 (2.5%)	141 (6.42%)	576 (26.22%)

Panel B: Excerpts from Pushkin's Correspondence

Letter/Person receiving	Date	Person's Place	Letter Excerpt
146. A. A. Fuks	20/02/1836	Kazan	"Allow me to present to you, gracious lady, a subscription ticket for <i>The Contemporary</i> , which I am publishing."
151. V. D. Sukhorukov	14/03/1836	Novocherkask	"You know that I have become a journalist (which reminds me, I haven't sent you <i>The Contemporary</i> ; please excuse me—I shall try to make up for my negligence)".
156. S. N. Glinka	26/03/1836	Smolensk oblast	"My edition of <i>The Contemporary</i> has not yet been published — but it will come out in due time. You will be the first to receive it immediately."
163. M. P. Pogodin	14/04/1836	Moscow oblast	"If you see Nadezhdin, thank him from me for <i>The Telescope</i> . I will send him <i>The Contemporary</i> ."
164. N. M. Yazykov	14/04/1836	Ulyanovsk	"You will receive my edition of <i>The Contemporary</i> ; I hope it will earn your approval."

**Notes:** The table's Panel A presents the composition of Pushkin's circle based on text analysis of articles from Chereiskii (1988). We use a GPT-based classification to determine whether a given article belongs to the specified categories. Panel B presents excerpts from Pushkin's correspondence promoting his magazine, *The Contemporary* (*Sovremennik*).

TABLE A5  
PLACEBO TEST: PRETREATMENT VIOLENCE

	<i>Dep. Var.: Pretreatment political violence</i>			
	IV: One-off Encounters		IV: Libraries pre-treatment	
	2SLS	RF	2SLS	RF
	(1)	(2)	(3)	(4)
Number of subscribers, average 1859-61, log	1.064 (0.8321)		0.4226 (0.2882)	
Number of Pushkin one-off encounters, log		0.1431 (0.0986)		
Number of libraries				0.3622* (0.2044)
Geographic controls	✓	✓	✓	✓
Main controls	✓	✓	✓	✓
Observations	99	99	99	99
Mean of dependent variable	0.667	0.667	0.667	0.667

**Notes:** The 2SLS and reduced form estimations assess the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of Pushkin one-off encounters (plus 0.1) and number of libraries in the gubernia, on pre-magazine political violence (mostly peasant unrest) in Russian Empire. For each instrument we present 2SLS, columns (1), (3) and RF estimates, columns (2), (4). Observed data is on province level. Standard errors (in parentheses) are heteroskedacity-robust. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE A6  
ROBUSTNESS ACCORDING TO CHEN AND ROTH (2024) AND ALTERNATIVE  
DEFINITIONS OF DEPENDENT AND INDEPENDENT VARIABLE

	(1)	(2)	(3)	(4)
<b>Panel A: Robustness According to Chen and Roth (2024)</b>				
<i>Dep. Var.:</i> Value of X if # of Attacks = 0	X = 0	X = -0.1	X = -1	X = -5
Number of subscribers, average 1859-61, log	0.1969** (0.0817)	0.2166** (0.0899)	0.3939** (0.1635)	1.182** (0.4905)
<b>Panel B: Alternative Definitions of Dependent Variable</b>				
<i>Dep. Var.:</i>	# of attacks	log(attacks + 1)	IHS(attacks)	Poisson
Number of subscribers, average 1859-61, log	1.598** (0.6124)	0.3669*** (0.1116)	0.4599*** (0.1405)	1.004*** (0.3247)
<b>Panel C: Alternative Definitions of Independent Variable</b>				
<i>Dep. Var.:</i>	log(attacks + 0.1)			
log(subscribers + 0.01)	0.1861** (0.0817)			
log(subscribers + 1)		0.2276** (0.0930)		
IHS(subscribers)			0.2048** (0.0837)	
Subscribers above/below median (dummy)				1.244* (0.7128)
Geographic controls	✓	✓	✓	✓
Main controls	✓	✓	✓	✓
Province FEs	✓	✓	✓	✓
Observations	824	824	824	824

