# The Threat of Faith: The Determinants and Legacies of Soviet Anti-Religious Repression

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**Abstract**

Religion has rarely faced state power as total as the Soviet Union's. Atheism was official policy for seven decades, and the state closed or destroyed 84 percent of the Orthodox churches standing in Russia in 1917. The campaign was nonetheless selective, and this paper asks what governed it and what it left behind. The evidence is a new dataset covering the near-universe of those churches – 21,238 buildings – with closure, destruction, and reopening dates, materials, and types recovered from free-text histories by a large language model. Even an unconditional ideological aim, the results show, was carried out like a constrained optimization. Facing limited enforcement capacity, the state acted first on the churches it most valued suppressing: older and larger buildings, those near past unrest, and those in places where the security apparatus was strong and the local church stock too sparse to strain it. Historical religiosity accounts for only part of the pattern. Conditional on acting, the disposal decision tracked reuse value: prominent masonry churches were closed and converted to secular use, while wooden and dilapidated ones were demolished, most sharply in the Stalin years. Using plausibly exogenous variation in repression built from these determinants, chiefly the physical composition of the local 1917 stock, the paper estimates the long-run effect on religiosity today and finds it faint. Repression is associated with somewhat lower service attendance and a lower stated importance of religion, by 0.1 to 0.3 of a standard deviation, but with no measurable change in religious affiliation, identity, or belief. A cohort analysis indicates that these near-null local effects are most consistent with an impact of repression that operated at the national and generational level rather than locally, and with a partial recovery of religiosity since the Soviet collapse.

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# 1 Introduction

Religious organizations have shaped political authority for centuries. They serve states as a source of legitimacy and a channel of mobilization, but they also hold a rival claim on the loyalty of subjects (Bazzi et al., 2020, Belloc et al., 2016, Cantoni et al., 2018, Chaney, 2013, Heldring et al., 2021, Saleh and Tirole, 2021). A state that regards an autonomous religious institution as a threat can respond in one of two ways: by co-opting it, or by confronting it. The economics of religion has concentrated on co-optation and on religious-market competition (Cantoni et al., 2018, Iyer, 2016, McCleary and Barro, 2006). Sustained confrontation – the deliberate, prolonged repression of religion by the state – is less well understood. Two things in particular remain unclear: why a government undertakes such repression, and what the repression leaves behind once it stops.

The sharpest historical instance of such confrontation is the Soviet Union. The Bolshevik state was the first government to make the elimination of religion an explicit aim of policy, and it pursued that aim for seven decades (Froese, 2008, Pospielovsky, 1984). Even so, it did not act against every house of worship at once. The closure and destruction of Orthodox churches was strikingly uneven across localities, and it was concentrated in a few years, above all 1937–1939 (Davis, 1995). Two questions follow. If the objective was absolute, what accounts for the unevenness in how it was carried out? And decades after the repressing state has dissolved and religion is again legal, how much of the campaign is still legible in what people believe and how they practice? A cross-country literature finds that communist rule lowered religiosity, and that religiosity recovered only in part after communism ended (Alesina and Fuchs-Schündeln, 2007, Barro and McCleary, 2003, McCleary and Barro, 2006). Within a single repressing state, however, the evidence has been thin. This is so above all at the level of the individual building and the individual believer, and largely because building-level data on which churches were repressed has not existed.

This paper studies the determinants and the long-run consequences of Soviet anti-religious repression at two levels of resolution: the individual Orthodox church and the individual survey respondent. On the determinants side, it asks which churches the Soviet state closed, which it destroyed rather than converted to secular use, and what predicts each choice. On the consequences side, it asks whether contemporary religiosity in Russia is lower where local repression was more intense, and, given that the association turns out to be weak, why it is weak.

The empirical core is a new building-level dataset. It is drawn from temples.ru, a collaborative catalogue that for the pre-revolutionary period is close to a full enumeration (temples.ru, 2025).

The catalogue lists 21,238 Orthodox buildings active in 1917, of which 91.5 percent carry precise coordinates. Each building's free-text history is passed through a large language model that extracts structured fields: the year of foundation, the last pre-1917 renovation, whether and when the building was closed and destroyed, its status today, its construction material, and its type. In the 1917-active stock, 84.0 percent of buildings were closed or destroyed at some point in the Soviet period. The extracted timing reproduces the documented chronology of Soviet policy, including the Stalin-era concentration, the wartime pause, and the Khrushchev-era secondary wave.

Each church is merged to historical covariates that proxy the primitives of a short decision-theoretic framework (e.g., the 1897 Orthodox population share, the local density of churches, security-police personnel per capita in the late 1930s, distance to the 1937 railway, the 1917 Constituent Assembly vote, and distance to the nearest Soviet-era uprising). For the consequences analysis, respondents in the seventh wave of the World Values Survey (2017, 1,810 respondents in Russia) are linked to the church stock within 50 km. Supporting evidence comes from the ARENA survey, the Life in Transition Survey, and the Russia Longitudinal Monitoring Survey panel. The framework treats repression as constrained. Enforcement capacity within a campaign wave is limited, so the state ranks the churches in a locality by the value of suppressing each one and acts on those above a capacity-determined cutoff. Symbolic importance raises the value of acting at all. Reuse value governs whether an acted-on building is repurposed or demolished.

The determinants results support that reading. Across 1897 provinces, the repressed share of the church stock rises only weakly with the 1897 Orthodox population share, and it falls with the pre-revolutionary density of churches ($-0.14$ percentage points of closure per additional church per capita, $p < 0.01$). Where more buildings competed for a fixed enforcement capacity, a smaller fraction of them was acted on. At the church level, with province fixed effects, three regularities emerge. First, older and larger buildings were more likely to be repressed at all: a church is 14 percentage points more likely than a chapel, and a monastery 29. Proximity to a recorded Soviet-era uprising raises the probability by about two percentage points per log unit of distance. Second, among repressed buildings, wooden and long-unrenovated structures were destroyed rather than closed and reused. The wood coefficient ($+0.31$) is the largest in the table, and brick and stone buildings were converted instead. Third, this selection rule was a Stalin-era phenomenon: the age and condition gradients are larger in the 1928–1941 columns and absent in the Khrushchev columns. The state's own heritage bureaucracy left a further trace. A 1928 Glavnauka decree

denied monument protection to buildings founded after 1825. A difference-in-discontinuities at that founding-year cutoff shows that, once the rule was in force, churches founded just after 1825 were destroyed relatively more often, by +0.25 to +0.35 across post-1928 windows (all $p < 0.05$). The same cutoff yields nothing in a 1953–1964 falsification window.

The consequences results are more modest. At the regional level, in the ARENA survey (2012, 79 regions), no measure of religiosity is related to the local repressed share. At the individual level, in the World Values Survey, of nine standardized religiosity measures a negative association with local repression appears on two: service attendance and the stated importance of religion, each at about 0.1 to 0.3 of a standard deviation. The other seven measures – affiliation, self-identification as religious, organizational membership, and belief in God among them – show nothing. Adding the determinants-side predictors as controls makes the importance coefficient more negative rather than less, the signature of negative selection. An omitted-variable bound (Oster, 2019) indicates that at least one commitment measure survives plausible unobserved selection under each research design. The local repressed share is then instrumented with the physical composition of the 1917 stock, using five instruments that include a recentered shift-share (Borusyak et al., 2022). For attendance and importance the two-stage estimates are same-signed and somewhat larger, at −0.2 to −0.3 of a standard deviation, but imprecise, because the first-stage statistics sit near the conventional threshold. The instruments therefore neither confirm nor overturn the controlled association.

A discussion section weighs why the individual-level evidence is this thin, drawing on the Life in Transition Survey and the RLMS panel. Coarse measurement contributes but is not the whole story: the local closed-or-destroyed share is a positive predictor of whether a Life in Transition respondent reports that their family was subjected to religious repression under communism. Two readings fit the remaining evidence best. The first is that the effect operated at the national and cohort level rather than locally. RLMS self-identification is lowest for the cohorts whose formative years fell under Stalin (−0.22 of a standard deviation, $p < 0.01$) and Khrushchev, and highest for those who came of age after 1980. A within-area split by local repression intensity, by contrast, yields a flat cohort gap. The second reading is that religiosity has partially recovered: within-person switching accounts for +9.6 to +10.1 percentage points of the post-Soviet rise in religious self-identification, roughly twice the aggregate change. Recovery is only partial. Russian religious practice remains below that of other historically Orthodox countries (e.g., Greece, Romania,

Georgia, and Serbia).

This paper makes three contributions. First, it assembles the first near-complete building-level micro-record of Soviet anti-religious repression. For the near-universe of the 1917 Orthodox church stock, it recovers closure, destruction, and reopening years, construction materials, building types, and founding and renovation dates. This is also a methodological contribution to the use of text as data in economics (Gentzkow et al., 2019). The raw material is thousands of unstructured Russian-language building histories, written by many contributors to no common standard. A large language model turns them into a consistent structured panel, with a per-field precision flag and a cross-task validation exercise (Appendix A), at a scale that manual coding would not reach. The same procedure extends to other bodies of local historical text (e.g., parish registers, cadastral descriptions, and land-survey notes) for which structured data does not yet exist. Second, it provides a within-repressing-state, building-level account of how anti-religious repression was targeted. The prior literature on states and religion has been cross-country (Barro and McCleary, 2003, McCleary and Barro, 2006) or has focused on co-optation and religious competition (Bazzi et al., 2020, Cantoni et al., 2018, Saleh and Tirole, 2021). Work on Soviet repression, in turn, has largely treated repression intensity as given (Rozenas et al., 2024, Rozenas and Zhukov, 2019, Toews and Vézina, 2025, Zhukov and Talibova, 2018). By asking how the state chose its targets, this paper finds that an avowedly absolute ideology was implemented like constrained optimization. Third, it quantifies the long-run religious imprint of that repression within one country, and shows that the imprint is largely national and cohort-wide rather than local. This speaks to the persistence-of-culture literature (Giuliano and Nunn, 2021, Nunn, 2009) and to the legacy-of-communism literature (Alesina and Fuchs-Schündeln, 2007, Nikolova et al., 2022). The contrast between a weak local gradient and a visible national one is a caution for within-country repression-legacy designs.

The paper also connects to three further literatures. Studies of religious persecution outside the Soviet case – the Spanish Inquisition (Drelichman et al., 2021) and the Pale of Settlement (Grosfeld et al., 2013) – find persistent effects on trust, development, and religiosity, and provide a comparative benchmark for the magnitudes here. The post-Soviet religious-revival literature (Evans and Northmore-Ball, 2012, Froese, 2004, Liu, 2024) supplies the aggregate trend against which the local variation is measured, and its period-versus-cohort decomposition method (Stolz et al., 2023) is applied here to the RLMS panel. On the mechanism, the finding that repression left

a mark on communal practice more than on private identity parallels evidence that authoritarian censorship targets collective action rather than private criticism (King et al., 2013). Finally, the paper sits within the new quantitative economic history of Russia (Markevich and Zhuravskaya, 2018, Zhuravskaya et al., 2024).

The rest of the paper proceeds as follows. Section 2 gives the historical background on religion in the late Russian Empire, Soviet anti-religious policy, and religiosity in Russia today. Section 3 sets out the decision-theoretic framework. Section 4 describes the church dataset, the historical covariates, and the survey data. Section 5 presents the determinants results at the province and church levels. Section 6 presents the consequences results from the regional, controlled, and instrumental-variables specifications. Section 7 weighs four explanations for why the individual-level evidence is thin. Section 8 concludes.

# 2 Historical Background

The character of Soviet anti-religious repression cannot be read from its stated aims alone. It depended on the religious landscape the Bolsheviks inherited and on the way state policy toward religion evolved over seven decades. This section provides that context in three parts. Section 2.1 describes religion in the late Russian Empire, where affiliation was near-universal and the Orthodox Church was administered as an arm of the state. Section 2.2 summarizes Soviet anti-religious policy, the instruments on which it relied, and the rise and fall of its intensity across the Soviet period. Section 2.3 describes religious identification and practice in the late Soviet Union and in contemporary Russia. The account rests on the historical literature; the datasets built for this paper are introduced in Section 4.

## 2.1 Religion in the Late Russian Empire

On the eve of the First World War, the Russian Empire was among the most institutionally religious societies in Europe. Religious affiliation was close to universal, the Orthodox Church held the status of an established state church, and religion structured law, education, and the recording of vital events. This near-universal affiliation, however, concealed real and growing unevenness in religious practice.

The Orthodox Church was governed as a department of the state. Since Peter the Great

abolished the Patriarchate in 1721, the Church had been administered by the Holy Synod under a lay Ober-Procurator of cabinet rank who answered to the Tsar (Freeze, 1985, Werth, 2014). Other confessions were legally ranked as "tolerated foreign faiths" and administered through state-supervised spiritual boards. The right to proselytize belonged to the Orthodox Church alone, and conversion out of Orthodoxy was a punishable offense until the Edict of Toleration of April 1905 (Shevzov, 2004, Werth, 2014). There was, moreover, no civil registration of birth, marriage, or death: these events were recorded only in confessional registers kept by the clergy, so that before 1905 there was no administrative way to hold no religion at all (Freeze, 1985, Shevzov, 2004).

The 1897 Census of the Russian Empire, the only empire-wide enumeration ever conducted, recorded essentially no one without a religion. Orthodox Christians were 69.4 percent of the population, followed by Muslims at 11.1 percent, Roman Catholics at 9.1 percent, and Jews at 4.2 percent (Central Statistical Committee of the Ministry of Internal Affairs, 1905, Electronic Archive of Russian Historical Statistics, 2025). It is worth noting that the census recorded legal and nominal confessional status rather than belief or practice, and that the ban on apostasy until 1905 means the recorded Orthodox share overstates active conviction to an unknown degree.

Religion was also woven into everyday institutions. The Church maintained an extensive network of parish primary schools, which for much of the nineteenth century accounted for a large share of primary schooling in the empire and, in many rural areas, were the only schooling available (Chulos, 2003). At the same time, religious indifference was a recognized phenomenon well before 1917: by the middle of the nineteenth century roughly nine percent of Orthodox men in some dioceses did not fulfill the annual obligation of confession (Andreeva, 2008), and by 1900 the erosion of institutional religious practice among urban workers and parts of the educated public was an active concern of contemporaries (Shevzov, 2004). Hence, late-imperial Russia is best described as near-universal in religious affiliation and institutionally saturated by religion, but already uneven in observed practice. This is the baseline against which Soviet policy operated.

## 2.2 Soviet Anti-Religious Policy

The Bolshevik state was the first government to adopt the elimination of religion as an explicit aim of policy, and it pursued that aim for seven decades with instruments and intensity that varied over time. Soviet anti-religious action worked through three channels: (1) the closure, repurposing, and physical destruction of houses of worship; (2) the arrest, exile, and execution of clergy and

active believers; and (3) organized atheist propaganda and education (Froese, 2008, Pospielovsky, 1984).

The legal foundation was the decree of January 1918 on the separation of church from state and school from church. It disestablished the Orthodox Church, nationalized all religious property, barred religious instruction in state schools, and denied religious associations legal personality; civil registration of marriage and divorce had been introduced a month earlier (Pospielovsky, 1984, Stricker, 1995). The Civil War years brought violent requisitioning, the 1922 campaign to confiscate church valuables under cover of famine relief, tribunals of clergy, and the arrest of Patriarch Tikhon (Husband, 2000, Pospielovsky, 1984). During the New Economic Policy the state also sponsored the "Renovationist" schism in an effort to split the Church from within (Pospielovsky, 1984).

Repression escalated sharply with collectivization. The Law on Religious Associations of April 1929 confined religious activity to registered congregations, and a constitutional amendment the same year replaced "freedom of religious propaganda" with the narrower "freedom of worship"; clergy households were taxed and disenfranchised as class enemies (Froese, 2004, Pospielovsky, 1984). Closures of churches, mosques, synagogues, and Buddhist temples became mass events through the 1930s and peaked during the Great Terror of 1937–1938, when clergy of every faith were arrested and largely executed on "counter-revolutionary" charges. By the end of the decade the number of functioning Orthodox churches had fallen from tens of thousands to, by many accounts, only a few hundred nationwide (Davis, 1995, Froese, 2008, Pospielovsky, 1984). The population census of 1937, which asked respondents about religious belief and was suppressed once its results became known, still recorded a majority of adults declaring themselves believers (Froese, 2008).

The German invasion produced an abrupt and instrumental reversal. In 1943 Stalin permitted the election of a Patriarch for the first time since 1925, allowed the reopening of churches and seminaries, and created state councils to supervise and contain religious life (Chumachenko, 2002, Davis, 1995). Thousands of parishes reopened, many of them in territory that had been under German occupation. A second campaign followed under Khrushchev between 1958 and 1964; it relied on administrative deregistration, punitive taxation, and closure rather than mass execution, and it closed roughly half of the parishes that had been open in the mid-1950s (Chumachenko, 2002, Davis, 1995). The Brezhnev decades settled into bureaucratic containment through registration, surveillance, and employment discrimination rather than new waves of closure (Pospielovsky, 1984).

State-sponsored militant atheism effectively ended with the officially sanctioned celebrations of the millennium of the Christianization of Rus' in 1988, and the Soviet and Russian laws on freedom of conscience of 1990 dismantled the 1929 framework (Davis, 1995).

Although the Orthodox Church was the principal and continuous target throughout the Soviet period, the same repertoire of measures was applied to Muslims, Roman and Greek Catholics, Protestants, Jews, Buddhists, and Old Believers (Froese, 2008, Pospielovsky, 1984).

## 2.3 Religion in the Late Soviet Union and Contemporary Russia

The end of Soviet restrictions was followed by a rapid recovery of religious identification that was not matched by a comparable recovery of religious practice. This gap is the central descriptive fact that motivates the analysis of long-run consequences in Section 6.

After 1991 the Russian Orthodox Church re-emerged as the dominant religious institution in Russia, and systematic survey measurement of religiosity began (Evans and Northmore-Ball, 2012). In the World Values Survey, the share of respondents in Russia identifying as Orthodox Christians rose from about 28 percent in 1990 to about 48 percent in 1995 and about 56 percent in 2017, while the share reporting no religious affiliation fell from about 66 percent to about 29 percent over the same period (Haerpfer et al., 2022). Panel (a) of Figure 1 shows this shift. Part of the early rise plausibly reflects the removal of reasons to conceal affiliation under Soviet rule, but the continued increase well after 1991 indicates genuine re-identification rather than disclosure alone (Evans and Northmore-Ball, 2012).

Religious practice recovered far less. Among respondents in Russia who identify as Orthodox, the share attending services at least monthly rose only from about 16 percent in 1990 to about 22 percent in 2017, and a large majority still attends rarely or never (Haerpfer et al., 2022). Panel (b) of Figure 1 shows this series. This identification-without-practice profile is unusual among Orthodox-majority countries. In the most recent common survey wave, about 46 percent of Orthodox respondents in Greece attended services at least monthly, more than double the share in Russia, and about 13 percent attended less than once a year or never (Haerpfer et al., 2022). Panels (c) and (d) of Figure 1 place Russia in the cross-country distribution: its Orthodox self-identification share is mid-range among Orthodox countries, while its rate of regular attendance sits near the bottom.

Two features of this picture matter for what follows. First, religious identification in Russia

recovered strongly after 1991, so any long-run suppression of religiosity by Soviet policy, if it exists, is more likely to show up in religious *practice* than in affiliation. Second, even practice partially recovered, and Russia's level of regular attendance, while low by the standards of other Orthodox countries, is not obviously the residue of repression rather than of the broader secularization common to industrialized societies. Section 6 therefore looks for a within-country relationship between local repression intensity and present-day religiosity, and Section 7 returns to why that relationship turns out to be so faint.

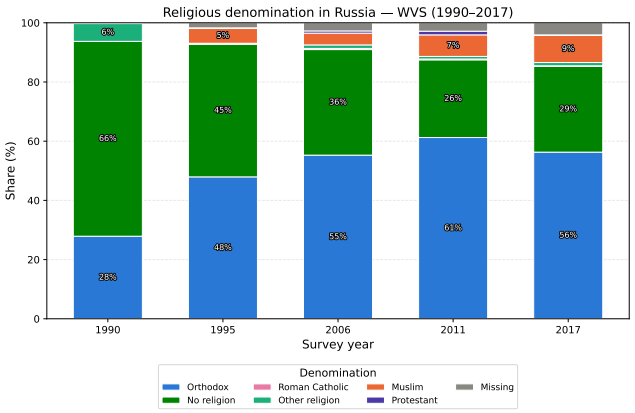
# 3 A Simple Framework

The Soviet state held an unconditional ideological objective toward religion, yet it did not close or destroy every church at once. As Section 2.2 describes, repression came in waves and was concentrated in particular periods, and which buildings were acted on, and how, varied with their characteristics. This section sets out a minimal decision-theoretic framework that organizes that variation and yields the predictions tested in Section 5. The framework is deliberately spare. It is an accounting of the payoffs to a single choice, not an equilibrium model.