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of Pushkin one-off encounters (plus 0.1), on different definitions of the dependent variable related to acts of political violence against imperial officials. Panel A presents 2SLS second-stage results with different values of X for the outcome variable (assuming no attacks). Panel B reports the 2SLS second-stage results with varying transformations of the outcome variable, including the raw attack count, log-transformed, inverse hyperbolic sine (ihs), and a Poisson model. Panel C reports the 2SLS second-stage results with varying transformations of the independent variable. The results are robust, and alternative transformations of dependent, independent and instrumental variables are available on request. All specifications include province-level fixed effects and the same controls as in Columns 2 and 4 of Table 1. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1.

TABLE A7  
ALTERNATIVE INSTRUMENT: LIBRARIES

	OLS		2SLS, second stage	
	(1)	(2)	(3)	(4)
<b>Panel A. OLS and second-stage results</b>				
	<i>Dep. Var.: Political Violence</i>			
Number of subscribers, average 1859-61, log	0.0988*** (0.0104)	0.0807*** (0.0124)	0.1924*** (0.0488)	0.1987*** (0.0829)
Geographic controls	✓	✓	✓	✓
Main controls		✓		✓
Province FEs	✓	✓	✓	✓
Observations	824	824	824	824
Mean of dependent variable	0.28	0.28	0.28	0.28
<b>Panel B. First-stage results</b>				
	<i>Dep. Var.: Number of subscribers, log</i>			
Library before 1846			1.413*** (0.2445)	0.8285*** (0.2064)
Geographic controls			✓	✓
Main controls				✓
Province FEs			✓	✓
F statistics (Kleibergen-Paap)			33.421	16.109
Observations			824	824

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the indicator of a library in the district before year 1846, when the ownership of the journal was handled to Nekrasov, on a dummy variable for at least one act of political violence against imperial officials. Panel A shows OLS estimates (columns 1 and 2) and 2SLS second-stage estimates (columns 3 and 4). Panel B presents the first stage. Each specification includes province-level fixed effects. We introduce two sets of controls, which are used in odd and even columns respectively. In the first group, we control for geographic variables, such as distances to Moscow and Saint Petersburg, and linear controls for latitude and longitude. In the second set of controls, we employ the shares of serfs, the logarithm of the number of writers born before the *Sovremennik* launch, the logarithm of population density in 1858 and number of post stations. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE A8  
CONTROLLING FOR ELITES OF VARIOUS OCCUPATIONS BORN IN THE COUNTY BEFORE  
THE ADVENT OF SOVREMENNIIK MAGAZINE

<i>2SLS, second stage</i>	(1)	(2)	(3)	(4)	(5)	(6)
	<i>Dep.Var.: Political Violence</i>					
Number of subscribers, average 1859-61, log	0.1632** (0.0746)	0.1973*** (0.0620)	0.1843** (0.0723)	0.1639** (0.0755)	0.1642** (0.0759)	0.1831** (0.0842)
All prominent individuals, log	✓					
Politicians, log		✓	✓	✓	✓	✓
Military, log			✓	✓	✓	✓
Scientists, log				✓	✓	✓
University teachers, log					✓	✓
Artists, musician, theater, log						✓
Geographic controls	✓	✓	✓	✓	✓	✓
Main controls	✓	✓	✓	✓	✓	✓
Province FEs	✓	✓	✓	✓	✓	✓
F statistics (Kleibergen-Paap)	37.220	41.496	47.990	33.638	46.036	38.570
Observations	824	824	824	824	824	824

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of Pushkin one-off encounters (plus 0.1), on a dummy variable for at least one act of political violence against imperial officials. We employ the full set of controls as in Table I, with one difference: from columns 1 to 6, we replace the number of writers born before 1836 (log, plus 0.1) with the number (log, plus 0.1) of other prominent individuals by occupation born in these counties. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE A9  
ROBUSTNESS TO ALTERNATE DEFINITIONS OF EXPOSURE TO MAGAZINE: SUBSCRIBERS  
BY 1859, 1860, 1861