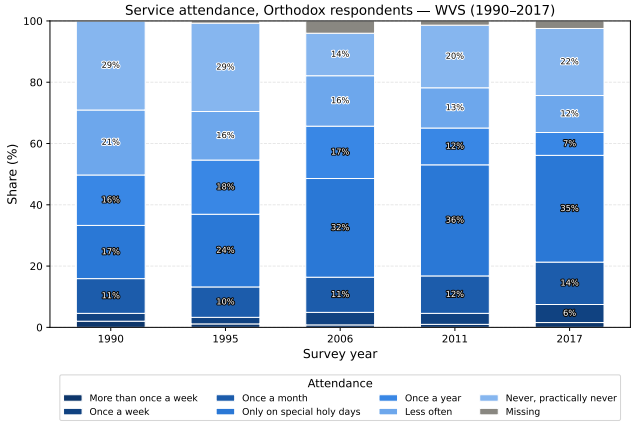
Consider the state's problem for a single church $i$ that was active in 1917 and located in locality $l$. The state chooses one of three actions: (1) leave the church operating; (2) close it and convert the building to secular use; or (3) destroy it.

The state did not treat each church in isolation. Within a campaign wave, the apparatus that carried out repression – the security police, local party organs, and the councils that processed closures – could handle only a limited number of churches (Chumachenko, 2002, Davis, 1995). The state therefore ranked the churches in a locality by how much it valued suppressing them and acted on those above a cutoff, denoted $\tau_l$. A church was closed or destroyed only if the value of acting on it exceeded $\tau_l$. Two forces raise $\tau_l$, so that fewer churches are acted on: (1) less coercive and administrative capacity in the locality, denoted $K_l$; and (2) a larger local church stock competing for that capacity. Where capacity is ample relative to the stock, $\tau_l$ is low and almost every church the state has any reason to suppress is acted on; where capacity is scarce, only the highest-value targets are. Figure 2 illustrates the comparison.

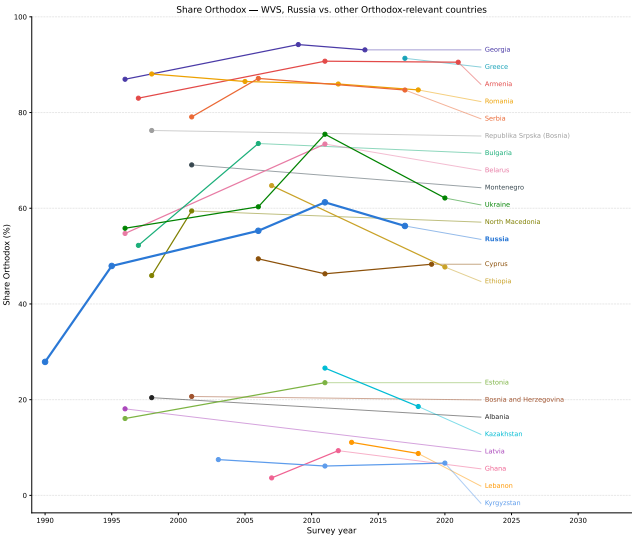
Three quantities govern the choice. The first is the *suppression benefit* $B_i$, the value to the state of removing $i$ as an operating religious site. $B_i$ is larger for churches of greater symbolic importance



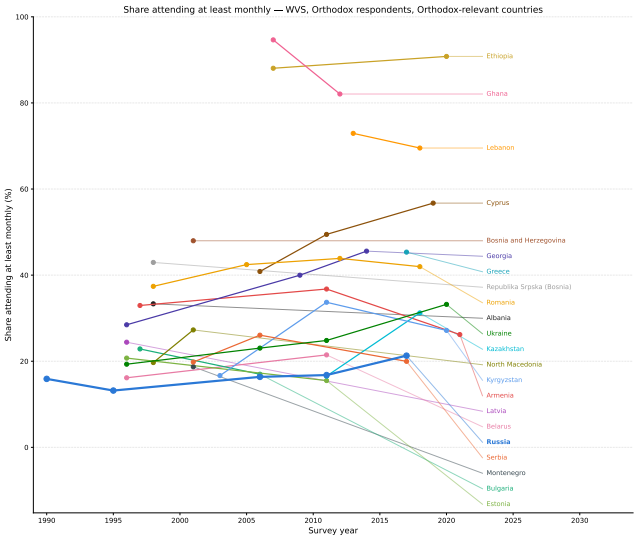

(a) Religious affiliation, Russia




(b) Service attendance, Orthodox respondents, Russia




(c) Orthodox self-identification, by country

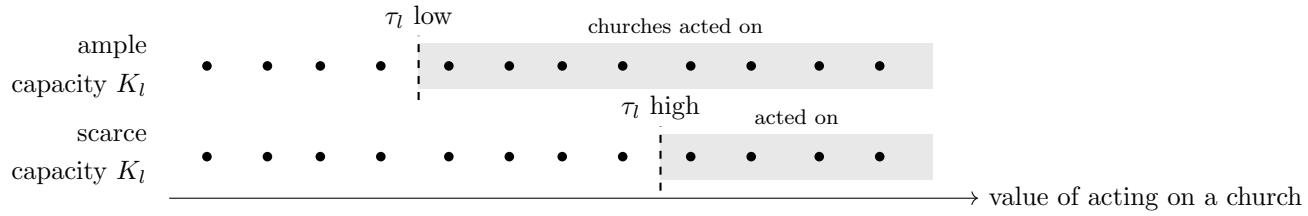



(d) Attendance at least monthly, Orthodox respondents, by country

*Notes:* All panels use the World Values Survey. Panels (a) and (b) show Russia across survey waves from 1990 to 2017: panel (a) is the distribution of religious affiliation among all respondents, panel (b) is the frequency of service attendance among respondents who identify as Orthodox. Panels (c) and (d) compare Russia (highlighted) with other countries that have a non-trivial Orthodox population: panel (c) is the share of all respondents identifying as Orthodox, panel (d) is the share of Orthodox respondents attending services at least monthly.

Figure 1: Religious Identification and Practice in Russia and Other Orthodox Countries

$S_i$ – older, larger, and historically more prominent buildings, whose removal weighs more heavily on local religious life – and in localities of greater political risk $P_l$, where the regime regarded the population as disloyal or prone to unrest and where a functioning church was more useful as a site of coordination. The second is the *reuse value* $R_i$, the worth of the building in secular use as a warehouse, club, school, or museum, which is higher for durable and sizable structures: brick or stone rather than wood, sound rather than dilapidated, and a church or monastery rather than a




*Notes:* Each dot is a church in the locality, placed by the value to the state of acting on it (closing or destroying it). The state acts on churches to the right of the cutoff $\tau_l$. When local capacity $K_l$ is scarce relative to the number of churches, $\tau_l$ is higher and fewer churches are repressed.

Figure 2: Enforcement Capacity and the Extensive Margin

small chapel. The third is the *incremental value of destruction* $G_i$, what razing achieves beyond closure – the permanent removal of the structure as a latent focal point that cannot later be reopened or reclaimed – which plausibly rises with $S_i$. Closure carries a small conversion cost $k_C$; destruction carries a demolition cost $k_D$ that is lower for wood, dilapidated, and small buildings.

Each quantity is a function of church or locality characteristics. Let $m_i$ denote construction material ordered by durability (wood least, brick and stone most), $c_i$ physical condition (higher for a more recently renovated building), $t_i$ building type ordered by size and prominence (chapel, church, monastery), and $N_l$ the number of churches in locality $l$. Then

$$B_i = B(S_i,\, P_l), \quad R_i = R(m_i,\, c_i,\, t_i), \quad G_i = G(S_i), \quad k_D = k_D(m_i,\, c_i,\, t_i), \quad \tau_l = \tau(K_l,\, N_l). \tag{1}$$

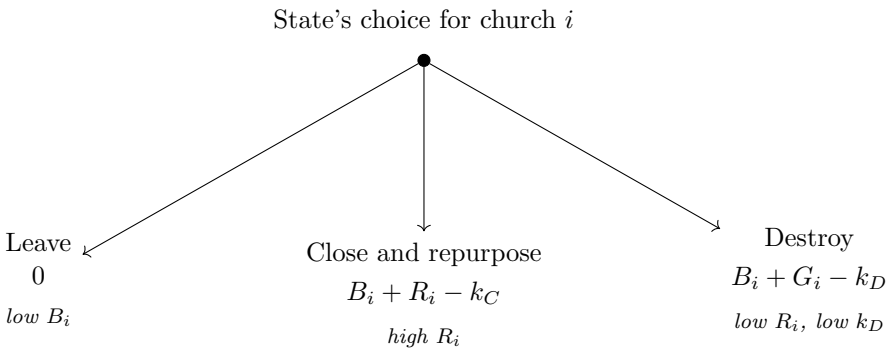
All five functions are increasing in every argument, with two exceptions: $k_D$ is *decreasing* in $m_i$, $c_i$, and $t_i$, since durable, sound, and larger buildings are costlier to raze, and $\tau_l$ is *decreasing* in $K_l$, since more local capacity lowers the cutoff.

Normalizing the payoff of leaving the church operating to zero, the three actions yield

$$\text{Leave: } 0, \qquad \text{Close: } B_i + R_i - k_C, \qquad \text{Destroy: } B_i + G_i - k_D. \tag{2}$$

The state acts on church $i$ – closes or destroys it – when the better of the two active payoffs exceeds the threshold $\tau_l$ introduced above:

$$\max\{\, B_i + R_i - k_C, \quad B_i + G_i - k_D \,\} > \tau_l. \tag{3}$$




*Notes:* The state chooses one action per church. Leaving the church operating is preferred when the suppression benefit $B_i$ is low relative to the capacity threshold $\tau_l$. Among churches the state acts on, closure and repurposing is preferred when the building's reuse value $R_i$ is high, and destruction is preferred when $R_i$ and the demolition cost $k_D$ are both low. $B_i$ rises with a church's symbolic importance $S_i$ and with the political risk $P_l$ of its locality.

Figure 3: The State's Decision for an Individual Church

Conditional on acting, the state destroys rather than closes when

$$G_i - R_i > k_D - k_C, \tag{4}$$

that is, when the incremental symbolic value of razing the building exceeds the reuse value it would forgo, net of the difference in costs.

This is a single choice, but it can be read as a sequence: first whether to act, then how. Under backward induction the two readings coincide, since

$$\max\{0,\ \text{Close},\ \text{Destroy}\} \ = \ \max\{\,0,\ \max\{\text{Close},\ \text{Destroy}\}\,\}. \tag{5}$$

The sequential reading is convenient here because it maps onto the empirical specifications in Section 5, which model the extensive margin (any repression) and the destruction margin (destroyed given repression) in separate equations, and onto the competing-risks survival analysis in the same section. It is also historically apt, since the decision to act was often set centrally as a quota or list while the disposal of the building was a local matter carried out later, a separation visible in the closure and destruction dates themselves (Section 4).

The framework delivers three predictions, which Section 5 takes to the data.

**Hypothesis 1** (Extensive margin)**.** A church was more likely to be closed or destroyed the greater its symbolic importance $S_i$ (building age, size, and type) and the greater the political risk $P_l$ of its locality (past unrest and anti-Bolshevik voting). By (3), repression was also more likely where the

threshold $\tau_l$ was low: where local coercive and administrative capacity $K_l$ was high (security-police presence, proximity to administration and rail infrastructure) and where the local church stock $N_l$ was small.

**Hypothesis 2** (Destruction margin)**.** Conditional on repression, a church was more likely to be destroyed than closed and repurposed when its reuse value $R_i$ and its demolition cost $k_D$ were both low: wood rather than brick or stone, poor physical condition, and a small chapel rather than a church or monastery.

**Hypothesis 3** (Division of labor between the margins)**.** Symbolic importance $S_i$ acts on the extensive margin, demolition cost $k_D$ acts on the destruction margin, and reuse value $R_i$ acts on both.

Hypothesis 3 follows from the framework directly: because a repurposable building makes the *close* option more attractive, its characteristics raise the value of acting at all, not only the choice of how to act. A pure separation, with structural characteristics confined to the destruction margin, would obtain only if the decision to act ignored the building's eventual disposal. Section 5 shows that the data follow this pattern, with building age acting on the extensive margin alone, construction from wood acting on the destruction margin alone, and building type and physical condition acting on both.

It is worth noting the limits of this framework. It is a decision-theoretic sketch rather than an equilibrium model: it allows no strategic response by believers, no learning across campaign waves beyond the capacity constraint, and no role for the internal principal–agent structure of the Soviet state. The primitives $S_i$, $P_l$, $R_i$, and $k_D$ are unobserved, and the empirical analysis replaces them with proxies – building age and type, 1917 election returns and proximity to unrest, construction material and renovation history – each of which is imperfect, and several of which load on more than one primitive, since a large old monastery is at once high in symbolic importance and high in reuse value. The predictions are therefore about dominant tendencies rather than clean exclusion restrictions.

Finally, the framework speaks to the state's choice, not to its effect. It predicts which churches were closed or destroyed and by what means; it says nothing about whether that repression changed religiosity generations later. Section 6 takes up that separate question empirically, across a range of religiosity measures. Thus the framework organizes the analysis of the state's decisions in Section 5; the analysis of long-run consequences in Section 6 does not rest on it.

# 4 Data

The analysis draws on three groups of data: a new building-level dataset on the closure and destruction of Orthodox churches, a set of historical variables that proxy for the determinants in Section 3, and survey data on contemporary religiosity. This section describes each in turn and then presents the main descriptive patterns.

## 4.1 A New Dataset on Church Closures and Destructions

The central dataset covers Orthodox religious buildings that were in use in 1917 within the present-day borders of Russia. It is built from temples.ru, a large collaborative catalogue of Orthodox churches that records, for each building, an administrative summary card and a free-text history (temples.ru, 2025). For the pre-revolutionary period the catalogue is close to a full enumeration: it lists 21,238 buildings active in 1917, of which 19,437 (91.5 percent) carry precise coordinates.

Each building's history is a paragraph of unstructured Russian text. This paper uses a large language model, accessed through the OpenAI API, to extract structured fields from these paragraphs: the year of foundation, the year of the last renovation before 1917, whether and when the building was closed during the Soviet period, whether and when it was destroyed, its status today, its construction material, its type (church, chapel, or monastery), its historical denomination (Orthodox or Old Believer), and, for closed or destroyed buildings, the use to which the structure was put. Each extracted year carries a precision flag distinguishing an exact date from one inferred from a period phrase. Appendix A reproduces the extraction prompt in full.

From these fields the paper constructs the outcomes used throughout: indicators for ever closed, ever destroyed, closed but not destroyed, closed or destroyed, and reopened, together with the year of each event and the building's age and years since last renovation as of 1917. In the 1917-active stock, 84.0 percent of buildings were closed or destroyed at some point in the Soviet period, 66.5 percent were closed, 35.6 percent were destroyed, and 33.8 percent were later reopened. Table 2 reports summary statistics.

Two limits of the dataset bear on the analysis. First, temples.ru is a collaborative catalogue, so its coverage could in principle tilt toward better-documented buildings. Appendix A shows that this concern is limited: the number of new records added each year has fallen to a low level,

consistent with the catalogue now being close to the full set of churches that existed in 1917, and the buildings still being added are disproportionately smaller and later-built rather than newly surfaced prominent ones – the opposite of what a prominence bias would produce. Second, a closure or destruction year is recoverable for 76.8 percent of closed or destroyed buildings, and roughly one building in five has no recorded construction material.

Two pieces of evidence support the reliability of the extracted fields. First, as Section 4.4 shows, the timing and composition of the extracted events track the documented chronology of Soviet anti-religious policy closely, including the Stalin-era concentration, the wartime pause, the Khrushchev-era secondary wave, and the post-1988 reopening. Second, the same extraction procedure applied to a separate task in this project – identifying and dating Soviet-era uprisings – produced output that agrees with an independent structured source and with manual review (Appendix A).

## 4.2 Historical Determinants

This paper assembles a set of historical variables, listed in Table 1, each of which serves as an observable proxy for one of the framework's primitives. Historical religiosity is measured by the Orthodox population share in the 1897 Imperial Census, defined on 1897 provincial boundaries. Separately, the number of churches per capita in 1897 measures the size of the local church stock, which the framework links to the enforcement threshold $\tau_l$: a denser stock means more buildings competing for a fixed capacity, and so a lower per-church probability of repression. This variable also partly reflects historical religiosity, since more religious areas built more churches, and the two readings cannot be fully separated here. Enforcement capacity is proxied by the per-capita strength of the state security apparatus in the late 1930s, from Memorial's personnel handbook, and by proximity to the 1937 railway network. Local political risk is proxied by the combined 1917 Constituent Assembly vote share of the Kadet and Rightist blocs – the anti-Bolshevik pole – and by the geodesic distance from each church to the nearest recorded Soviet-era uprising. The Bolshevik bloc share, the pro-regime pole, enters the determinants regressions in Section 5 as a complementary control. Province-level variables are merged to churches through their 1897 province; the others are computed at the building level. After merging, the church-level determinants analysis uses roughly 19,000 buildings. The 1917 election and the security-apparatus data cover most but not all provinces; Appendix B maps the coverage and the spatial distribution of each historical variable.

Table 1: Historical Determinants: Sources and Interpretation

| Variable | Source | Level | Proxy for (Section 3) |
|---|---|---|---|
| Orthodox population share, 1897 | 1897 Imperial Census, via the Electronic Archive of Russian Historical Statistics | 1897 province | local religiosity ($S$) |
| Churches per 100,000, 1897 | temples.ru 1917 stock over 1897 census population | 1897 province | size of the local church stock ($N_l$) |
| Security-police personnel per capita, 1935–1939 | Memorial, personnel handbook of the Soviet state security organs | 1897 province (crosswalked) | enforcement capacity ($K$) |
| Distance to nearest 1937 railway | Rozenas et al. (2024) replication data | church (geodesic) | development and administrative reach ($K$) |
| Kadet and Rightist bloc vote shares, 1917 | Constituent Assembly election returns (Protasov; Radkey compilations) | 1897 province (crosswalked) | anti-Bolshevik opposition ($P$) |
| Distance to nearest Soviet-era uprising | Wikidata and Wikipedia, extracted and hand-geocoded (187 events) | church (geodesic) | political risk ($P$) |
| Population within 100 km, 1926 | Toews and Vézina (2025) replication data | church (geodesic) | urbanization and stock context |

## 4.3 Contemporary Religiosity

The primary source for contemporary religiosity is the seventh wave of the World Values Survey, conducted in Russia in 2017 with 1,810 respondents (Haerpfer et al., 2022). This wave records respondent coordinates, which makes it possible to link each respondent to the churches and to the historical variables around their location. It also carries the widest set of religiosity measures used here: Orthodox affiliation, atheist self-identification, whether the respondent considers themselves a religious person, membership in a religious organization, frequency of service attendance, belief in God, and the stated importance of religion in life.

Three further sources play supporting roles. The third wave of the Life in Transition Survey (2016, 1,507 respondents in Russia) is used in Section 7 for a retrospective battery, which it uniquely carries, on whether the respondent's family experienced political repression under communism. The Russia Longitudinal Monitoring Survey, a household panel, is used for the descriptive cohort and switching evidence in Section 7. The ARENA survey (2012) is the only source covering a large number of regions – 79 – with a sample designed to be representative within each, but its data are released only at the regional level; it is used for the region-level evidence in Section 6.

For the individual-level analysis the paper summarizes local repression as an exposure share:

within a given radius of a respondent, the number of 1917 churches that were closed or destroyed, divided by the number active in 1917. The headline measure uses closed or destroyed buildings within 50 km; Section 6 varies the outcome, the radius, and the definition. In that section each outcome and the exposure share are standardized. Appendix B reports summary statistics for the World Values Survey and Life in Transition samples, maps respondent locations, and shows the distribution of the exposure share across respondents.

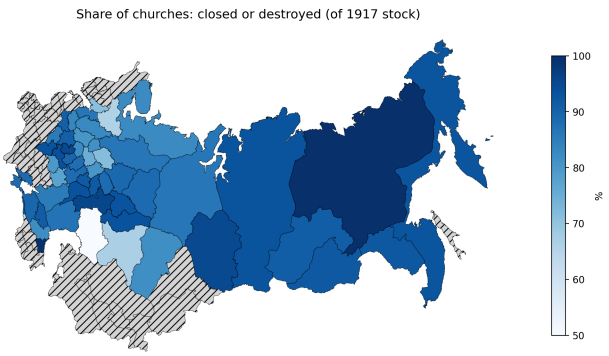
## 4.4 Descriptive Patterns

The extracted events reproduce the historical chronology of Soviet anti-religious policy. Among closures and destructions with a known year, 85.5 percent fall in the Stalin period (1924–1953), and the single busiest year is 1939. A distinct but far smaller second wave followed under Khrushchev: roughly 350 dated closures and destructions fall in the campaign years 1958–1964, against about 11,600 in the Stalin period. Figure 4 shows the regional distribution of closures and destructions and the year-by-year timing of each. There is substantial variation across regions, and closures and destructions are not perfectly correlated, so the two margins are not simply the same event measured twice.

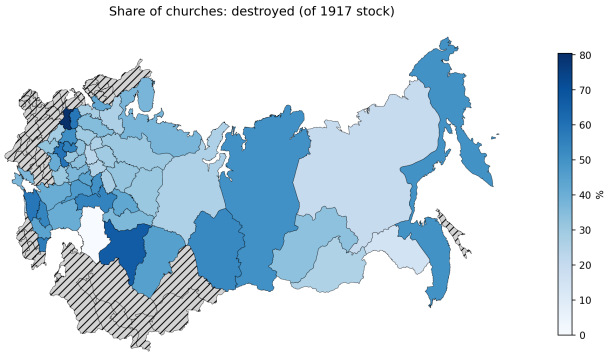
The stock of active churches collapsed between the mid-1930s and the early 1950s and then stayed low for three decades. Reopenings came in a small wartime bump between 1941 and 1948 and then, after almost nothing for forty years, a large wave from 1988 onward: of the 6,302 buildings with a recorded reopening year, 5,079 reopened in 1991 or later. Figure B4 in the appendix traces the status of the 1917 stock and the timing of reopenings year by year.

Closure and destruction rates vary sharply with building characteristics, and in a way that anticipates the framework's second and third predictions. Figure B5 in the appendix shows repression, destruction, and reopening rates by construction material, building type, and founding era. Conditional on being repressed, a wooden church was destroyed about twice as often as a brick one and reopened less than half as often; chapels were repressed less often than churches or monasteries but, once repressed, were destroyed rather than merely closed far more often; and monasteries were reopened at by far the highest rate. Founding era, by contrast, is a weak predictor in this unconditional comparison.

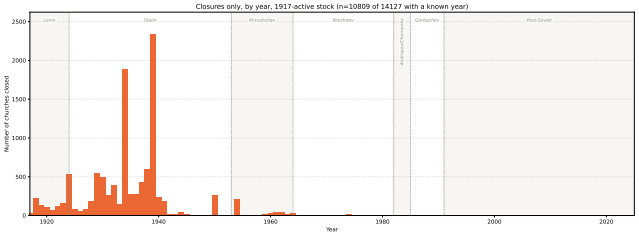
Finally, the record often shows what a closed church became. Among closed or destroyed buildings with a recorded subsequent use, the most common outcome is abandonment, followed



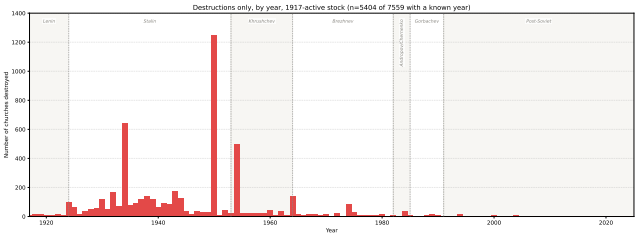

(a) Share closed or destroyed, by region




(b) Share destroyed, by region




(c) Timing of closures




(d) Timing of destructions

*Notes:* Panels (a) and (b) show, for each region, the share of the 1917-active Orthodox church stock that was closed or destroyed, and destroyed. Panels (c) and (d) show the distribution of recorded closure and destruction years. Vertical bands mark Soviet leadership periods.

Figure 4: Anti-Religious Repression Across Regions and Over Time

by conversion to a warehouse, a cultural club, a school, or a museum – the standard repertoire of Soviet repurposing. Appendix B gives the full breakdown. Thus the descriptive record is consistent both with the historical account in Section 2 and with the framework in Section 3, which the next section takes to the data.

Table 2: Descriptive statistics — churches data (1917-active stock)

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| **Panel A: Building characteristics (1917)** | | | | | |
| Year founded | 1763.7 | 134.4 | 700 | 1917 | 21,238 |
| Year of last renovation before 1917 | 1846.1 | 67.7 | 950 | 1917 | 21,238 |
| Material: brick (% of 1917 stock) | 38.53 | 48.67 | 0.00 | 100.00 | 21,238 |
| Material: wood (% of 1917 stock) | 22.03 | 41.45 | 0.00 | 100.00 | 21,238 |
| Material: stone (% of 1917 stock) | 19.06 | 39.28 | 0.00 | 100.00 | 21,238 |
| Material: other (% of 1917 stock) | 1.90 | 13.66 | 0.00 | 100.00 | 21,238 |
| Material: unknown (% of 1917 stock) | 18.48 | 38.81 | 0.00 | 100.00 | 21,238 |
| Building type: church (% of 1917 stock) | 77.28 | 41.90 | 0.00 | 100.00 | 21,238 |
| Building type: chapel (% of 1917 stock) | 19.77 | 39.82 | 0.00 | 100.00 | 21,238 |
| Building type: monastery (% of 1917 stock) | 2.92 | 16.84 | 0.00 | 100.00 | 21,238 |
| Denomination: Orthodox (% of 1917 stock) | 99.38 | 7.83 | 0.00 | 100.00 | 21,238 |
| Denomination: Old Believer (% of 1917 stock) | 0.60 | 7.74 | 0.00 | 100.00 | 21,238 |
| **Panel B: Closure, destruction, and reopening outcomes** | | | | | |
| Closed (% of 1917 stock) | 66.52 | 47.19 | 0.00 | 100.00 | 21,238 |
| Closed or destroyed (% of 1917 stock) | 83.96 | 36.70 | 0.00 | 100.00 | 21,238 |
| Closed, not destroyed (% of 1917 stock) | 48.37 | 49.97 | 0.00 | 100.00 | 21,238 |
| Destroyed (% of 1917 stock) | 35.59 | 47.88 | 0.00 | 100.00 | 21,238 |
| Reopened (% of 1917 stock) | 33.77 | 47.30 | 0.00 | 100.00 | 21,238 |
| Renovated, post-reopening (% of 1917 stock) | 34.40 | 47.51 | 0.00 | 100.00 | 21,238 |
| Active today (% of 1917 stock) | 40.02 | 48.99 | 0.00 | 100.00 | 21,238 |
| **Panel C: Timing (conditional on that outcome)** | | | | | |
| Year closed (of closed, not destroyed) | 1935.2 | 8.8 | 1917 | 1994 | 10,809 |
| Year destroyed (of destroyed) | 1946.7 | 15.3 | 1917 | 2024 | 5,405 |
| Year reopened (of reopened) | 1994.3 | 19.0 | 1889 | 2025 | 6,301 |

# 5 Determinants of Repression

This section takes Hypotheses 1–3 to the data at two levels: the 1897 province and the individual church. The province regressions describe how the intensity of repression varied across the country; the church-level regressions, which carry province fixed effects and so hold constant everything specific to a region, describe which buildings within a place were singled out. The church-level specification is the workhorse. Two points hold throughout. First, all the estimates are descriptive: they report which churches were repressed, not the causal effect of any one characteristic. Second, and substantively, the picture that emerges is that anti-religious repression was not driven by religiosity alone. It also tracked the reach of the security apparatus, proximity to the transport network, the recent history of unrest, and – most sharply – the physical characteristics of the buildings themselves. Even a state whose stated aim was the elimination of religion behaved, in carrying that aim out, like an administration rationing scarce enforcement capacity across targets of unequal value.

## 5.1 Regional Evidence

Table 3 regresses the share of a province's 1917 church stock that was closed or destroyed on the historical determinants, adding blocks of regressors across columns. On average about 86 percent of a province's stock was repressed, so the regression explains variation around an already very high level.

Two province characteristics predict that variation. The 1897 Orthodox population share enters positively but weakly – about 0.13 percentage points of closure per point of Orthodox share, significant only at the 10 percent level – so historical religiosity is, at most, a modest part of the story at this level of aggregation. The number of churches per capita in 1897 enters negatively and robustly ($-0.14$, $p < 0.01$): a province that entered the Soviet period with a denser stock of churches saw a *smaller* share of it repressed. This is what Hypothesis 1 implies through the enforcement threshold – more buildings competing for a fixed administrative and coercive capacity means a higher bar for acting on any one of them – though the same variable also partly reflects religiosity, and the two readings cannot be separated here. Security-police strength per capita enters positively ($p < 0.05$), consistent with the capacity channel from the other side: where the apparatus was larger, more of the stock was processed.

Table 3: Determinants of Repression: Provincial Evidence (1897 boundaries)

| | **Dependent variable:** Share of 1917 church stock closed or destroyed (%) | | | |
|---|---|---|---|---|
| | (1) Opposition | (2) NKVD | (3) Material | (4) All |
| Orthodoxy share (1897 census, %) | 0.159 | 0.162* | 0.126** | 0.131** |
| | (0.096) | (0.087) | (0.060) | (0.061) |
| Churches per 100,000 population (1897) | -0.152*** | -0.124*** | -0.113*** | -0.144*** |
| | (0.046) | (0.032) | (0.037) | (0.045) |
| Bolsheviks vote share (1917, %) | 0.095 | | | 0.082 |
| | (0.062) | | | (0.055) |
| Kadets vote share (1917, %) | 0.320 | | | 0.347 |
| | (0.262) | | | (0.280) |
| Rightists vote share (1917, %) | -0.373 | | | -0.188 |
| | (0.328) | | | (0.412) |
| Rebellion/unrest occurred, 1917-1989 (dummy) | 2.010 | | | 2.708 |
| | (2.387) | | | (3.206) |
| NKVD personnel per 100,000 population (1897) | | 0.007** | | 0.008** |
| | | (0.003) | | (0.004) |
| Material: wood (% of 1917 stock) | | | -0.079 | -0.098 |
| | | | (0.132) | (0.142) |
| Material: stone (% of 1917 stock) | | | -0.145 | -0.180 |
| | | | (0.184) | (0.188) |
| Material: other (% of 1917 stock) | | | 0.004 | 0.276 |
| | | | (0.424) | (0.539) |
| Material: unknown (% of 1917 stock) | | | -0.035 | -0.205 |
| | | | (0.149) | (0.203) |
| Constant | 72.961*** | 76.206*** | 85.087*** | 81.558*** |
| | (8.757) | (7.587) | (8.222) | (8.600) |
| Observations | 51 | 51 | 52 | 50 |
| Mean of Dep. Variable | 86.52 | 86.18 | 86.23 | 86.48 |
| R-squared | 0.338 | 0.321 | 0.312 | 0.419 |

*Notes:* OLS on 1897 provinces. The dependent variable is the share of the province's 1917 Orthodox church stock that was closed or destroyed during the Soviet period. Columns add blocks of regressors; column (4) includes all of them. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

The 1917 vote shares and the uprising indicator are imprecisely estimated at the province level – the Kadet share is positive, the Rightist share negative, neither significant – so the political-risk term of Hypothesis 1 cannot be read from these regressions. It is better tested church by church below, where distance to the nearest recorded uprising provides within-province variation. Appendix C replicates the table on modern regional boundaries and splits the closure measure into its components; the determinants are not uniform across those components, which is itself part of the point and which the church-level analysis makes precise.

## 5.2 Church-Level Evidence

Table 4 moves to the building level, with province fixed effects, so that the coefficients compare churches within the same province. Column (1) is the extensive margin – closed or destroyed versus untouched – and column (4) is the destruction margin – destroyed rather than only closed, among repressed buildings; columns (2) and (3) are the intermediate outcomes.

On the extensive margin (column 1), three kinds of characteristic predict repression. Older buildings were more likely to be repressed: each additional century of age raises the probability by about one percentage point. Buildings closer to a recorded Soviet-era uprising were more likely to be repressed, and the effect is sizeable – roughly two percentage points per log unit of distance – which recovers the political-risk channel of Hypothesis 1 that the province regressions could not identify. And a church or a monastery, rather than a small chapel, was much more likely to be acted on (a church is 14 percentage points more likely, a monastery 29). Distance to the 1937 railway carries the expected negative sign but is not significant once province fixed effects and the uprising control are included, and 1926 population within 100 km is flat. The province covariates themselves cannot be estimated alongside the fixed effects; the specification that enters them directly (Appendix C) reproduces the province-level pattern – security-police strength and the Kadet vote share predict more repression, church density less – while leaving the building coefficients essentially unchanged.

On the destruction margin (column 4), the picture is about reuse value rather than importance. A repressed building was more likely to be destroyed, rather than closed and converted to other use, when it was wooden – the largest single coefficient in the table, +0.31 – when it had gone longer without renovation, and when it was a small chapel rather than a church (−0.17) or monastery (−0.10). Brick and stone buildings, and larger structures, were closed and reused instead. This is Hypothesis 2: the state kept what it could repurpose and demolished what it could not.

The two margins divide the work broadly as Hypothesis 3 predicts, with one qualification. Building age is significant on the extensive margin and not on the destruction margin; wooden construction is the mirror image, null on the extensive margin and large on the destruction margin. Building type, stone construction, and renovation recency, by contrast, act on both margins. That is what the framework's baseline implies – the state weighed a building's eventual disposal already when deciding whether to act, so a readily repurposable building was a slightly more attractive target in the first place – and a clean separation of the two channels would not.

Table 4: Determinants of Repression: Church-Level Evidence

| | Church-level OLS with province fixed effects; standard errors clustered by province | | | |
|---|---|---|---|---|
| | (1) Closed or destroyed | (2) Closed, not destroyed | (3) Destroyed | (4) Destroyed, if C/D |
| Years since foundation (centuries, rel. to 1917) | 0.011*** | 0.015*** | 0.020*** | 0.002 |
| | (0.004) | (0.005) | (0.007) | (0.004) |
| Years since last renovation (centuries, rel. to 1917) | -0.067*** | -0.089*** | -0.065*** | 0.040*** |
| | (0.010) | (0.010) | (0.015) | (0.008) |
| Material: wood | 0.000 | -0.084*** | 0.094*** | 0.306*** |
| | (0.014) | (0.022) | (0.028) | (0.021) |
| Material: stone | -0.036*** | -0.063*** | -0.026 | 0.080*** |
| | (0.011) | (0.013) | (0.027) | (0.018) |
| Material: other | 0.040*** | -0.028 | 0.164*** | 0.271*** |
| | (0.015) | (0.025) | (0.034) | (0.035) |
| Material: unknown | -0.231*** | -0.276*** | -0.341*** | -0.022 |
| | (0.023) | (0.028) | (0.030) | (0.030) |
| Building type: church | 0.142*** | 0.269*** | 0.097** | -0.169*** |
| | (0.032) | (0.045) | (0.038) | (0.020) |
| Building type: monastery | 0.293*** | 0.458*** | 0.327*** | -0.100** |
| | (0.044) | (0.065) | (0.050) | (0.038) |
| Denomination: Old Believer | -0.017 | -0.001 | 0.023 | -0.016 |
| | (0.053) | (0.077) | (0.109) | (0.105) |
| Pop. within 100km, 1926 (ln) | -0.000 | -0.002 | 0.001 | 0.003 |
| | (0.001) | (0.002) | (0.002) | (0.003) |
| Distance to 1937 railroad, km (ln) | -0.006 | -0.011* | -0.004 | 0.006 |
| | (0.005) | (0.006) | (0.009) | (0.007) |
| Distance to nearest Soviet-era uprising, km (ln) | -0.020** | -0.023 | -0.038*** | -0.016** |
| | (0.010) | (0.014) | (0.010) | (0.007) |
| Constant | 0.901*** | 0.801*** | 0.819*** | 0.456*** |
| | (0.046) | (0.061) | (0.062) | (0.056) |
| Observations | 19358 | 12830 | 9686 | 16196 |
| Province FE | Yes | Yes | Yes | Yes |
| Mean of Dep. Variable | 0.837 | 0.754 | 0.674 | 0.403 |
| R-squared | 0.123 | 0.173 | 0.206 | 0.126 |

*Notes:* OLS with province (`Gub_ID`) fixed effects, standard errors clustered by province. Each column is a separate regression. Age and renovation recency are in centuries before 1917; the last three rows are geographic controls. Omitted categories: brick (material), chapel (building type), Orthodox (denomination). The province-level covariates are collinear with the fixed effects and are reported in Appendix C. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

## 5.3 Timing: Stalin versus Khrushchev

Section 4.4 showed that most repression happened under Stalin. It turns out that the *selection rule* was also a Stalin-era phenomenon. Table 5 splits the church-level regression by the era of the event. In the Stalin columns, building age and renovation recency predict repression, with coefficients larger than in the pooled model – each century of age now raises the probability of Stalin-era repression by five percentage points rather than one. In the Khrushchev columns, neither predicts closure at all. Distance to the nearest uprising, likewise, matters for the Stalin-era destruction margin but not for the Khrushchev-era one.

Table 6 confirms the pattern with a different method – a province-stratified Cox model of the time to a first closure or destruction, which also brings out *how fast* different buildings were

Table 5: Determinants of Repression by Era

| | **Church-level OLS with province fixed effects; standard errors clustered by province** | | | |
|---|---|---|---|---|
| | Stalin era | | Khrushchev era | |
| | (1) Repressed | (2) Destroyed | (3) Repressed | (4) Destroyed |
| Years since foundation (centuries, rel. to 1917) | 0.050*** | 0.002 | 0.007 | -0.014 |
| | (0.009) | (0.006) | (0.005) | (0.015) |
| Years since last renovation (centuries, rel. to 1917) | -0.073*** | 0.061*** | -0.006 | 0.012 |
| | (0.009) | (0.012) | (0.007) | (0.020) |
| Material: wood | -0.128*** | 0.221*** | 0.000 | 0.102* |
| | (0.020) | (0.030) | (0.018) | (0.051) |
| Material: stone | -0.176*** | 0.103*** | -0.019 | -0.041 |
| | (0.032) | (0.018) | (0.013) | (0.055) |
| Material: other | -0.086** | 0.183*** | -0.033 | 0.182** |
| | (0.034) | (0.038) | (0.026) | (0.086) |
| Material: unknown | -0.389*** | 0.078** | -0.084*** | 0.001 |
| | (0.018) | (0.034) | (0.012) | (0.050) |
| Building type: church | 0.324*** | -0.447*** | 0.048*** | -0.092** |
| | (0.028) | (0.027) | (0.010) | (0.040) |
| Building type: monastery | 0.494*** | -0.455*** | 0.065* | 0.021 |
| | (0.036) | (0.036) | (0.033) | (0.122) |
| Denomination: Old Believer | 0.084** | -0.094* | -0.008 | -0.302 |
| | (0.035) | (0.051) | (0.067) | (0.209) |
| Pop. within 100km, 1926 (ln) | 0.000 | 0.002 | 0.004 | -0.011 |
| | (0.002) | (0.003) | (0.002) | (0.007) |
| Distance to 1937 railroad, km (ln) | -0.020** | -0.007 | 0.001 | 0.015 |
| | (0.008) | (0.009) | (0.006) | (0.018) |
| Distance to nearest Soviet-era uprising, km (ln) | -0.017 | -0.027** | 0.005 | -0.044** |
| | (0.015) | (0.012) | (0.007) | (0.018) |
| Constant | 0.554*** | 0.722*** | 0.022 | 1.030*** |
| | (0.093) | (0.089) | (0.041) | (0.148) |
| Observations | 18483 | 11079 | 7490 | 984 |
| Province FE | Yes | Yes | Yes | Yes |
| Mean of Dep. Variable | 0.595 | 0.311 | 0.095 | 0.696 |
| R-squared | 0.234 | 0.158 | 0.046 | 0.189 |

*Notes:* OLS with province fixed effects, standard errors clustered by province. Within each era: "Repressed" is closed or destroyed versus untouched, "Destroyed" is destroyed rather than only closed among repressed buildings. Each era's columns exclude buildings already repressed before that era began. Controls as in Table 4. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

reached. The hazard rises with building age in the Stalin era (hazard ratio 1.09, $p < 0.01$) but not in the Khrushchev era (0.98, n.s.), and the same holds for renovation recency and for wooden construction. Monasteries were reached fastest of all, at roughly seven times the hazard of a chapel in the Stalin era. Only building type still predicts the Khrushchev-era hazard.