	OLS	2SLS	OLS	2SLS	OLS	2SLS
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Dep.Var.: Political Violence</i>						
Number of subscribers, 1859, log	0.0555*** (0.0127)	0.1918** (0.0820)				
Number of subscribers, 1860, log			0.0642*** (0.0113)	0.1847** (0.0786)		
Number of subscribers, 1861, log					0.0757*** (0.0105)	0.1839** (0.0778)
Geographic controls	✓	✓	✓	✓	✓	✓
Main controls	✓	✓	✓	✓	✓	✓
Province FEs	✓	✓	✓	✓	✓	✓
<i>Fit statistics</i>						
F statistics (Kleibergen-Paap)		17.088		17.040		15.964
Observations	824	824	824	824	824	824

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of Pushkin one-off encounters (plus 0.1), on a dummy variable for at least one act of political violence against imperial officials. We employ the full set of controls as shown in column 4 Table I. We present OLS estimates (columns 1, 3, 5) and 2SLS second-stage estimates (columns 2, 4, and 6). We vary the definition of exposure to the magazine by using the number of subscriptions in 1859, 1860, and 1861 in columns 1-2, 3-4, and 5-6, respectively. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE A10  
ROBUSTNESS BY DIFFERENT SAMPLES: ATTACKS BY TIME PERIODS

	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)	OLS (5)	2SLS (6)
<i>Sample:</i>	First half of period		Second half of period		Excluding peak days	
	<i>Dep. Var.: Political Violence</i>					
Number of subscribers, average 1859-61, log	0.0642*** (0.0094)	0.1747** (0.0804)	0.0622*** (0.0117)	0.2119*** (0.0727)	0.0834*** (0.0112)	0.2077*** (0.0749)
Geographic controls	✓	✓	✓	✓	✓	✓
Main controls	✓	✓	✓	✓	✓	✓
Province FEs	✓	✓	✓	✓	✓	✓
F statistics (Kleibergen-Paap)		17.136		17.136		17.136
Observations	824	824	824	824	824	824

**Notes:** The 2SLS estimation assesses the effect of the logarithm of magazine subscriptions (plus 0.1), averaged between 1859 and 1861, instrumented by the logarithm of the count of Pushkin one-off encounters (plus 0.1), on a dummy variable for at least one act of political violence against imperial officials. We employ the full set of controls as shown in column 4 Table I. We vary the definitions of the outcome variable by focusing on the first half of the period when attacks occurred, the second half, and only the days when no more than one attack happened, in columns 1-2, 3-4, and 5-6, respectively. We report the Kleibergen-Paap rk Wald F statistic. Standard errors (in parentheses) are clustered at the province level. \*\*\*: 0.01, \*\*: 0.05, \*: 0.1

TABLE A11  
ROBUSTNESS TO ACCOUNTING FOR CONLEY SPATIAL CORRELATION

	<i>Panel A. Radius 50km</i>			<i>Panel B. Radius 100km</i>		
	(1)	(2)	(3)	(1)	(2)	(3)
<i>Dep. Var.: Political Violence</i>						
Log(Number of Subscribers + 0.1)	0.0993*** (0.0105)	0.0988*** (0.0106)	0.0807*** (0.0116)	0.0993*** (0.0109)	0.0988*** (0.0110)	0.0807*** (0.0119)
Province Fixed Effects	✓	✓	✓	✓	✓	✓
Geographic Controls		✓	✓		✓	✓
Main Controls			✓			✓
<i>Panel C. Radius 200km</i>						
<i>Panel D. Radius 300km</i>						
<i>Dep. Var.: Political Violence</i>						
Log(Number of Subscribers + 0.1)	0.0993*** (0.0101)	0.0988*** (0.0100)	0.0807*** (0.0112)	0.0993*** (0.0102)	0.0988*** (0.0101)	0.0807*** (0.0113)
Province Fixed Effects	✓	✓	✓	✓	✓	✓
Geographic Controls		✓	✓		✓	✓
Main Controls			✓			✓
<i>Panel E. Radius 400km</i>						
<i>Panel F. Radius 500km</i>						
<i>Dep. Var.: Political Violence</i>						
Log(Number of Subscribers + 0.1)	0.0993*** (0.0079)	0.0988*** (0.0080)	0.0807*** (0.0095)	0.0993*** (0.0075)	0.0988*** (0.0073)	0.0807*** (0.0100)
Province Fixed Effects	✓	✓	✓	✓	✓	✓
Geographic Controls		✓	✓		✓	✓
Main Controls			✓			✓
Mean Dep. Var.	0.282	0.282	0.282	0.282	0.282	0.282
Observations	824	824	824	824	824	824