The reading is that the two waves of repression were selected on different criteria. The Stalin-era wave tracked the building characteristics of Hypotheses 1 and 2; the Khrushchev campaign of 1958–1964, which worked through administrative deregistration and closure quotas rather than the targeting of prominent buildings, tracked them much less. Appendix C reports the proportional-

Table 6: Determinants of Repression: Survival Analysis

| | **Specification:** Province-stratified Cox, clustered SE | | | |
|---|---|---|---|---|
| | (1) Pooled (1917-1991) | (2) Lenin era | (3) Stalin era | (4) Khrushchev era |
| Years since foundation (centuries, rel. to 1917) | 1.062*** | 0.872*** | 1.094*** | 0.981 |
| | (0.021) | (0.039) | (0.023) | (0.046) |
| Years since last renovation (centuries, rel. to 1917) | 0.772*** | 0.746*** | 0.781*** | 0.878 |
| | (0.024) | (0.056) | (0.024) | (0.075) |
| Material: wood | 0.805*** | 0.671** | 0.755*** | 1.295 |
| | (0.039) | (0.132) | (0.039) | (0.225) |
| Material: stone | 0.894* | 2.190*** | 0.845** | 1.166* |
| | (0.053) | (0.322) | (0.058) | (0.100) |
| Material: other | 1.078 | 2.999*** | 1.001 | 1.196 |
| | (0.092) | (0.615) | (0.110) | (0.405) |
| Material: unknown | 0.443*** | 3.728*** | 0.371*** | 0.273*** |
| | (0.048) | (0.540) | (0.040) | (0.039) |
| Building type: church | 2.373*** | 4.650*** | 2.489*** | 1.782*** |
| | (0.281) | (1.602) | (0.358) | (0.312) |
| Building type: monastery | 10.576*** | 33.714*** | 7.443*** | 3.657*** |
| | (1.937) | (12.859) | (1.542) | (1.773) |
| Denomination: Old Believer | 1.098 | 0.000*** | 1.282* | 0.716 |
| | (0.164) | (0.000) | (0.179) | (0.609) |
| Observations | 15998 | 15998 | 15031 | 4152 |
| Failures (events) | 12797 | 841 | 10866 | 702 |
| Province stratified | Yes | Yes | Yes | Yes |

*Notes:* Province-stratified Cox proportional-hazards model; the event is a first closure or destruction, with time origin 1917 and censoring at 1991. Entries are hazard ratios; a ratio above one means a higher hazard. Standard errors clustered by province. Column (1) is the full period; columns (2)–(4) restrict the event window to each era. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

hazards tests, the cause-specific split of closure and destruction as competing risks, and time-varying-coefficient estimates.

## 5.4 The Age Rule: Soviet Monument Protection

Building age was not only a statistical predictor of repression; the Soviet state itself made founding date a formal criterion. A 1928 decree of Glavnauka, the science administration under the Commissariat of Enlightenment, classified buildings for heritage protection by construction date: founded before 1613, inviolable; 1613–1725, alterable only "in case of special necessity"; 1725–1825, facade to be preserved; after 1825, not classified as a monument at all and given no protection (Froese, 2008). The rule set the anti-religious campaign against the state's own heritage bureaucracy: a church that was a target for closure could also be a protected monument. It was

Table 7: The 1825 Monument-Protection Boundary: Difference-in-Discontinuities

| | **Destroyed within the window (=1), among churches closed or destroyed in the window** | | | |
|---|---|---|---|---|
| *Cutoff 1825 pre-window 1922–1927 ±50y donut ±0* | | | | |
| | (1) | (2) | (3) | (4) |
| | 1928–33 | 1928–38 | 1928–41 | 1953–63 |
| Jump at cutoff, pre-1928 | -0.199* | -0.197* | -0.202* | -0.182* |
| | (0.099) | (0.102) | (0.104) | (0.095) |
| Post-1928 (first action ≥ 1928) | -0.051 | 0.014 | -0.010 | 0.358*** |
| | (0.081) | (0.083) | (0.082) | (0.126) |
| Diff-in-disc: jump × post-1928 | 0.354*** | 0.251** | 0.271** | 0.024 |
| | (0.112) | (0.109) | (0.106) | (0.171) |
| Churches near cutoff | 951 | 2182 | 3041 | 667 |
| pre-1928 | 362 | 362 | 362 | 362 |
| post-1928 | 589 | 1820 | 2679 | 305 |

*Notes:* Saturated local-linear difference-in-discontinuities in founding year at 1825 (±50 years), with a pre-1928 placebo window of 1922–1927. Each column is a post-1928 calendar window for the closure or destruction event; column (4), 1953–1964, is a falsification window from the Khrushchev campaign, when monument status was disregarded. The row "Diff-in-disc" is the change in the founding-year discontinuity after 1928 – the coefficient of interest. Province fixed effects, geography and building controls; standard errors clustered by province. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

in force from 1928; its practical weight faded later, as wartime disruption and the 1958–1964 anti-religious campaign openly overrode heritage status.

If the rule mattered, buildings founded just after a protection boundary should have been treated more harshly than buildings founded just before it, once the rule took effect. Table 7 tests this at the 1825 boundary – the one with enough buildings for a local specification. The design is a difference-in-discontinuities. For churches acted on within a narrow calendar window, it measures the jump in the probability of destruction at the 1825 founding-year cutoff, and then compares that jump with the one in a pre-1928 placebo window (1922–1927, the years of the church-valuables campaign), so that any founding-year gradient present before the rule is differenced out. Once the rule was in force, a church founded just after 1825 – unprotected – was destroyed relatively more often: the difference-in-discontinuities is +0.35, +0.25, and +0.27 across the 1928–1933, 1928–1938, and 1928–1941 windows (all $p < 0.05$). In a 1953–1964 falsification window, when monument status was openly disregarded, the same statistic is +0.02 (n.s.), and placebo cutoffs at 1775, 1800, 1850, and 1875 give nothing (Appendix C). The estimate rests on a thin pre-1928 comparison window and is identified from the change at 1928 rather than the level of the jump; it is suggestive rather than decisive. But it is consistent evidence that the state's own age rule left

a mark on which churches were destroyed.

Thus Soviet anti-religious repression was selective and administered rather than blanket and automatic. Historical religiosity explains only part of where it fell, and building characteristics – not religion – are the sharpest predictors of which individual churches were repressed and how. A building's symbolic importance, proxied by its age, size, and type, governed whether the state acted on it at all; its reuse value, proxied by material and physical condition, governed whether the state destroyed it or closed and repurposed it; and the reach of the security apparatus and proximity to past unrest shifted the intensity of repression on top of that. This selection logic was concentrated in the Stalin era, and the state's own age-based monument rule left a detectable trace at the 1825 boundary. All of this describes the state's choices. Whether those choices left a mark on religion itself is the question of the next section.

# 6 Consequences for Contemporary Religiosity

This section asks whether the repression documented in Section 5 left a mark on religiosity in Russia today. The evidence is thin. Of the nine religiosity measures examined, a negative association with local repression shows up on two – service attendance and the stated importance of religion – at about 0.1 to 0.3 of a standard deviation; the other seven show nothing. The association on those two is not robust to every specification, and the instruments used to address selection are too weak to sharpen it. The rest of the paper treats this as a real but modest and fragile finding, and Section 7 asks why the evidence is so limited.

## 6.1 Regional Evidence

Table 8 regresses eight measures of regional religiosity from the ARENA survey (2012, 79 regions) on the share of the region's 1917 church stock that was closed or destroyed, controlling for 1897 Orthodoxy, ethnic composition, and urbanization. No coefficient on repression is significant, and the point estimates are small and mixed in sign. At the regional level, with fewer than eighty observations and religiosity measured only in the aggregate, there is nothing to detect. The individual-level data, where respondents can be matched to the churches around them, are more informative.

Table 8: Repression and Contemporary Religiosity: Regional Evidence (ARENA 2012)

| | **Dependent variable:** Religious affiliation, belief, and practice (ARENA 2012, %) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) Orthodox | (2) Believe in God | (3) Atheist | (4) Follow prescriptions | (5) Religion important | (6) Pray daily | (7) Parishioner | (8) Confess monthly+ |
| Closed or destroyed (% of 1917 stock) | 0.037 | 0.062 | 0.005 | -0.091 | 0.055 | 0.017 | -0.004 | -0.007 |
| | (0.075) | (0.042) | (0.048) | (0.065) | (0.036) | (0.045) | (0.010) | (0.008) |
| Orthodoxy share (1897 census, %) | 0.263* | 0.032 | -0.055 | -0.137 | -0.109 | -0.057 | 0.019 | 0.019** |
| | (0.136) | (0.071) | (0.068) | (0.116) | (0.094) | (0.078) | (0.012) | (0.009) |
| Ethnic Russian (2012, %) | 0.174 | 0.178*** | 0.101** | -0.082 | -0.052 | -0.042 | 0.004 | 0.010 |
| | (0.118) | (0.052) | (0.046) | (0.079) | (0.034) | (0.034) | (0.012) | (0.008) |
| Urban share (2012, %) | 0.013 | 0.040 | 0.015 | -0.123 | -0.093* | -0.013 | -0.000 | -0.015 |
| | (0.121) | (0.070) | (0.043) | (0.097) | (0.050) | (0.046) | (0.025) | (0.011) |
| Constant | -0.428 | 0.213 | 8.112 | 56.235*** | 30.048*** | 18.930** | 0.735 | 1.079 |
| | (11.595) | (7.060) | (6.130) | (11.089) | (9.979) | (8.694) | (1.460) | (1.122) |
| Observations | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Mean of Dep. Variable | 39.60 | 25.15 | 12.97 | 21.76 | 15.16 | 11.45 | 2.30 | 1.89 |
| R-squared | 0.233 | 0.266 | 0.127 | 0.156 | 0.273 | 0.106 | 0.037 | 0.134 |

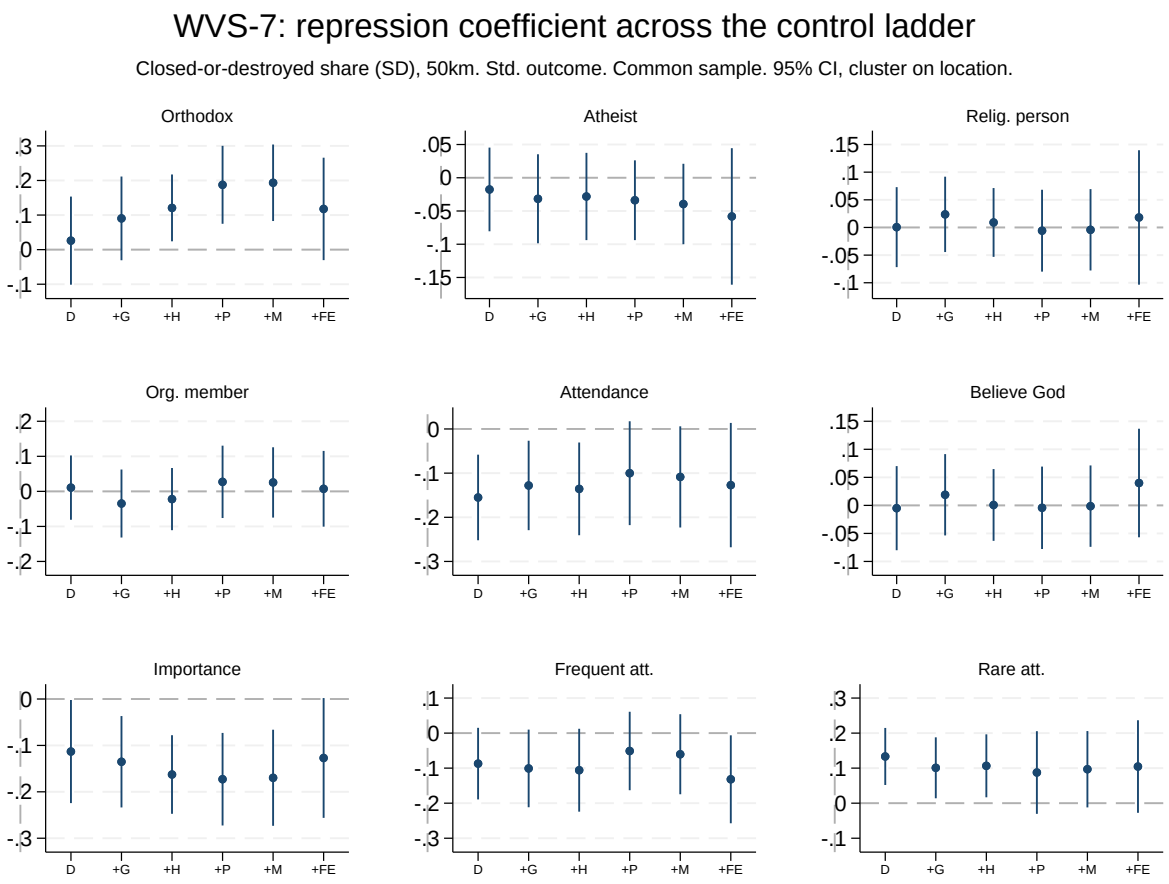
*Notes:* OLS on 79 regions. Each column is a separate regression of a 2012 ARENA religiosity measure (percent) on the regional closed-or-destroyed share, with the controls shown. Robust standard errors in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

## 6.2 Individual-Level Evidence: Controlled Regressions

The individual-level analysis uses the seventh wave of the World Values Survey (2017), linking each respondent to the church stock within 50 km. The outcome is one of nine standardized religiosity measures; the regressor is the standardized share of that local stock that was closed or destroyed. Because repression was predictable from observable history (Section 5), the natural first step is to control for those same predictors and watch how the association moves.

Figure 5 plots the coefficient on local repression for each outcome as controls are added in blocks: demographics; then development and geography; then 1897 religiosity; then the determinants-half predictors (security-police strength, 1917 vote shares, proximity to unrest, stock composition); then post-Soviet church supply (reopenings and new construction); then province fixed effects. Three patterns stand out. First, for *service attendance* and the *stated importance of religion*, the coefficient is negative and significant at almost every rung, and sizeable – between about $-0.10$ and $-0.17$ of a standard deviation. Adding the determinants-half predictors makes the importance coefficient more negative rather than less, the signature of negative selection: on the observed history, high-repression places would have been somewhat *more* religious. Second, affiliation, self-identification as religious, organizational membership, and belief in God sit on zero throughout. Third, the coefficient on Orthodox affiliation drifts *positive* as controls are added, from $+0.03$ to $+0.19$ – the same higher-repression-goes-with-more-Orthodox pattern that appears in the other surveys below; province fixed effects remove it.

A formal omitted-variable-bias bound (Oster, 2019) confirms that at least one commitment measure is robust to plausible unobserved selection under each research design – the importance of




*Notes:* Each panel is one WVS-7 outcome, standardized. The marker is the coefficient on the standardized local closed-or-destroyed share (50 km), with a 95% confidence interval, at each rung of the control ladder. Standard errors clustered on respondent location.

Figure 5: How the Repression Coefficient Moves as Controls Are Added (WVS-7)

religion when the comparison is across provinces, service attendance when it is within provinces – though not the same measure under both. Appendix D reports the full control ladder, the bound, and its sensitivity to how fixed effects are handled.

## 6.3 Instrumental-Variables Estimates

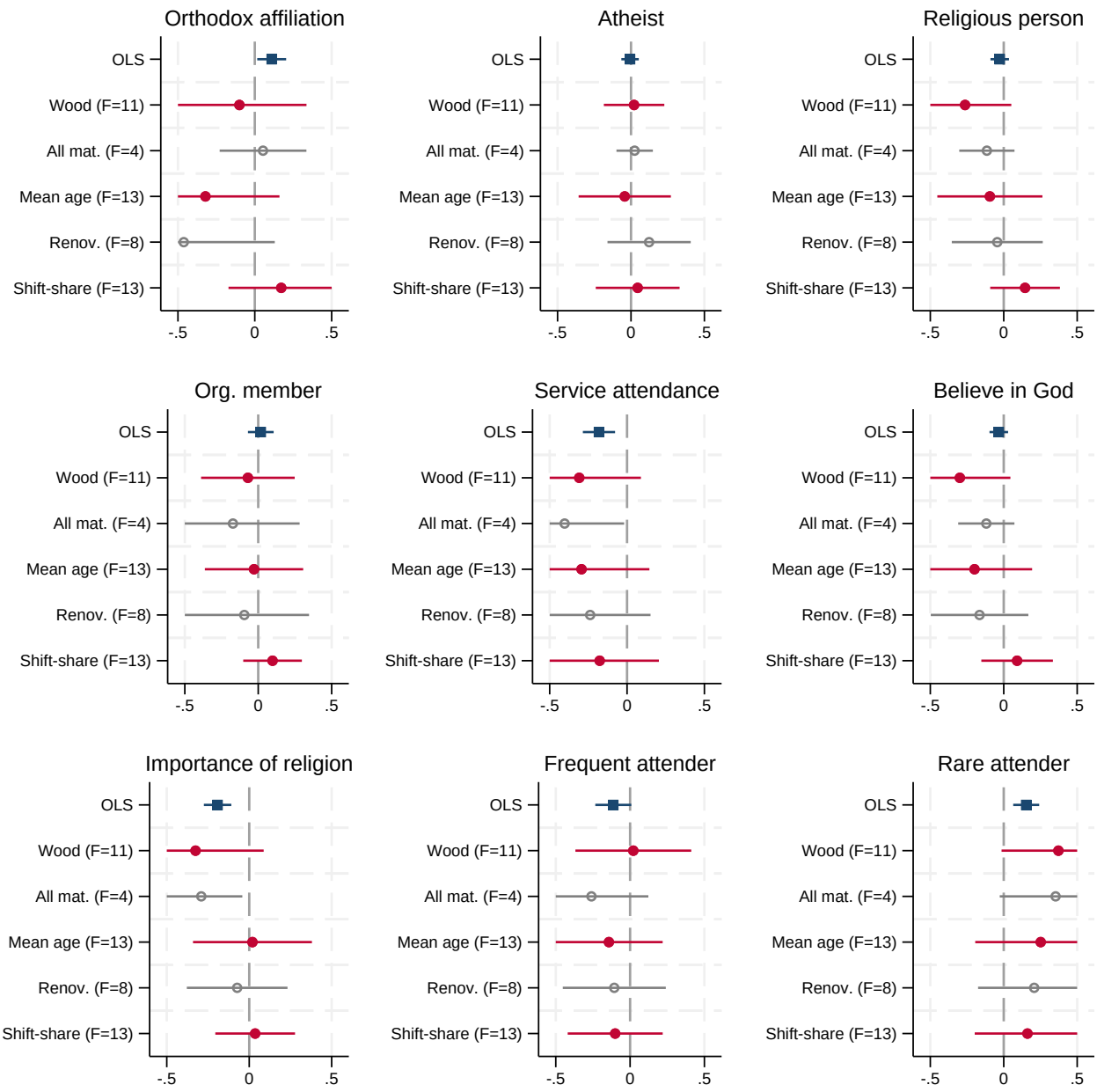
The controlled regressions cannot rule out that some unobserved feature of high-repression places, rather than the repression itself, drives the practice association. Section 5 suggests an instrument: which churches a locality lost depended on the physical composition of its 1917 stock, and that composition has no obvious route to religiosity today, conditional on historical religiosity and development, except through the repression it shaped. This paper uses five instruments for the local closed-or-destroyed share.

The first two are shares of the local 1917 stock: the share built of wood, and the shares built of wood, stone, and other non-brick materials together ("all materials"). The next two are the mean founding year of the local stock and the mean year of its last pre-1917 renovation. The fifth is a shift-share. Following the construction in Section 5, every 1917 church is sorted into one of sixty cells defined by founding era (<1700, 1700–1800, 1800–1850, ≥1850), building type (church, chapel, monastery), and material (brick, wood, stone, other, unknown). For each cell the paper computes the national fraction of its churches that were closed or destroyed, leaving out the church's own province. Each church inherits its cell's national rate, and the shift-share instrument for a locality is the average of that rate over the churches in the local 1917 stock – a prediction of local repression driven by the *composition* of the 1917 stock, not by geography. Because the raw composition of the local stock may affect religiosity directly, the shift-share is recentered on the composition-implied expectation, following Borusyak et al. (2022), so that only the deviation from what composition alone would predict is used as the instrument.

Figure 6 shows, for each of the nine outcomes, the controlled (OLS) estimate and the two-stage least-squares estimate from each instrument, in the main specification (closed-or-destroyed share, 50 km, no fixed effects). The two-stage estimates for service attendance and the importance of religion are negative – the same direction as the controlled estimates – and *larger* in magnitude, around −0.2 to −0.3 of a standard deviation. But the standard errors are also much larger, so most of the individual estimates are not significant at conventional levels; the first-stage statistics, shown in each row label and tabulated in Appendix D, are around 8–13 for wood, mean age, and the recentered shift-share, and below 10 for the all-materials and renovation-recency instruments. The estimates for affiliation, identity, and belief stay centered on zero, now with wide intervals.

The reading is cautious. Instrumenting does not overturn the controlled results and, if anything, points to a larger effect on the practice margin; but the instruments are not strong enough for a precise estimate, so the two-stage results cannot carry the claim on their own. Appendix D repeats the exercise varying the radius (10–100 km), the repression measure (closed, destroyed, closed or destroyed), the sample, the treatment definition, and the control set, over all twelve instrument sets that were tried; the pattern – a negative, imprecise association on attendance and importance and nothing on the other seven measures – holds throughout.

To summarize: where more of the local church stock was closed or destroyed, people today report religion as somewhat less important and attend services somewhat less often – by about




*Notes:* Each panel is one WVS-7 outcome, standardized. Markers are the OLS estimate (navy square) and the two-stage least-squares estimate from each instrument, for the standardized local closed-or-destroyed share (50 km, no fixed effects), with 95% confidence intervals clipped to ±0.5 SD. Instruments with a first-stage Kleibergen–Paap $F$ of at least 10 are drawn as filled circles, those below 10 as hollow circles; $F$ is in each row label.

Figure 6: OLS and Instrumental-Variables Estimates, Main Specification (WVS-7)

0.1 to 0.3 of a standard deviation, and not in every specification – while the seven other measures of affiliation, identity, belief, and organizational membership show no association at all. Why the evidence for a long-run effect is this narrow and this weak is the subject of the next section, which

uses the Life in Transition Survey and the Russia Longitudinal Monitoring Survey panel to weigh four explanations.

# 7 Discussion

The individual-level analysis in Section 6 produced a modest and fragile result: a negative association between local repression and two of nine religiosity measures – service attendance and the importance of religion – of about 0.1 to 0.3 of a standard deviation, absent in some specifications and not sharpened by instruments. This section weighs four explanations for why the evidence is this thin, and what each would imply. It draws on two panels the main analysis did not use: the Life in Transition Survey, which asks respondents whether their family was repressed under communism, and the Russia Longitudinal Monitoring Survey (RLMS), which follows the same individuals from the 1990s into the 2020s.

## 7.1 The Repression Measure Is Too Coarse

The local closed-or-destroyed share is a blunt measure. It is built from a language-model extraction over crowd-sourced records; it counts buildings without weighting them by importance; and, for the survey respondents, it is evaluated at their current location, which for a mobile population is a noisy stand-in for where they or their parents lived during the Soviet period. Classical measurement error of this kind attenuates coefficients toward zero and widens their confidence intervals – the pattern seen in Section 6.

Two checks argue that the measure is not merely noise. First, Section 5 showed that it is predicted by pre-revolutionary church characteristics and by local politics in signed, interpretable ways, which a purely random variable would not be. Second, in the Life in Transition Survey the local closed-or-destroyed share is a positive predictor of whether a respondent reports that their family was subjected to religious repression under communism – about +1.2 percentage points per standard deviation on the pooled family-memory measure, against a base rate of ten percent ($p < 0.1$; Appendix E, Table E1). The association is diffuse: it is no stronger for religious repression than for a non-religious-repression placebo, so the measure reflects how heavily a place was hit in general rather than anything specific to churches. The measure is therefore not ideal, but it is adequate, for three reasons. First, it is built from a near-complete, precisely geocoded census of the

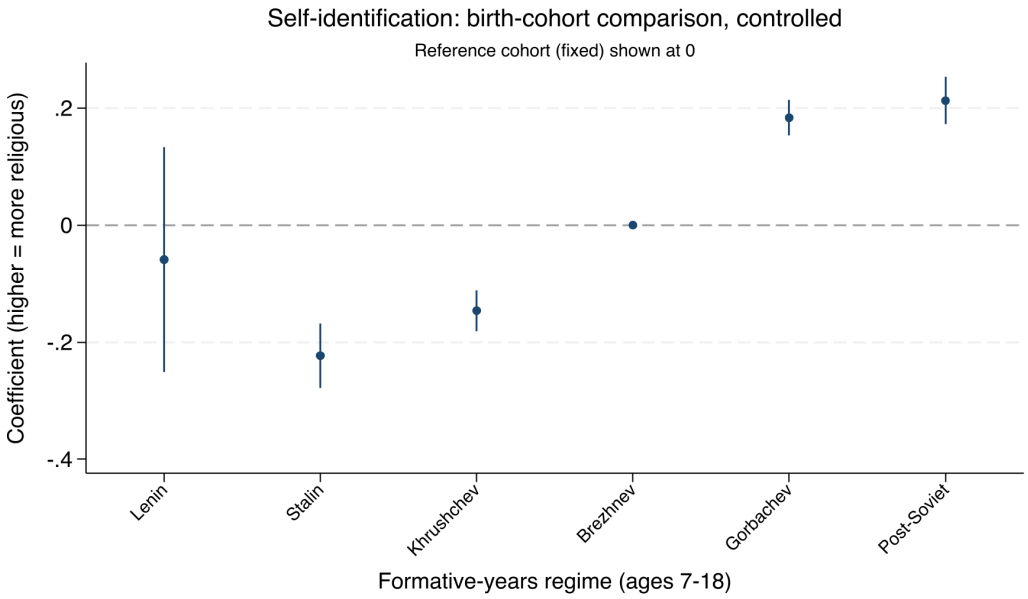
church stock that existed in 1917, not from a sample or a reconstruction. Second, it behaves like a real variable rather than noise: it is systematically predicted by pre-1917 church characteristics and by 1917 politics in signed, interpretable directions (Section 5), and it moves with an independent survey record of family repression. Third, a measure strong enough to deliver the determinants results and to track recalled repression would be expected to register at least a trace of a large local effect on contemporary religiosity if one existed. Measurement error attenuates whatever local signal is present and widens its confidence intervals, and that cost is real; but it is unlikely to be the whole reason the signal is faint.

## 7.2 Repression Had No Long-Run Effect

The simplest reading of a near-null result is that seven decades of anti-religious policy left no durable mark on religiosity – that what was suppressed either recovered fully or was never deeply held. Two facts sit awkwardly with this reading.

First, regular religious practice in Russia is low even by the standards of other Orthodox-majority countries. In the World Values Survey the share of self-identified Orthodox who attend services at least monthly places Russia near the bottom of the cross-country distribution (Figure 1, panel d), below Greece, Romania, Georgia, and Serbia. This is consistent with – though not proof of – a Soviet-era suppression of practice that has not fully reversed, as opposed to the milder secular decline seen across industrialized societies.

Second, the RLMS panel shows that Russian birth cohorts differ in religiosity in a way the Soviet timeline predicts, and that the difference survives controls for age and survey period. Each respondent is assigned to the political regime in place during their formative years (roughly ages 7–18); the paper estimates the cohort profile of religious self-identification while controlling flexibly for a quadratic in age and for survey decade, and plots the cohort effects (Figure 7). Self-identification is lowest for the cohorts whose formative years fell under Stalin ($-0.22$ of a standard deviation relative to the Brezhnev cohort, $p < 0.01$) and Khrushchev ($-0.15$, $p < 0.01$) – the decades of the most intense repression – and highest for those who came of age under Gorbachev and after 1991 ($+0.18$ to $+0.21$, $p < 0.01$), who barely experienced the Soviet state; the profile peaks at the 1980 birth cohort. A blanket "no effect" is hard to square with this. What Section 6 failed to find is not an effect of the Soviet period as a whole, but a *local* gradient in it.




*Notes:* RLMS, waves 1994–2024. Each point is the effect of belonging to the birth cohort whose formative years (about ages 7–18) fell under the named regime, relative to the Brezhnev cohort, on standardized religious self-identification, from a regression that also includes a quadratic in age and survey-decade fixed effects. Bars are 95% confidence intervals, clustered on the sampled area.

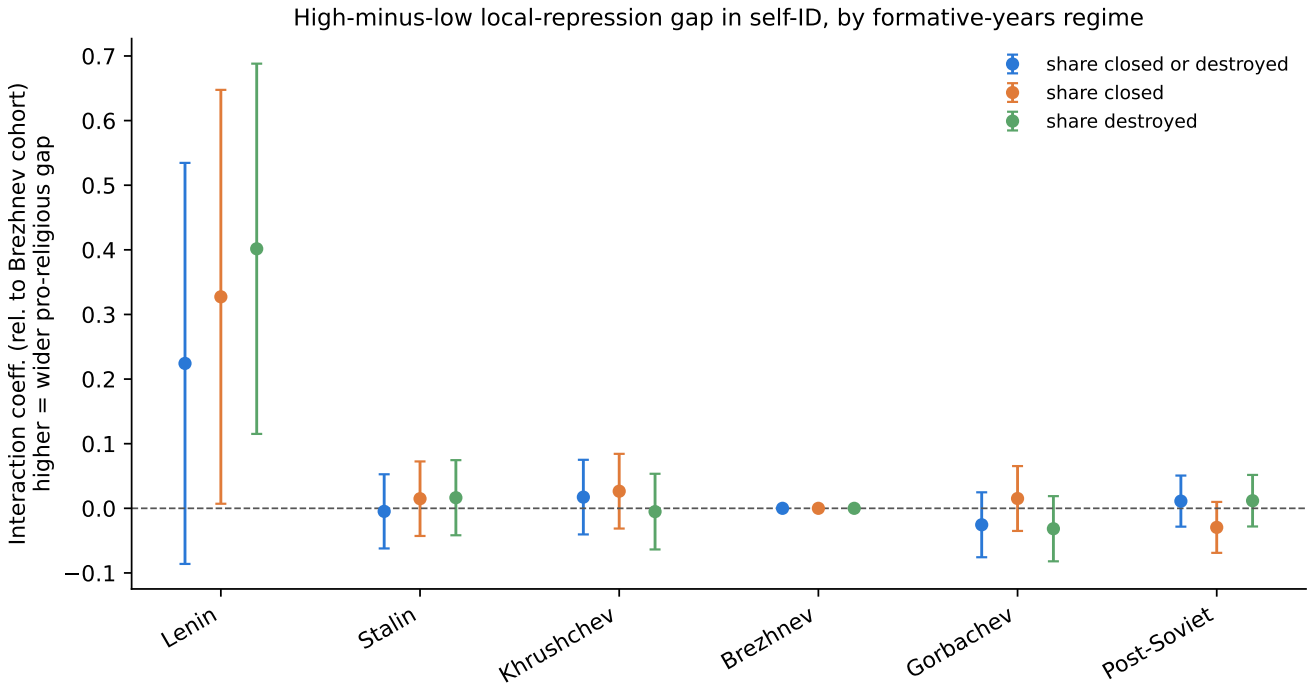
Figure 7: Religious Self-Identification by Birth Cohort, Controlled for Age and Period (RLMS)

## 7.3 The Effect Was National, Not Local

Suppose repression did lower religiosity, but did so fairly uniformly – through national atheist schooling, mass media, and the general scarcity of open churches – so that someone raised in a heavily repressed province is no less religious today than someone from a lightly repressed one. A within-country design that compares localities by repression intensity, like the one in Section 6, would then find little even if the aggregate effect were large. The RLMS data allow two partial checks.

First, the paper splits the roughly forty sampled areas at the median of local repression intensity and interacts the resulting high/low indicator with the cohort profile, keeping area fixed effects so that the interaction rather than the level is identified. The high-minus-low religiosity gap is flat across cohorts for every repression measure, cohort binning, and catchment radius (Figure 8; Appendix E): cohorts from heavily and lightly repressed areas track one another.

Second, for each respondent the paper computes the share of the local 1917 church stock closed or destroyed during their own formative years – combining their birth year with the dated timing of the local closures – and regresses religiosity on that childhood exposure with area and birth-




*Notes:* RLMS. The difference in standardized religiosity between respondents from above-median and below-median repression areas, by formative-years regime cohort, with area fixed effects. Bars are 95% confidence intervals clustered on the sampled area. A flat profile at zero means the cohort pattern is the same in heavily and lightly repressed areas.

Figure 8: High-minus-Low Repression Gap in Religiosity, by Cohort (RLMS)

decade fixed effects. Without an age control the exposure coefficient is small and positive for a couple of outcomes; once a quadratic in age is included it is indistinguishable from zero for every outcome (Table 9), and it stays null across measures, radii, samples, and formative-age windows (Appendix E).

These tests cannot separate "a real effect that is national and cohort-wide" from "no effect at all": both imply no local gradient, and RLMS's coarse geography – current residence, about forty distinct points – is a poor instrument for either. But taken together with the cohort profile in Section 7.2, the most economical reading is that Soviet anti-religious repression bore on Russians mainly as a national, cohort-level experience, and that its local intensity added only a faint increment on top.

Table 9: Childhood Repression Exposure and Adult Religiosity (RLMS)

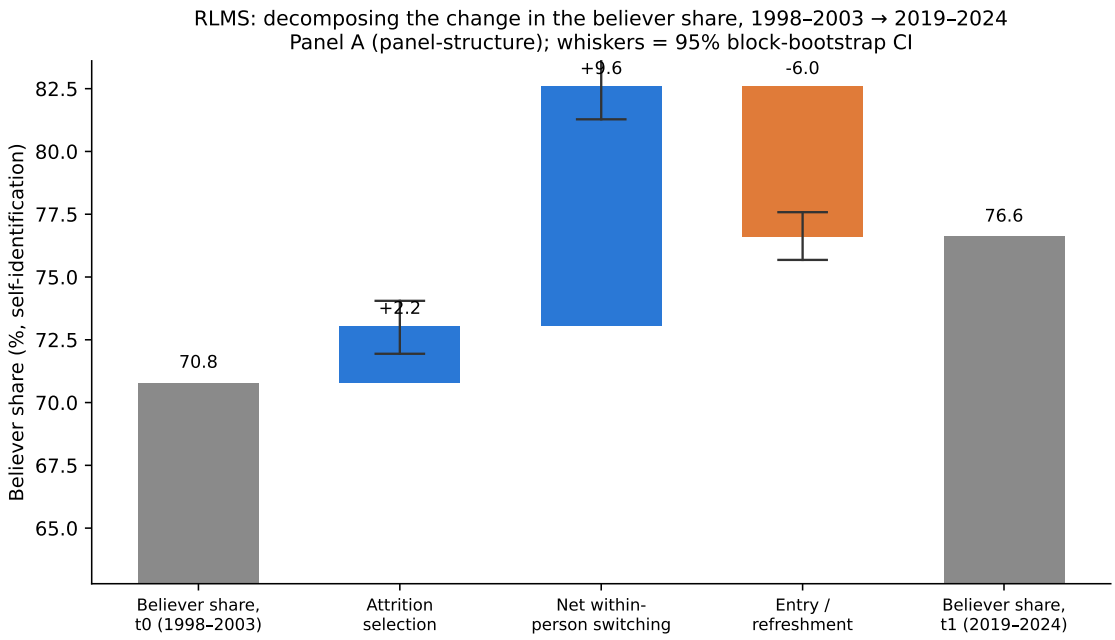
| Outcome | Specification | $\beta$ (raw) | (SE) | N |
|---|---|---|---|---|
| Self-identification (reversed) | no age | 0.0215** | (0.0095) | 106,179 |
| | + age poly | -0.0039 | (0.0084) | 106,179 |
| | + age poly + decade FE | -0.0013 | (0.0096) | 106,179 |
| Service attendance (1–7) | no age | 0.0266 | (0.0181) | 44,969 |
| | + age poly | 0.0088 | (0.0220) | 44,969 |
| | + age poly + decade FE | 0.0165 | (0.0178) | 44,969 |
| Frequent-attender share | no age | 0.0076** | (0.0038) | 44,969 |
| | + age poly | 0.0007 | (0.0036) | 44,969 |
| | + age poly + decade FE | 0.0015 | (0.0038) | 44,969 |
| Rare-attender share | no age | -0.0013 | (0.0069) | 44,969 |
| | + age poly | -0.0015 | (0.0073) | 44,969 |
| | + age poly + decade FE | -0.0035 | (0.0058) | 44,969 |
| Orthodox identification | no age | 0.0022 | (0.0016) | 105,388 |
| | + age poly | -0.0008 | (0.0017) | 105,388 |
| | + age poly + decade FE | -0.0015 | (0.0019) | 105,388 |

*Notes:* Each row is a regression of the standardized outcome on the standardized share of the local 1917 church stock closed or destroyed during the respondent's formative years, with area and birth-decade fixed effects, standard errors clustered on the sampled area. "no age": no age control; "+ age poly": a quadratic in age; "+ age poly + decade FE": also survey-decade fixed effects. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

## 7.4 Religiosity Has Had Time to Recover

More than thirty years have passed since the Soviet collapse. If the effect of repression decays over generations – as parents who were kept from church raise children who return to it – then a survey fielded in 2016–2017 may be catching the tail of a process that is nearly complete.

Religiosity in Russia did change over the RLMS window, and much of the change is genuine individual re-identification rather than generational turnover. The paper decomposes the rise in the share identifying as a believer between 1998–2003 and 2019–2024 – a gain of 5.8 percentage points overall, and 9.6 points among people observed at ages 30–60 – into a within-person component and a cohort-replacement component (Table E5; Figure 9). Net within-person switching accounts for +9.6 to +10.1 percentage points, roughly twice the aggregate change, while cohort replacement and sample turnover pull the other way, because on the age- and period-controlled profile older Russians are *more* religious than younger ones. A substantial share of the same individuals became




*Notes:* RLMS balanced panel. Decomposition of the change in the believer (self-ID) share between 1998–2003 and 2019–2024 into net within-person switching, cohort replacement, and sample entry/refreshment. Bars are bootstrap 95% confidence intervals.

Figure 9: Sources of the Post-Soviet Rise in Religious Self-Identification (RLMS)

more religious over two decades.

Partial recovery is thus a plausible part of the answer: the population was actively re-identifying with religion during the very years the surveys were run, which would erode any local repression gradient that existed earlier. It is not the whole answer, because the recovery has not run its course – Russian religious practice remains well below that of comparable Orthodox societies (Figure 1) – so if repression depressed practice, some of that depression persists.

## 7.5 Taking Stock

Of the four explanations, the two most consistent with the evidence are that the effect of Soviet anti-religious repression was national and cohort-wide rather than local (Section 7.3), and that religiosity has partially recovered (Section 7.4); coarse measurement (Section 7.1) compounds both by attenuating whatever local signal is left. A blanket absence of any long-run effect (Section 7.2) is the least consistent with the cross-country and cohort patterns. The practical lesson is that the local church-closure intensity constructed in this paper is better suited to studying the *determinants* of repression, where it varies meaningfully and predictably, than its *consequences*, where the relevant variation is largely national and has been partly undone by time.

# 8 Conclusion

Ideologies that present themselves as absolute are still carried out by administrators who face budgets, competing uses for buildings, and uneven local capacity. This paper has used Soviet anti-religious repression to show what that combination produced on the ground between 1928 and 1941, and how much of it is still visible today. The paper assembles a building-level dataset of the Orthodox church stock active in Russia in 1917 – 21,238 buildings, with closure, destruction, and reopening years, construction materials, building types, and founding and renovation dates extracted from free-text records by a language model – and uses it to study which buildings the state closed or destroyed and whether that repression still registers in contemporary religiosity. The pattern of destruction was selective rather than indiscriminate: symbolic prominence governed whether the state acted at all, reuse value governed whether a building was repurposed or demolished, and closures were concentrated in the Stalin era. The consequences for religiosity today are modest, national and cohort-wide rather than local, and partly offset by a post-Soviet recovery that has still not reached the levels observed in other historically Orthodox countries.

The paper makes three contributions. First, it provides the first near-complete building-level micro-dataset of Soviet anti-religious repression, covering the fate of the 1917 church stock at a resolution that earlier region- or diocese-level sources could not reach. Second, it documents that an avowedly absolute anti-religious campaign behaved like constrained optimization, in which the symbolic value of a target governed the extensive margin and its material value governed the intensive margin. Third, it shows that the long-run imprint on contemporary religiosity is real but small (about 0.1 to 0.3 of a standard deviation on two of nine measures) and operates mainly at the national and cohort level, which makes local church-closure intensity better suited to studying the determinants of repression than its consequences.