**Notes:** Standard errors robust to spatial correlation in parentheses. We present the 2SLS estimation where the dependent variable is an indicator variable on political attack in the county. Log Subscribers is logarithm of number of subscribers to *Sovremennik* in the county (plus 0.1). We use the same set of controls as in our baseline specifications. Province fixed effects used in the regression. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

TABLE A12  
ROBUSTNESS TO ALTERNATE FIXED EFFECTS

<b>Panel A. Cell 333x333km fixed effects</b>			
	(1)	(2)	(3)
<i>Dep. Var.: Political Violence</i>			
Log(Number of Subscribers + 0.1)	0.1038*** (0.0110)	0.1024*** (0.0112)	0.0805*** (0.0125)
Cell 333x333km Fixed Effects	✓	✓	✓
Geographic Controls		✓	✓
Controls			✓
Mean Dep. Var.	0.282	0.282	0.282
Observations	824	824	824
<b>Panel B. Cell 444x444km fixed effects</b>			
Log(Number of Subscribers + 0.1)	0.0921*** (0.0086)	0.0917*** (0.0085)	0.0662*** (0.0103)
Cell 444x444km Fixed Effects	✓	✓	✓
Geographic Controls		✓	✓
Controls			✓
Mean Dep. Var.	0.282	0.282	0.282
Observations	824	824	824

**Notes:** Standard errors clustered by cell in parentheses. The dependent variable is an indicator variable on political attack in the county. Log Subscribers is logarithm of number of subscribers to *Sovremennik* journal in the county. We introduce two sets of controls, which are used in odd and even columns respectively. In the first group, we control for geographic variables, such as distances to Moscow and Saint Petersburg, and linear controls for latitude and longitude. In the second set of controls, we employ the shares of serfs, the logarithm of the number of writers born before the *Sovremennik* launch, the logarithm of population density in 1858 and number of post stations. Fixed effects listed in the panel are sell 3x3 degree (333x333km) sell fixed effects, sell 4x4 degree (444x444km) sell fixed effects. \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Appendix B: Text Analysis, GPT and Sources

**Text analysis of the *Sovremennik* corpus.** In this paper, we digitize almost the entire corpus of *Sovremennik* to describe its intellectual evolution during the period of its existence between 1836 and 1866. We briefly discuss the main stages related to this text analysis. In the baseline approach, we combine a dictionary-based method with *word2vec* to construct vectors of term frequencies related to the following subjects of our interest—democracy, serfdom, and economy—the epitome of intellectual life at the time and in the region.

As a first step, we train a *word2vec* embedding on the magazine’s corpus. Then, we take the words associated with these subjects and extend our dictionaries by identifying the closest terms in terms of cosine distances in the embedding. To produce time series that show the evolution of subject frequencies, we focus on the annual level. We also present the frequencies of the most common functional stop words in the Russian language as a validation.

To confirm our findings, we apply an alternative approach commonly used in the literature by employing the topic-modeling Latent Dirichlet Allocation (LDA) algorithm to our corpus. [Almelhem, Iyigun, Kennedy, and Rubin \(2023\)](#) used a similar approach to demonstrate the evolution of topics in English Enlightenment texts. In our case, LDA consistently identifies a socio-economic topic among others, and its dynamics are very similar to our previous findings.