Four extensions follow directly. First, the same building-level measure can be matched to broader outcomes (e.g., interpersonal and institutional trust, social values, and political attitudes), for which the historical literature predicts a larger long-run footprint than for religiosity alone. Second, individual-level repression records from Memorial would allow a complementary measure based on the arrest intensity of clergy and lay believers, closer to the human than the architectural side of the campaign. Third, an exposure-timing design that assigns each respondent a childhood dose from year and region of birth – available in the Life in Transition Survey – would separate cohort effects from local exposure more cleanly than a contemporary-location match can. Fourth,

post-Soviet church construction and reopening is itself a political-economy outcome worth modeling: where and when the state and the Church chose to rebuild speaks to how the relationship between the two was renegotiated after 1991.

Thus the records that make Soviet anti-religious repression legible as an administrative process are most informative about why the state acted as it did, and only faintly about how much that action still weighs on religious life in Russia today.

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# A Data Construction and Reliability

## A.1 The Extraction Prompt

Each building's free-text history, together with its catalogue metadata, is passed to a large language model with the system prompt abridged below; the full prompt is in the replication materials. The model returns a JSON record with the listed fields and no other text.

```
You extract structured information from Russian text about a religious building.

Return ONLY a valid JSON object with exactly the following fields:
{
  "year_founded":         string or null,
  "year_renovated_1917":  string or null,   // last renovation strictly before 1917
  "material_1917":        string (English) or null,
  "d_closed":             0 or 1,
  "year_closed":          string or null,
  "d_destroyed":          0 or 1,
  "year_destroyed":       string or null,
  "repurposed":           string (short English description) or null,
  "d_reopened":           0 or 1,           // reopened for worship only
  "year_reopened":        string or null,
  "d_renovated":          0 or 1,           // renovation in 1917 or later
  "year_renovated":       string or null
}

ENTITY SCOPE
- The target entity is the building named in building_name.
- Ignore events about nearby institutions (school, gymnasium, monastery
  administration) unless they explicitly refer to the target building.
- If uncertain whether a fact refers to the target building, do not use it.

DATES
- Do not average or combine years. On a foundation-year conflict, take the earliest.
- Every year value resolves to exactly one of: "YYYY" (a point),
  "YYYY-YYYY" (a range), "-YYYY" (no later than), or "YYYY-" (no earlier than).
- A decade or century phrase is converted to its full range; "around YYYY" to a
  point; a one-sided phrase ("no later than YYYY") to a bound.
```

```
CURRENT STATUS
- The catalogue status field (preserved / not preserved / active / unknown) is
  used only when the text gives no explicit closure, destruction, or reopening
  event, and never overrides an explicit dated event.

Return no explanation, only JSON.
```

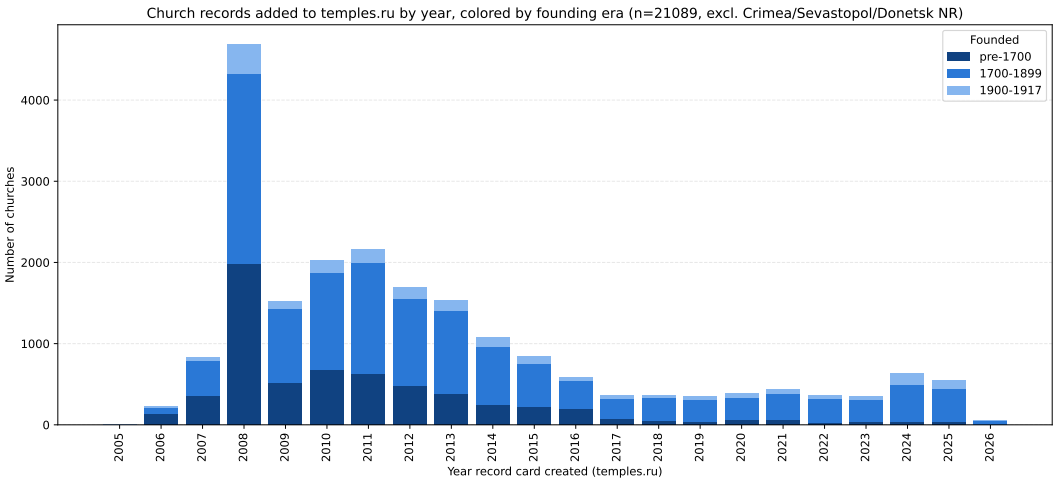
Every extracted year carries a precision flag recording which of the four shapes it took. For the numeric variables used in the analysis, a range is collapsed to its midpoint.

## A.2 Cross-Task Validation

The same extraction procedure was applied to a separate task in this project: identifying and dating Soviet-era uprisings from Wikipedia and Wikidata article text. Of 273 candidate articles, the model classified 187 as genuine uprisings and discarded 86 as organizations, buildings, or unrelated events, a split confirmed by manual review. For the 78 uprisings that also have a date recorded natively in Wikidata, the model's extracted year matches exactly in 71 cases; of the remaining seven, five are articles the model had correctly flagged as non-uprisings and two are genuine date discrepancies. This is an imperfect but reassuring check on the pipeline used for the church data.

## A.3 Catalogue Provenance

Figure A1 shows, by the year a record was added to temples.ru, the founding-era composition of the buildings added that year. Two features support treating the 1917 stock as close to complete. First, the volume of new records has fallen from several thousand per year around 2008 to a few hundred per year by the early 2020s. Second, the buildings still being added are increasingly recent: records added before 2010 were 41 percent pre-1700 buildings, while records added in 2020 or later are only 10 percent pre-1700. The catalogue is filling in obscure, later parish churches rather than surfacing prominent ancient ones.




*Notes:* Number of temples.ru records created each year, stacked by the founding era of the church the record describes. Restricted to the 1917-active stock.

Figure A1: When Records Were Added to the Catalogue, by Founding Era

## A.4 Event-Year Precision

A closure or destruction year is recoverable for about 77 percent of closed or destroyed buildings. Two apparent single-year spikes in the destruction series (Figure 4, panel d), at 1950 and around 1954, should be read with caution: more than 90 percent of the destruction records in 1950–1954 carry range rather than exact precision, meaning the source gave a decade phrase that was collapsed to a midpoint. The 1930s peak, by contrast, is built mostly from exact or bounded dates (about one record in four is a range), so it reflects a genuine concentration of events.

# B Additional Descriptive Statistics and Figures

## B.1 Province-Level Data and Coverage

Table B1 reports province-level summary statistics for the historical variables on 1897 provincial boundaries. Church-level data are available for about half of the 103 provinces (roughly 52 to 55, depending on the variable); the 1917 Constituent Assembly returns cover 72 provinces and the security-apparatus data 86. Provinces without coverage are hatched in every map. Figure B1 maps the main province-level determinants, plus the locations of the uprisings.

## B.2 Individual-Level Data

Table B2 reports summary statistics for the World Values Survey sample used in Section 6, including the geo-matched exposure variables; Table B3 does the same for the Life in Transition sample used in Section 7. Figure B2 maps the World Values Survey respondent locations and shows the distribution of the local closed-or-destroyed exposure share across those respondents. The identifying variation is concentrated in European Russia, where survey coverage and the density of the 1917 church stock are both highest.

## B.3 Aggregate Religiosity Across Surveys

Figure B3 shows the share of respondents in Russia reporting each religious affiliation, by year, in five independent survey series. All five agree on the direction – a sharp rise in Orthodox identification and a fall in the share reporting no religion – while differing on levels, which supports the pattern in Figure 1.

## B.4 Additional Church-Level Descriptives

Figures B4 and B5, referenced from Section 4.4, trace the church stock over time and show repression rates by building characteristic. Figure B6 gives the full breakdown of what closed or destroyed buildings became. Figure B7 shows the distribution of building age, and of years since the last pre-1917 renovation, at the moment of closure or destruction: both peak early, so the buildings hit were disproportionately those built or rebuilt in the late nineteenth century rather than ancient ones. Figure B8 shows the descriptive gradient behind the monument-protection test in Section 5: across the four legal tiers of the 1928 Glavnauka rule, the share of repressed buildings that were destroyed rather than only closed rises monotonically and the share later reopened falls, consistent with the protection ranking, though Section 5 shows the gradient does not survive building-level controls.

Table B1: Descriptive statistics — RI_reg_data (1897 Gub_ID boundaries)

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| **Panel A: Churches** | | | | | |
| Churches active in 1917 | 386 | 514 | 0 | 2,927 | 55 |
| Churches active today (total stock) | 330 | 457 | 1 | 3,133 | 55 |
| Closed (% of 1917 stock) | 71.79 | 12.44 | 40.18 | 100.00 | 52 |
| Closed or destroyed (% of 1917 stock) | 86.23 | 9.13 | 50.00 | 100.00 | 52 |
| Closed, not destroyed (% of 1917 stock) | 47.46 | 13.95 | 0.00 | 80.00 | 52 |
| Destroyed (% of 1917 stock) | 38.76 | 14.31 | 0.00 | 80.46 | 52 |
| Reopened (% of 1917 stock) | 41.50 | 14.81 | 13.79 | 80.00 | 52 |
| Renovated (% of 1917 stock) | 39.88 | 14.64 | 11.49 | 100.00 | 52 |
| Still active today, of 1917 stock (%) | 47.28 | 16.61 | 14.94 | 100.00 | 52 |
| Material: brick (% of 1917 stock) | 37.43 | 16.40 | 0.00 | 66.41 | 52 |
| Material: wood (% of 1917 stock) | 24.25 | 17.20 | 0.00 | 73.43 | 52 |
| Material: stone (% of 1917 stock) | 19.51 | 12.50 | 0.00 | 57.14 | 52 |
| Material: other (% of 1917 stock) | 2.12 | 2.48 | 0.00 | 9.26 | 52 |
| Material: unknown (% of 1917 stock) | 16.69 | 9.84 | 0.00 | 45.27 | 52 |
| **Panel B: Religion (1897 census)** | | | | | |
| Province population (1897 census) | 1,247,726 | 895,998 | 0 | 3,559,229 | 101 |
| Orthodoxy (1897 census, %) | 59.01 | 38.37 | 0.63 | 99.50 | 90 |
| Old Believers (1897 census, %) | 1.70 | 2.14 | 0.00 | 11.89 | 89 |
| Catholicism (1897 census, %) | 11.71 | 25.55 | 0.02 | 87.48 | 89 |
| Protestantism (1897 census, %) | 5.08 | 17.39 | 0.01 | 91.44 | 90 |
| Islam (1897 census, %) | 15.85 | 30.07 | 0.00 | 99.04 | 90 |
| Judaism (1897 census, %) | 3.65 | 5.57 | 0.00 | 18.22 | 90 |
| Buddhism (1897 census, %) | 0.86 | 3.98 | 0.00 | 25.93 | 90 |
| Other Christianity (1897 census, %) | 1.74 | 7.32 | 0.00 | 52.13 | 90 |
| Other religion (1897 census, %) | 0.54 | 2.00 | 0.00 | 12.47 | 90 |

*Continued on next page*

*Descriptive statistics — RI_reg_data (1897 Gub_ID boundaries) — continued*

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| **Panel C: 1917 Constituent Assembly election** | | | | | |
| Total votes cast (1917 Constituent Assembly) | 609,978 | 410,222 | 3,582 | 1,509,719 | 72 |
| SRs (Socialist Revolutionaries), % of vote | 34.89 | 26.89 | 0.00 | 88.86 | 72 |
| Popular Socialists, % of vote | 1.06 | 2.87 | 0.00 | 21.58 | 72 |
| Mensheviks, % of vote | 4.04 | 7.12 | 0.00 | 26.98 | 72 |
| Bolsheviks, % of vote | 20.63 | 18.73 | 0.00 | 71.86 | 72 |
| Other socialists, % of vote | 11.96 | 22.14 | 0.00 | 84.63 | 72 |
| Kadets, % of vote | 4.99 | 4.76 | 0.00 | 22.04 | 72 |
| National lists, % of vote | 14.33 | 23.02 | 0.00 | 100.00 | 72 |
| Rightists, % of vote | 1.08 | 1.75 | 0.00 | 11.49 | 72 |
| Others, % of vote | 6.88 | 12.65 | 0.00 | 45.28 | 72 |
| **Panel D: Repression and unrest** | | | | | |
| NKVD personnel (1935-39 estimate) | 908.5 | 917.1 | 0.8 | 4,137.3 | 86 |
| NKVD personnel per 100,000 population (1897) | 111.5 | 223.8 | 0.2 | 1,852.5 | 78 |
| Gulag prisoners, peak headcount (summed) | 57,825.2 | 121,613.3 | 0.0 | 617,408.4 | 103 |
| Gulag camps | 4 | 8 | 0 | 38 | 103 |
| Rebellions/unrest events, total | 2 | 2 | 0 | 10 | 103 |
| Rebellions/unrest events, 1917-1928 | 1 | 1 | 0 | 5 | 103 |
| Rebellions/unrest events, 1929-1941 | 0 | 1 | 0 | 6 | 103 |
| Rebellions/unrest events, 1942-1953 | 0 | 0 | 0 | 2 | 103 |
| Rebellions/unrest events, 1954-1964 (Khrushchev) | 0 | 0 | 0 | 3 | 103 |
| Rebellions/unrest events, 1965+ | 0 | 0 | 0 | 2 | 103 |

Table B2: Descriptive statistics — WVS Wave 7 (2017), Russia

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| **Panel A: Demographics** | | | | | |
| Age (years) | 45.4 | 17.1 | 18.0 | 91.0 | 1,810 |
| Male (%) | 41.2 | 49.2 | 0.0 | 100.0 | 1,810 |
| Urban (%) | 72.8 | 44.5 | 0.0 | 100.0 | 1,810 |
| Higher education (%) | 65.2 | 47.7 | 0.0 | 100.0 | 1,800 |
| High income tercile (%) | 8.4 | 27.7 | 0.0 | 100.0 | 1,747 |
| **Panel B: Religiosity outcomes** | | | | | |
| Orthodox denomination (%) | 56.3 | 49.6 | 0.0 | 100.0 | 1,810 |
| Importance of religion (1=very important ... 4=not at all) | 2.5 | 1.0 | 1.0 | 4.0 | 1,760 |
| Self-identifies as religious person (%) | 83.5 | 37.1 | 0.0 | 100.0 | 1,671 |
| Self-identifies as atheist (%) | 6.2 | 24.2 | 0.0 | 100.0 | 1,671 |
| Religious org. membership: active (%) | 7.3 | 26.1 | 0.0 | 100.0 | 1,787 |
| Religious org. membership: inactive (%) | 2.9 | 16.7 | 0.0 | 100.0 | 1,787 |
| Religious service attendance (1=more than weekly ... 7=never) | 5.0 | 1.7 | 1.0 | 7.0 | 1,731 |
| Confidence in church (1=a great deal ... 4=none at all) | 2.2 | 1.0 | 1.0 | 4.0 | 1,699 |
| Believes in God (%) | 84.6 | 36.1 | 0.0 | 100.0 | 1,667 |
| Would not want neighbor of different religion (%) | 11.3 | 31.6 | 0.0 | 100.0 | 1,810 |
| **Panel C: Church exposure within 50km** | | | | | |
| Churches active in 1917, within 50km | 212.5 | 407.6 | 0.0 | 1,390.0 | 1,810 |
| Closed (% of 1917 stock within 50km) | 74.7 | 16.5 | 0.0 | 100.0 | 1,680 |
| Closed or destroyed (% of 1917 stock within 50km) | 86.9 | 12.7 | 14.3 | 100.0 | 1,680 |
| Closed, not destroyed (% of 1917 stock within 50km) | 48.4 | 15.7 | 0.0 | 100.0 | 1,680 |

*Continued on next page*

*Descriptive statistics — WVS Wave 7 (2017), Russia — continued*

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| Destroyed (% of 1917 stock within 50km) | 38.4 | 17.1 | 0.0 | 100.0 | 1,680 |
| Reopened (% of 1917 stock within 50km) | 45.2 | 17.9 | 0.0 | 100.0 | 1,680 |
| Renovated (% of 1917 stock within 50km) | 44.8 | 16.6 | 0.0 | 100.0 | 1,680 |
| Survived, active today (% of 1917 stock within 50km) | 50.8 | 17.1 | 0.0 | 100.0 | 1,680 |
| **Panel D: Era-specific closure within 50km** | | | | | |
| Lenin era: closed or destroyed (% of 1917 stock within 50km) | 7.47 | 9.09 | 0.00 | 38.89 | 1,680 |
| Stalin era: closed or destroyed (% of 1917 stock within 50km) | 59.21 | 17.89 | 0.00 | 100.00 | 1,680 |
| Khrushchev era: closed or destroyed (% of 1917 stock within 50km) | 3.87 | 5.75 | 0.00 | 33.33 | 1,680 |
| **Panel E: Other geo-matched exposure** | | | | | |
| Distance to nearest closed/destroyed church (km) | 20.3 | 63.2 | 0.0 | 544.6 | 1,810 |
| Distance to nearest surviving (active) church (km) | 22.8 | 66.6 | 0.1 | 544.6 | 1,810 |
| Distance to nearest Gulag camp (km) | 152.1 | 181.2 | 0.5 | 1,317.7 | 1,810 |
| Gulag camps within 100km | 1.0 | 1.6 | 0.0 | 5.0 | 1,810 |
| Gulag prisoners, 1952 headcount, within 100km | 12,997.0 | 22,325.9 | 0.0 | 72,778.0 | 1,810 |
| Distance to nearest 1926 city (km) | 2.5 | 2.4 | 0.0 | 10.5 | 1,810 |
| 1926 population within 50km | 388,424.9 | 746,231.9 | 0.0 | 2,436,391.0 | 1,810 |
| Distance to 1937 railroad (km) | 27.1 | 92.2 | 1.5 | 903.2 | 1,810 |
| Distance to nearest rebellion/unrest event (km) | 117.5 | 155.2 | 0.2 | 975.4 | 1,810 |
| Rebellions/unrest events within 100km | 1.2 | 1.5 | 0.0 | 10.0 | 1,810 |
| **Panel F: Province-level context** | | | | | |
| Province Orthodoxy share (1897 census, %) | 83.3 | 18.9 | 2.9 | 99.5 | 1,800 |

*Continued on next page*

*Descriptive statistics — WVS Wave 7 (2017), Russia — continued*

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| Churches active in 1917, province total | 677.4 | 882.8 | 0.0 | 2,927.0 | 1,800 |
| Region Orthodoxy share (ARENA 2012, %) | 41.3 | 13.6 | 2.4 | 78.4 | 1,785 |
| Churches active today, region total | 389.0 | 528.0 | 0.0 | 2,492.0 | 1,810 |

Table B3: Descriptive statistics — LiTS Wave 3 (2016), Russia

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| **Panel A: Demographics** | | | | | |
| Age (years) | 45.1 | 16.6 | 18.0 | 93.0 | 1,507 |
| Male (%) | 38.1 | 48.6 | 0.0 | 100.0 | 1,507 |
| Urban (%) | 73.6 | 44.1 | 0.0 | 100.0 | 1,507 |
| Wealth ladder (1=lowest ... 10=highest) | 4.7 | 2.1 | 1.0 | 10.0 | 1,443 |
| Education (raw category code, 1=lowest ... 8=highest) | 5.1 | 1.1 | 1.0 | 8.0 | 1,507 |
| **Panel B: Religiosity outcomes** | | | | | |
| Orthodox Christian denomination (%) | 82.0 | 38.4 | 0.0 | 100.0 | 1,507 |
| Religious org. membership: active (%) | 9.3 | 29.0 | 0.0 | 100.0 | 1,507 |
| Religious org. membership: inactive (%) | 2.8 | 16.5 | 0.0 | 100.0 | 1,507 |
| Confidence in church (1=low ... 5=high) | 2.9 | 1.3 | 1.0 | 5.0 | 1,344 |
| Religious leaders seen as corrupt (1=low ... 4=high) | 2.3 | 1.0 | 1.0 | 4.0 | 621 |
| Would not want neighbor of different religion (%) | 12.3 | 32.8 | 0.0 | 100.0 | 1,507 |
| Would not want Jewish neighbor (%) | 7.0 | 25.5 | 0.0 | 100.0 | 1,507 |
| **Panel C: Repression memory (self-reported)** | | | | | |
| Repression memory: self, religion-related (%) | 1.46 | 12.00 | 0.00 | 100.00 | 1,507 |
| Repression memory: family, religion-related (%) | 2.32 | 15.07 | 0.00 | 100.00 | 1,507 |

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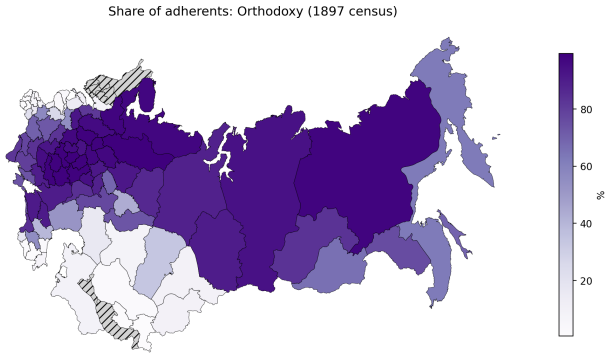
*Descriptive statistics — LiTS Wave 3 (2016), Russia — continued*

| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| Repression memory: grandparents, religion-related (%) | 5.51 | 22.82 | 0.00 | 100.00 | 1,507 |
| Repression memory: other relatives, religion-related (%) | 2.19 | 14.64 | 0.00 | 100.00 | 1,507 |
| **Panel D: Church exposure within 50km** | | | | | |
| Churches active in 1917, within 50km | 245.6 | 435.1 | 0.0 | 1,383.0 | 1,507 |
| Closed (% of 1917 stock within 50km) | 75.6 | 15.3 | 0.0 | 100.0 | 1,447 |
| Closed or destroyed (% of 1917 stock within 50km) | 87.6 | 14.0 | 0.0 | 100.0 | 1,447 |
| Closed, not destroyed (% of 1917 stock within 50km) | 49.1 | 14.7 | 0.0 | 100.0 | 1,447 |
| Destroyed (% of 1917 stock within 50km) | 38.5 | 17.1 | 0.0 | 100.0 | 1,447 |
| Reopened (% of 1917 stock within 50km) | 45.7 | 19.4 | 0.0 | 100.0 | 1,447 |
| Renovated (% of 1917 stock within 50km) | 45.5 | 18.1 | 0.0 | 100.0 | 1,447 |
| Survived, active today (% of 1917 stock within 50km) | 53.5 | 19.8 | 0.0 | 100.0 | 1,447 |
| **Panel E: Era-specific closure within 50km** | | | | | |
| Lenin era: closed or destroyed (% of 1917 stock within 50km) | 10.75 | 10.86 | 0.00 | 42.86 | 1,447 |
| Stalin era: closed or destroyed (% of 1917 stock within 50km) | 57.79 | 17.24 | 0.00 | 100.00 | 1,447 |
| Khrushchev era: closed or destroyed (% of 1917 stock within 50km) | 3.59 | 5.19 | 0.00 | 33.33 | 1,447 |
| **Panel F: Other geo-matched exposure** | | | | | |
| Distance to nearest closed/destroyed church (km) | 11.2 | 24.5 | 0.2 | 134.0 | 1,507 |
| Distance to nearest surviving (active) church (km) | 14.0 | 27.8 | 0.2 | 170.8 | 1,507 |
| Distance to nearest Gulag camp (km) | 137.2 | 179.0 | 1.2 | 889.6 | 1,507 |

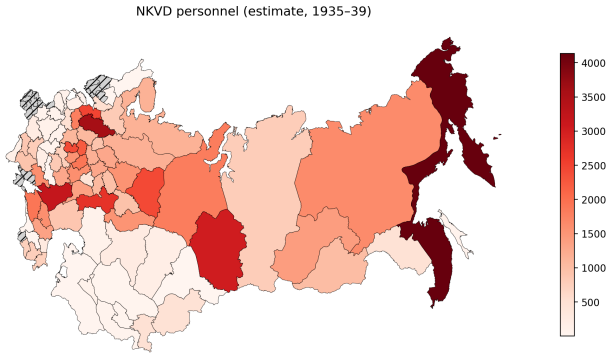
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*Descriptive statistics — LiTS Wave 3 (2016), Russia — continued*

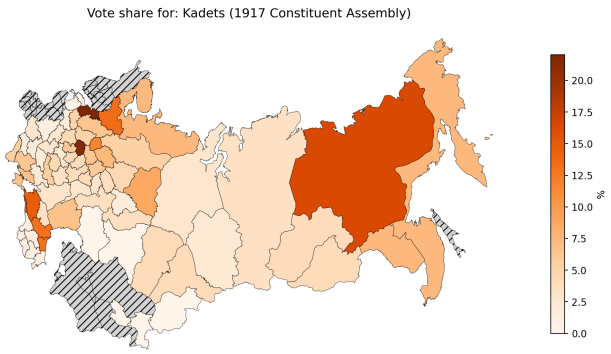
| Variable | Mean | SD | Min | Max | N |
|---|---|---|---|---|---|
| Gulag camps within 100km | 1.2 | 1.7 | 0.0 | 6.0 | 1,507 |
| Gulag prisoners, 1952 headcount, within 100km | 15,854.6 | 25,075.5 | 0.0 | 72,778.0 | 1,507 |
| Distance to nearest 1926 city (km) | 3.0 | 2.5 | 0.0 | 9.5 | 1,507 |
| 1926 population within 50km | 516,363.2 | 815,126.0 | 0.0 | 2,378,352.0 | 1,507 |
| Distance to 1937 railroad (km) | 15.2 | 27.7 | 0.7 | 231.8 | 1,507 |
| Distance to nearest rebellion/unrest event (km) | 104.2 | 135.3 | 0.9 | 770.7 | 1,507 |
| Rebellions/unrest events within 100km | 1.3 | 1.4 | 0.0 | 5.0 | 1,507 |
| **Panel G: Province-level context** | | | | | |
| Province Orthodoxy share (1897 census, %) | 83.9 | 14.6 | 34.0 | 99.1 | 1,507 |
| Churches active in 1917, province total | 663.5 | 912.8 | 22.0 | 2,927.0 | 1,507 |
| Region Orthodoxy share (ARENA 2012, %) | 41.7 | 12.6 | 22.6 | 69.2 | 1,507 |
| Churches active today, region total | 308.5 | 359.4 | 3.0 | 1,370.0 | 1,507 |



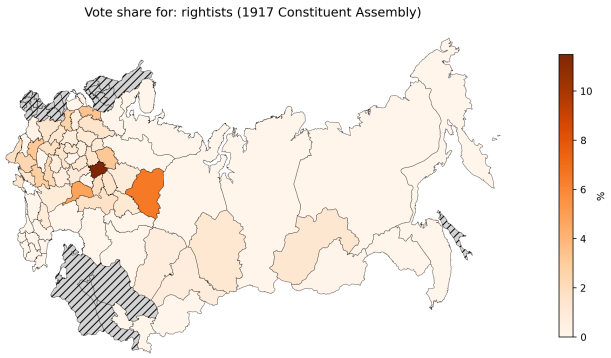

(a) Orthodox population share, 1897



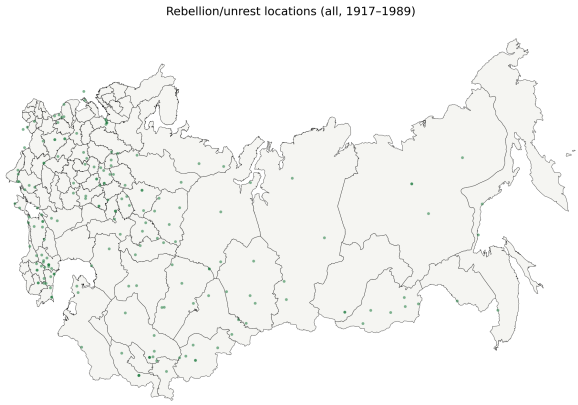

(b) Security-police personnel, 1935–1939




(c) Kadet vote share, 1917



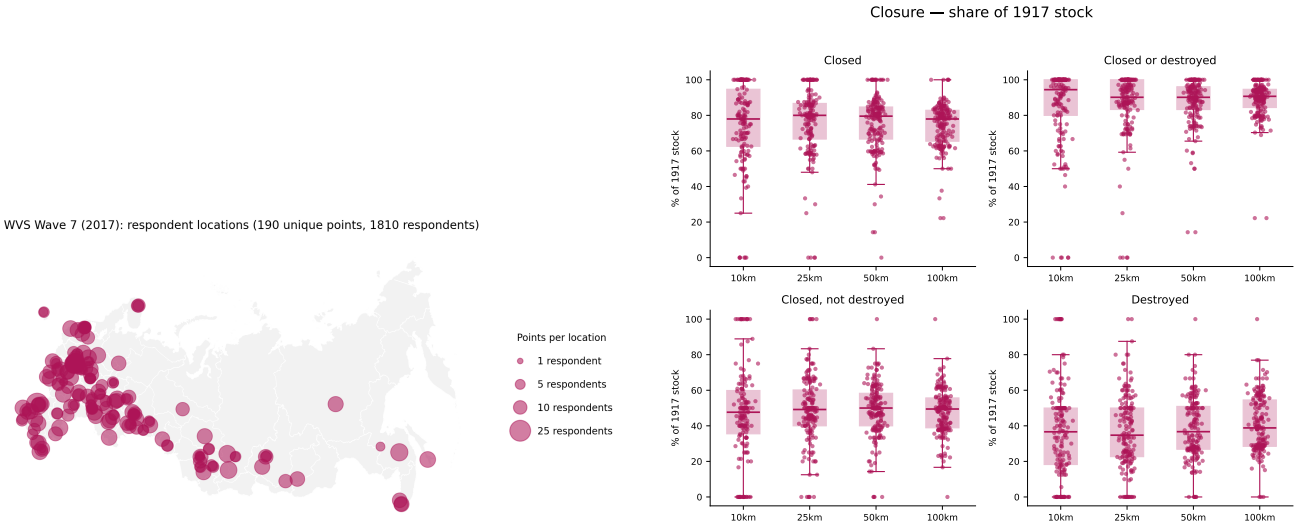

(d) Rightist vote share, 1917




(e) Soviet-era uprisings (locations)

*Notes:* Historical determinants on 1897 provincial boundaries. Panel (e) plots the 187 geocoded Soviet-era uprisings; the church-level variable is the distance from each church to the nearest one. Hatched provinces have no church-level coverage or no data for that variable.

Figure B1: Spatial Distribution of the Main Historical Controls

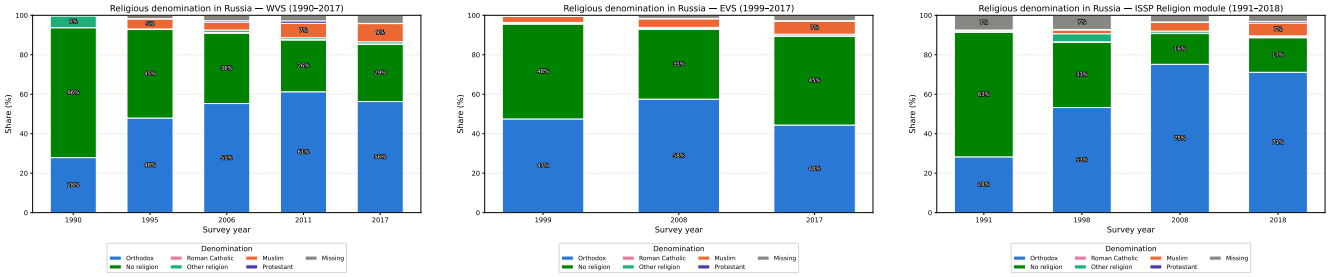



(a) Respondent locations

(b) Local closed-or-destroyed exposure share

*Notes:* World Values Survey (2017). Panel (a): respondent locations. Panel (b): the distribution across respondents of the share of the local 1917 church stock (within 50 km) that was closed or destroyed.

Figure B2: World Values Survey: Respondent Locations and Local Exposure




(a) World Values Survey

(b) European Values Study

(c) ISSP

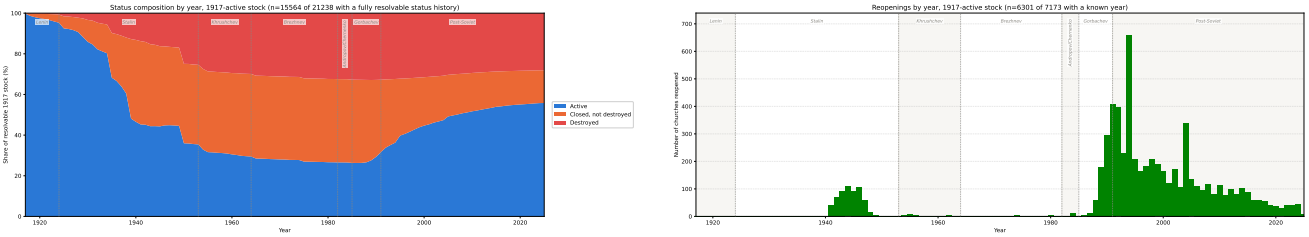



(d) RLMS-HSE

(e) Life in Transition Survey

*Notes:* Distribution of self-reported religious affiliation among respondents in Russia, by survey year, in five independent survey series.

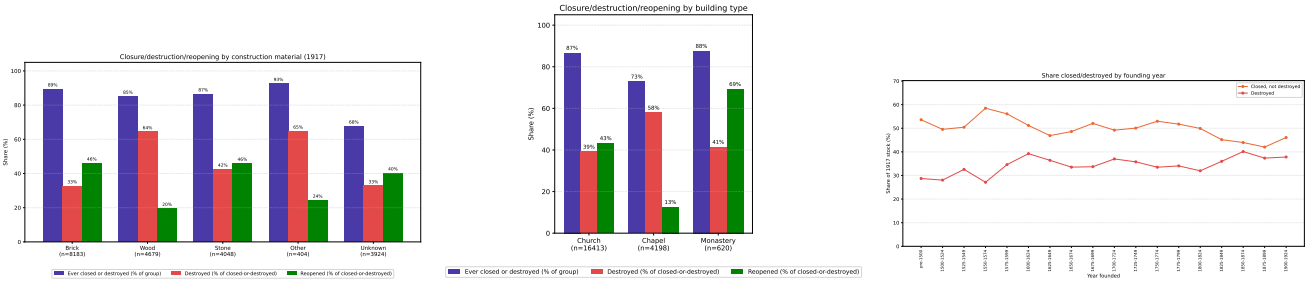
Figure B3: Religious Affiliation in Russia Over Time, Five Survey Series




(a) Status of the 1917 stock, by year (b) Reopenings, by year

*Notes:* Panel (a) shows, for the subset of the 1917 stock whose status is time-resolvable in each year, the share active, closed but not destroyed, and destroyed. Panel (b) shows the number of reopenings by year. Vertical bands mark Soviet leadership periods.

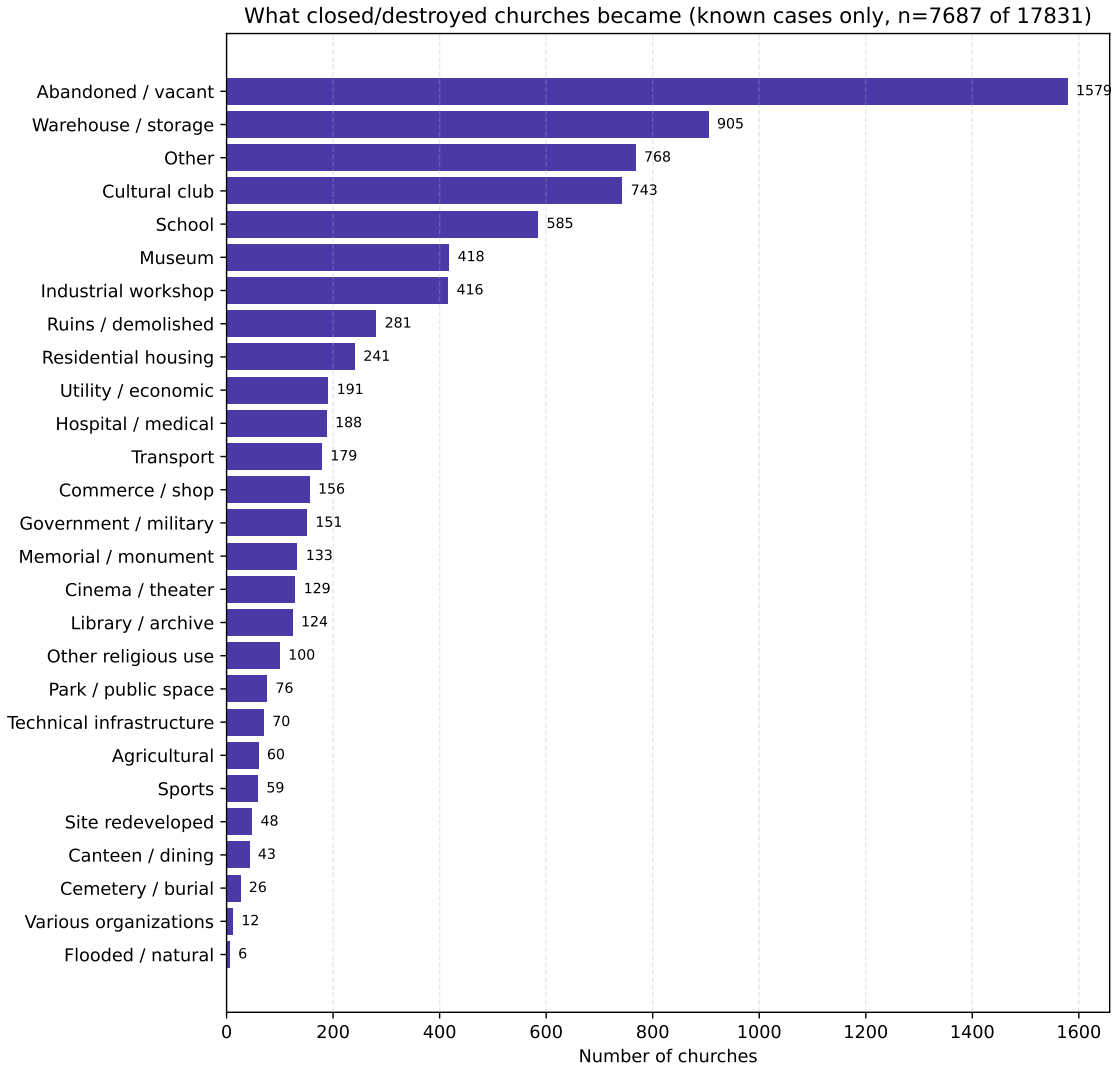
Figure B4: The Church Stock Over Time and the Post-1988 Reopening Wave




(a) By material (b) By building type (c) By founding year

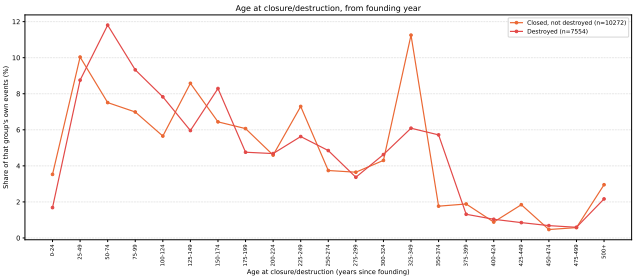
*Notes:* For each category: the share of that category's 1917-active stock ever closed or destroyed; the share of the closed-or-destroyed subset that was destroyed rather than only closed; and the share of that subset later reopened.

Figure B5: Repression, Destruction, and Reopening Rates by Building Characteristic

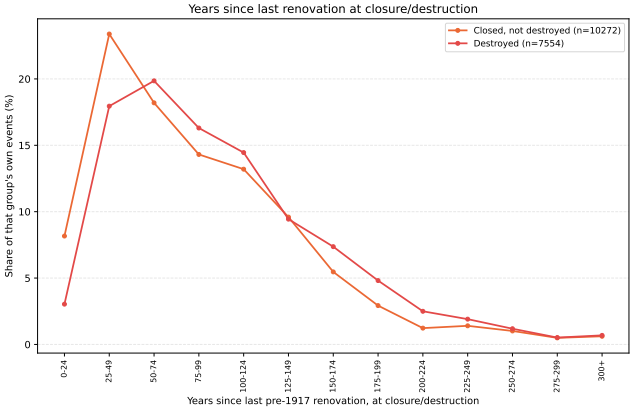



*Notes:* Recorded subsequent use of closed or destroyed buildings, among those with a known category.