**Classification of Pushkin Circle.** In order to classify the individuals mentioned in the book *Pushkin and his Entourage* ([Chereiskii, 1988](#)), we developed and applied a GPT-based classifier. This approach helps to overcome common issues found in traditional text analysis methods discussed in ([Ash & Hansen, 2023](#)). The classifier analyzes textual descriptions of meetings and extracts key information about each individual. The classifier identifies whether the person is related to Pushkin, a friend, a noble or peasant, and whether they hold liberal, conservative, loyalist, or radical views. It also detects whether the person has military or civilian connections, or if they were involved in creative professions. Descriptive statistics on the range and diversity of these encounters can be found in Panel A of Table [A4](#).

To perform this analysis, we used GPT model 4o-mini designed to extract specific in-

formation and return the results as a dictionary object. After running the classification, we validated the results using alternative methods, e.g., the BART classifier (Lewis et al. (2019)). As an additional check, we applied a CBOW model pre-trained on Russian Wikipedia to calculate text centroids and their distances to key words such as “relatives” and “friends.” We also used the BART model to validate our GPT classifier and ran further robustness checks based on text length, and finally, a manual validation of the GPT-based results. All these tests suggest the GPT classifier is extremely robust.<sup>14</sup> The exact GPT prompt utilized in this analysis is provided on the following page.

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<sup>14</sup>All these checks and validation exercises are available on request.

## *GPT Classification Prompt*

You will receive an article or biographical entry about a person.

Based on the provided text, extract specific information according to the following questions.

Answer each question concisely and explain the reasoning in 1-2 sentences.

If the information is not explicitly stated or implied in the text, respond with 'Impossible to tell.'

Return the answers strictly as a valid JSON object.

Do not include any text or explanation outside the JSON.

Use the following structure and scale: No, Unlikely, Likely, Yes, Impossible to tell.

```
{
  "relative_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Is the person related to Pushkin?
  "relative_txt": "Explanation for whether the person is related to Pushkin",
  "friend_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Is the person a friend of Pushkin?
  "friend_txt": "Explanation for whether the person is a friend of Pushkin",
  "freq_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Does this text contain a long history of interaction between the person and Pushkin?
  "freq_txt": "Explain why",
  "noble_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Are there indications that the person is a (noble) or (landowner)?
  "noble_txt": "Explanation for whether the person is noble",
  "peasant_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Are there indications that the person is a peasant?
  "peasant_txt": "Explanation for whether the person is a peasant",
  "liberal_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Does this text show signs that the person is liberal, progressive or reformist
  (e.g., supporting political or social change)?
  "liberal_txt": "Explanation for whether the person is progressive or reformist",
  "conservative_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Does this text show signs that the person is conservative or monarchist
  (e.g., opposing reforms or supporting the status quo)?
  "conservative_txt": "Explanation for whether the person is conservative or monarchist",
  "loyalist_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Is there any indication in the text that the person is a loyalist,
  showing unwavering support for the ruling government or monarchy and
  opposing radical change or revolution?
  "loyalist_txt": "Explanation for whether the person is a loyalist,
  showing unwavering support for the ruling government or monarchy
  and opposing radical change or revolution",
  "radical_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
  # Is there any indication in the text that the person has at least some connections
  to radical movements, activities and/or secret political organizations,
```

```
and/or was a political radical or revolutionary?
"radical_txt": "Explanation for whether the person has at least some connections
to radical movements, activities and/or secret political organizations,
and/or was a political radical or revolutionary",
"military_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
# Is the person in the military?
"military_txt": "Explanation for whether the person is in the military",
"civilian_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
# Is the person a civilian?
"civilian_txt": "Explanation for whether the person is a civilian",
"creative_bin": "No/Unlikely/Likely/Yes/Impossible to tell",
# Are there indications that the person is in a creative profession (e.g., writer, artist)?
"creative_txt": "Explanation for whether the person is in a creative profession"
}
```

TABLE B1  
DESCRIPTION OF DATA SOURCES

Variable	Description	Source
Sovremennik corpus	Contents of the <i>Sovremennik</i>	“Sovremennik [The Contemporary]” (1836–1866)
Sovremennik subscribers	Number of subscribers in the county to <i>Sovremennik</i> per year for 1859, 1860, and 1861	“Sovremennik [The Contemporary]” (1862)
Political Violence	A list of violent attacks, extracted from the biographies of individuals who died during revolutionary unrest	<i>Kniga russkoi skorbi [The Book of Russian Sorrow]</i> (1908–1914)
Revolutionary Publications	Propaganda materials of social movements, organizations and political parties at the initial stage of mass workers’ protest in Russia (1895-1904)	“Agitacionnye materialy” (1895–1904)
<i>A writer’s diary</i> subscribers	Subscribers to Feyodor Dostoevsky’s magazine <i>A writer’s diary</i> (1881)	Dostoyevskaya (1881)
Literacy	Literacy rate from 1897 Census	Buggle and Nafziger (2021)
Schools, 1894	Total county number of schools per 1000, 1894	Buggle and Nafziger (2021)

TABLE B1  
(CONTINUED)

Variable	Description	Source
Schools, 1911	Total number of schools per 1000, 1911	<a href="#">Buggle and Nafziger (2021)</a>
Schools, 1911	Total number of schools per 1000, 1911	<a href="#">Buggle and Nafziger (2021)</a>
Catherine's contacts	Locations of receivers of Catherine the Great letters and locations from where she sent her letters	<a href="#">Kahn and Rubin-Detlev (2021)</a>
Catherine's correspondence	Locations of receivers of Catherine the Great letters	<a href="#">Kahn and Rubin-Detlev (2021)</a>
Writers	Number of writers by year and location of birth	<a href="#">Wikidata</a>
Prominent individuals	Number of prominent individuals by year and location of birth	<a href="#">Wikidata</a>
Politicians	Number of politicians by year and location of birth	<a href="#">Wikidata</a>
Military	Number of military individuals by year and location of birth	<a href="#">Wikidata</a>
Scientists	Number of scientists by year and location of birth	<a href="#">Wikidata</a>
University teachers	Number of university teachers by year and location of birth	<a href="#">Wikidata</a>

TABLE B1  
(CONTINUED)

Variable	Description	Source
Artists, musicians, theater	Number of artists, musicians, theater workers by year and location of birth	<a href="#">Wikidata</a>
Post stations	Post stations on Piadyshev atlas (1820)	<a href="#">The Imperia Project</a> (2024)
Factories	Factories on Piadyshev atlas (1820)	<a href="#">The Imperia Project</a> (2024)
Military objects	Military objects on Piadyshev atlas (1820)	<a href="#">The Imperia Project</a> (2024)
Tavernas	Tavernas on Piadyshev atlas (1820)	<a href="#">The Imperia Project</a> (2024)
Monasteries	Monasteries on Piadyshev atlas (1820)	<a href="#">The Imperia Project</a> (2024)
Province (Gubernia)	Province shapefiles (1897)	<a href="#">Kessler (2017)</a>
County (Uezd)	county shapefiles (1897)	<a href="#">Kessler (2017)</a>
Lat and lon (centroid)	Latitude and longitude of county centroid	Own calculation
Distances to Moscow and Saint Petersburg		Own calculation
Distances to Moscow and Saint Petersburg		Own calculation

TABLE B1  
(CONTINUED)

Variable	Description	Source
Shares of serfs	Share of serfs before Abolition of serfdom (1861)	<a href="#">Bugle and Nafziger (2021)</a>
Logarithm of population density in 1858		<a href="#">Bugle and Nafziger (2021)</a>
Other controls	Factories in 1868, Gulag camps, Schools before 1856, Forest cover, Wheat index, Percent of Jewish people 1870	<a href="#">Bugle and Nafziger (2021)</a>