Figure B6: What Closed or Destroyed Churches Became



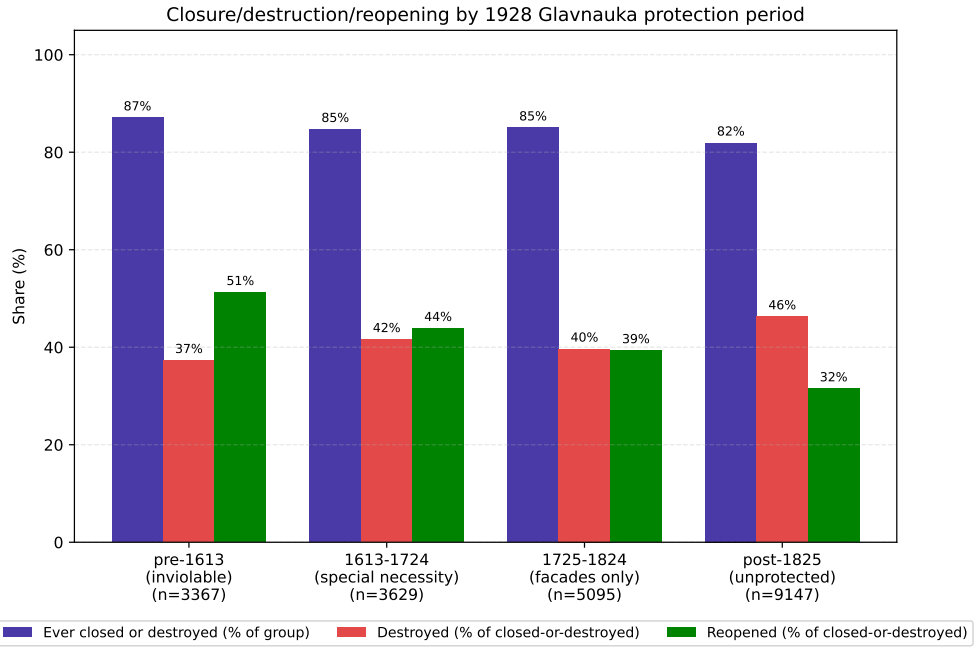

(a) Years since foundation




(b) Years since last pre-1917 renovation

*Notes:* Distribution, across closed or destroyed buildings, of building age and of years since the last pre-1917 renovation, measured at the year of the closure or destruction event.

Figure B7: Building Age at the Time of Closure or Destruction




*Notes:* The four founding-date tiers of the 1928 Glavnauka monument-protection rule: before 1613 (inviolable), 1613–1725, 1725–1825, and after 1825 (unprotected). For each tier: the share ever closed or destroyed, the share of that subset destroyed rather than only closed, and the share later reopened.

Figure B8: Closure Outcomes by Monument-Protection Tier (1928 Glavnauka Rule)

# C Determinants of Repression: Additional Results

## C.1 Regional Analysis

Table C1 replicates the provincial regression of Table 3 on contemporary regional boundaries. Tables C2 and C3 hold the regressors fixed and vary the dependent variable across the components of the closure measure – the share purely closed, the share closed but not destroyed, and the share destroyed. The determinants are not uniform across these outcomes: the 1917 vote shares in particular load differently on closure than on destruction.

## C.2 Church-Level Specification Ladder

For the two headline outcomes – closed or destroyed, and destroyed conditional on repression – Tables C4 and C5 report the full specification ladder: building and denomination controls; then geography; then province covariates entered directly; then province fixed effects. The building coefficients are stable across the ladder.

## C.3 Survival Analysis

The proportional-hazards assumption is tested rather than assumed; the main text's Cox model is stratified by province so that the baseline hazard is free to differ across provinces. Table C6 reports the version with province covariates entered directly instead of stratification. Tables C7 and C8 run cause-specific hazards – time to a first closure and time to a first destruction as competing risks. Table C9 replaces the era split with time-varying coefficients on the building characteristics.

## C.4 The Age Rule: Additional Results

The difference-in-discontinuities at 1825 reported in the main text is robust to the founding-year bandwidth (Table C10), gives nothing at placebo cutoffs of 1775, 1800, 1850, and 1875 (Table C11), and survives dropping the buildings within three founding years of the cutoff (Table C12). Figure C1 plots the underlying discontinuity, before and after 1928.

Table C1: Determinants of Repression: Provincial Evidence (modern regional boundaries)

| | **Dependent variable:** Share of 1917 church stock closed or destroyed (%) | | | |
|---|---|---|---|---|
| | (1) Opposition | (2) NKVD | (3) Material | (4) All |
| Orthodoxy share (1897 census, %) | 0.015 | 0.088 | 0.008 | 0.126 |
| | (0.150) | (0.148) | (0.131) | (0.163) |
| Churches per 100,000 population (1897) | 0.010 | -0.016 | 0.030 | 0.028 |
| | (0.017) | (0.016) | (0.020) | (0.021) |
| Bolsheviks vote share (1917, %) | -0.064 | | | -0.268* |
| | (0.117) | | | (0.148) |
| Kadets vote share (1917, %) | -0.651 | | | 0.192 |
| | (0.495) | | | (0.539) |
| Rightists vote share (1917, %) | 0.691 | | | -0.023 |
| | (0.906) | | | (0.701) |
| Rebellion/unrest occurred, 1917-1989 (dummy) | 6.365 | | | 3.887 |
| | (4.500) | | | (4.065) |
| NKVD personnel per 100,000 population (1897) | | 0.001*** | | 0.002** |
| | | (0.000) | | (0.001) |
| Material: wood (% of 1917 stock) | | | -0.159 | -0.182 |
| | | | (0.099) | (0.121) |
| Material: stone (% of 1917 stock) | | | -0.151 | -0.082 |
| | | | (0.155) | (0.159) |
| Material: other (% of 1917 stock) | | | -0.286 | -0.218 |
| | | | (0.296) | (0.335) |
| Material: unknown (% of 1917 stock) | | | -0.800*** | -0.839*** |
| | | | (0.295) | (0.289) |
| Constant | 84.424*** | 78.151*** | 105.555*** | 97.343*** |
| | (14.905) | (13.427) | (11.742) | (14.186) |
| Observations | 79 | 79 | 79 | 79 |
| Mean of Dep. Variable | 85.33 | 85.33 | 85.33 | 85.33 |
| R-squared | 0.091 | 0.034 | 0.277 | 0.367 |

*Notes:* As Table 3, on contemporary regional boundaries. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C2: Determinants of Repression by Outcome Measure (1897 boundaries)

| | **Dependent variable:** Share (%) of 1917 church stock, by outcome | | | |
|---|---|---|---|---|
| | (1) Closed or destroyed | (2) Closed | (3) Closed, not destroyed | (4) Destroyed |
| Orthodoxy share (1897 census, %) | 0.131** | 0.159** | 0.291** | -0.159 |
| | (0.061) | (0.067) | (0.129) | (0.118) |
| Churches per 100,000 population (1897) | -0.144*** | -0.194*** | -0.133** | -0.010 |
| | (0.045) | (0.052) | (0.061) | (0.065) |
| Bolsheviks vote share (1917, %) | 0.082 | -0.194*** | -0.143 | 0.225 |
| | (0.055) | (0.068) | (0.121) | (0.134) |
| Kadets vote share (1917, %) | 0.347 | 0.899*** | 1.403*** | -1.057** |
| | (0.280) | (0.229) | (0.314) | (0.419) |
| Rightists vote share (1917, %) | -0.188 | -0.087 | -0.159 | -0.028 |
| | (0.412) | (0.564) | (0.634) | (0.644) |
| Rebellion/unrest occurred, 1917-1989 (dummy) | 2.708 | 3.706 | -3.094 | 5.802 |
| | (3.206) | (5.818) | (6.259) | (5.885) |
| NKVD personnel per 100,000 population (1897) | 0.008** | 0.009** | 0.000 | 0.008 |
| | (0.004) | (0.003) | (0.004) | (0.005) |
| Material: wood (% of 1917 stock) | -0.098 | -0.196 | -0.015 | -0.083 |
| | (0.142) | (0.133) | (0.168) | (0.249) |
| Material: stone (% of 1917 stock) | -0.180 | -0.110 | -0.030 | -0.151 |
| | (0.188) | (0.171) | (0.174) | (0.313) |
| Material: other (% of 1917 stock) | 0.276 | -0.906 | -2.277** | 2.553** |
| | (0.539) | (0.731) | (1.063) | (1.221) |
| Material: unknown (% of 1917 stock) | -0.205 | -0.332* | -0.301* | 0.096 |
| | (0.203) | (0.171) | (0.162) | (0.265) |
| Constant | 81.558*** | 74.255*** | 36.318** | 45.240*** |
| | (8.600) | (9.456) | (16.364) | (15.200) |
| Observations | 50 | 50 | 50 | 50 |
| Mean of Dep. Variable | 86.48 | 72.23 | 47.75 | 38.73 |
| R-squared | 0.419 | 0.581 | 0.425 | 0.322 |

*Notes:* OLS. Same regressors as Table 3, column (4); the dependent variable varies across columns (share closed or destroyed, closed, closed not destroyed, destroyed). * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C3: Determinants of Repression by Outcome Measure (modern regional boundaries)

| | **Dependent variable:** Share (%) of 1917 church stock, by outcome | | | |
|---|---|---|---|---|
| | (1) Closed or destroyed | (2) Closed | (3) Closed, not destroyed | (4) Destroyed |
| Orthodoxy share (1897 census, %) | 0.126 | 0.137 | 0.144 | -0.018 |
| | (0.163) | (0.124) | (0.107) | (0.143) |
| Churches per 100,000 population (1897) | 0.028 | 0.037 | 0.037* | -0.009 |
| | (0.021) | (0.027) | (0.021) | (0.019) |
| Bolsheviks vote share (1917, %) | -0.268* | -0.463*** | -0.312** | 0.044 |
| | (0.148) | (0.162) | (0.119) | (0.151) |
| Kadets vote share (1917, %) | 0.192 | 0.336 | 0.421 | -0.229 |
| | (0.539) | (0.609) | (0.581) | (0.590) |
| Rightists vote share (1917, %) | -0.023 | -0.052 | 0.761 | -0.784 |
| | (0.701) | (0.773) | (0.775) | (0.892) |
| Rebellion/unrest occurred, 1917-1989 (dummy) | 3.887 | 9.892** | 8.129* | -4.242 |
| | (4.065) | (4.664) | (4.124) | (3.722) |
| NKVD personnel per 100,000 population (1897) | 0.002** | 0.002** | 0.000 | 0.001** |
| | (0.001) | (0.001) | (0.001) | (0.001) |
| Material: wood (% of 1917 stock) | -0.182 | -0.195 | -0.205 | 0.024 |
| | (0.121) | (0.126) | (0.166) | (0.152) |
| Material: stone (% of 1917 stock) | -0.082 | -0.043 | -0.103 | 0.020 |
| | (0.159) | (0.146) | (0.157) | (0.155) |
| Material: other (% of 1917 stock) | -0.218 | -0.098 | -0.885*** | 0.667*** |
| | (0.335) | (0.374) | (0.170) | (0.243) |
| Material: unknown (% of 1917 stock) | -0.839*** | -0.996*** | -0.575*** | -0.264 |
| | (0.289) | (0.247) | (0.190) | (0.236) |
| Constant | 97.343*** | 83.705*** | 50.511*** | 46.833*** |
| | (14.186) | (12.434) | (11.988) | (13.964) |
| Observations | 79 | 79 | 79 | 79 |
| Mean of Dep. Variable | 85.33 | 71.44 | 45.43 | 39.90 |
| R-squared | 0.367 | 0.468 | 0.414 | 0.267 |

*Notes:* As Table C2, on contemporary regional boundaries. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C4: Determinants of Closure or Destruction: Specification Ladder

| | **Dependent variable:** Closed or destroyed (=1), full 1917 stock | | | |
|---|---|---|---|---|
| | (1) Building+Denom. | (2) + Geography | (3) + Region obs. | (4) Province FE |
| Years since foundation (centuries, rel. to 1917) | 0.006*** | 0.005** | 0.011*** | 0.011*** |
| | (0.002) | (0.002) | (0.002) | (0.004) |
| Years since last renovation (centuries, rel. to 1917) | -0.075*** | -0.075*** | -0.072*** | -0.067*** |
| | (0.005) | (0.005) | (0.005) | (0.010) |
| Material: wood | -0.004 | 0.006 | 0.008 | 0.000 |
| | (0.006) | (0.007) | (0.007) | (0.014) |
| Material: stone | -0.020*** | -0.029*** | -0.028*** | -0.036*** |
| | (0.006) | (0.007) | (0.007) | (0.011) |
| Material: other | 0.056*** | 0.042*** | 0.039** | 0.040*** |
| | (0.013) | (0.015) | (0.015) | (0.015) |
| Material: unknown | -0.208*** | -0.231*** | -0.227*** | -0.231*** |
| | (0.009) | (0.009) | (0.009) | (0.023) |
| Building type: church | 0.149*** | 0.159*** | 0.143*** | 0.142*** |
| | (0.008) | (0.009) | (0.009) | (0.032) |
| Building type: monastery | 0.296*** | 0.320*** | 0.297*** | 0.293*** |
| | (0.015) | (0.016) | (0.016) | (0.044) |
| Denomination: Old Believer | 0.020 | -0.028 | -0.012 | -0.017 |
| | (0.025) | (0.038) | (0.038) | (0.053) |
| Pop. within 100km, 1926 (ln) | | -0.000 | 0.001 | -0.000 |
| | | (0.001) | (0.001) | (0.001) |
| Distance to 1937 railroad, km (ln) | | -0.011*** | -0.007** | -0.006 |
| | | (0.003) | (0.003) | (0.005) |
| Distance to nearest Soviet-era uprising, km (ln) | | -0.016*** | -0.015*** | -0.020** |
| | | (0.002) | (0.002) | (0.010) |
| Orthodoxy share, 1897 census (region) | | | 0.000 | |
| | | | (0.000) | |
| Churches per 100,000 pop., 1897 (region) | | | -0.001*** | |
| | | | (0.000) | |
| NKVD personnel per 100,000 pop. (region) | | | 0.000*** | |
| | | | (0.000) | |
| Bolsheviks vote share, 1917 (region) | | | -0.000 | |
| | | | (0.000) | |
| Kadets vote share, 1917 (region) | | | 0.003*** | |
| | | | (0.001) | |
| Rightists vote share, 1917 (region) | | | -0.004*** | |
| | | | (0.001) | |
| Constant | 0.802*** | 0.897*** | 0.904*** | 0.901*** |
| | (0.009) | (0.021) | (0.032) | (0.046) |
| Observations | 21238 | 19367 | 19179 | 19358 |
| Province FE | No | No | No | Yes |
| Mean of Dep. Variable | 0.840 | 0.836 | 0.837 | 0.837 |
| R-squared | 0.088 | 0.099 | 0.108 | 0.123 |

*Notes:* OLS. Dependent variable: closed or destroyed versus untouched. Columns add control blocks; column (4) adds province fixed effects. Standard errors clustered by province. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C5: Determinants of Destruction Given Repression: Specification Ladder

| | **Dependent variable:** Destroyed (=1), if closed or destroyed | | | |
|---|---|---|---|---|
| | (1) Building+Denom. | (2) + Geography | (3) + Region obs. | (4) Province FE |
| Years since foundation (centuries, rel. to 1917) | -0.004 | -0.008** | 0.001 | 0.002 |
| | (0.003) | (0.003) | (0.003) | (0.004) |
| Years since last renovation (centuries, rel. to 1917) | 0.031*** | 0.038*** | 0.040*** | 0.040*** |
| | (0.007) | (0.007) | (0.007) | (0.008) |
| Material: wood | 0.285*** | 0.298*** | 0.313*** | 0.306*** |
| | (0.010) | (0.011) | (0.011) | (0.021) |
| Material: stone | 0.088*** | 0.066*** | 0.074*** | 0.080*** |
| | (0.010) | (0.010) | (0.010) | (0.018) |
| Material: other | 0.293*** | 0.289*** | 0.301*** | 0.271*** |
| | (0.025) | (0.028) | (0.028) | (0.035) |
| Material: unknown | -0.024** | -0.043*** | -0.018 | -0.022 |
| | (0.011) | (0.011) | (0.012) | (0.030) |
| Building type: church | -0.109*** | -0.154*** | -0.180*** | -0.169*** |
| | (0.011) | (0.012) | (0.012) | (0.020) |
| Building type: monastery | -0.043* | -0.066** | -0.114*** | -0.100** |
| | (0.025) | (0.026) | (0.026) | (0.038) |
| Denomination: Old Believer | 0.148*** | 0.007 | 0.033 | -0.016 |
| | (0.044) | (0.062) | (0.064) | (0.105) |
| Pop. within 100km, 1926 (ln) | | 0.001 | 0.005*** | 0.003 |
| | | (0.001) | (0.002) | (0.003) |
| Distance to 1937 railroad, km (ln) | | -0.012** | -0.004 | 0.006 |
| | | (0.005) | (0.005) | (0.007) |
| Distance to nearest Soviet-era uprising, km (ln) | | -0.005 | -0.008** | -0.016** |
| | | (0.003) | (0.004) | (0.007) |
| Orthodoxy share, 1897 census (region) | | | -0.001 | |
| | | | (0.000) | |
| Churches per 100,000 pop., 1897 (region) | | | -0.001*** | |
| | | | (0.000) | |
| NKVD personnel per 100,000 pop. (region) | | | 0.000 | |
| | | | (0.000) | |
| Bolsheviks vote share, 1917 (region) | | | 0.001*** | |
| | | | (0.000) | |
| Kadets vote share, 1917 (region) | | | -0.004*** | |
| | | | (0.001) | |
| Rightists vote share, 1917 (region) | | | -0.011*** | |
| | | | (0.002) | |
| Constant | 0.414*** | 0.493*** | 0.566*** | 0.456*** |
| | (0.012) | (0.034) | (0.052) | (0.056) |
| Observations | 17831 | 16199 | 16054 | 16196 |
| Province FE | No | No | No | Yes |
| Mean of Dep. Variable | 0.424 | 0.403 | 0.402 | 0.403 |
| R-squared | 0.078 | 0.083 | 0.095 | 0.126 |

*Notes:* OLS. Sample: buildings closed or destroyed. Dependent variable: destroyed rather than only closed. Columns as in Table C4. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C6: Survival Analysis: Province Covariates Instead of Stratification

| | **Specification:** No stratification; province-level covariates included directly | | | |
|---|---|---|---|---|
| | (1) Pooled (1917-1991) | (2) Lenin era | (3) Stalin era | (4) Khrushchev era |
| Years since foundation (centuries, rel. to 1917) | 1.057*** | 0.883*** | 1.087*** | 0.972 |
| | (0.023) | (0.040) | (0.025) | (0.047) |
| Years since last renovation (centuries, rel. to 1917) | 0.765*** | 0.752*** | 0.769*** | 0.892 |
| | (0.024) | (0.058) | (0.024) | (0.079) |
| Material: wood | 0.831*** | 0.690** | 0.792*** | 1.191 |
| | (0.050) | (0.125) | (0.050) | (0.170) |
| Material: stone | 0.920 | 1.870*** | 0.888 | 1.062 |
| | (0.061) | (0.264) | (0.069) | (0.124) |
| Material: other | 1.118 | 2.573*** | 1.053 | 1.193 |
| | (0.105) | (0.576) | (0.123) | (0.375) |
| Material: unknown | 0.442*** | 3.218*** | 0.383*** | 0.221*** |
| | (0.050) | (0.515) | (0.044) | (0.032) |
| Building type: church | 2.410*** | 4.250*** | 2.511*** | 1.911*** |
| | (0.307) | (1.442) | (0.376) | (0.344) |
| Building type: monastery | 11.358*** | 30.435*** | 8.059*** | 3.042** |
| | (2.119) | (11.806) | (1.613) | (1.480) |
| Denomination: Old Believer | 1.160 | 0.000 | 1.351* | 0.955 |
| | (0.186) | (.) | (0.213) | (0.769) |
| Orthodoxy share, 1897 census (region) | 0.997 | 1.001 | 0.997 | 1.006 |
| | (0.002) | (0.006) | (0.002) | (0.004) |
| Churches per 100,000 pop., 1897 (region) | 0.996*** | 0.994* | 0.997*** | 0.992*** |
| | (0.001) | (0.003) | (0.001) | (0.002) |
| NKVD personnel per 100,000 pop. (region) | 1.001*** | 1.001* | 1.001*** | 0.999 |
| | (0.000) | (0.000) | (0.000) | (0.001) |
| Bolsheviks vote share, 1917 (region) | 0.994** | 0.991 | 0.994*** | 1.002 |
| | (0.002) | (0.008) | (0.002) | (0.003) |
| Kadets vote share, 1917 (region) | 1.017*** | 1.047** | 1.015* | 0.997 |
| | (0.006) | (0.020) | (0.008) | (0.012) |
| Rightists vote share, 1917 (region) | 0.989 | 0.989 | 0.990 | 1.006 |
| | (0.013) | (0.033) | (0.017) | (0.031) |
| Observations | 15869 | 15869 | 14914 | 4103 |
| Failures (events) | 12705 | 834 | 10798 | 694 |
| Province stratified | No | No | No | No |

*Notes:* Cox model with province-level covariates entered directly. Hazard ratios; standard errors clustered by province. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C7: Cause-Specific Hazard: Time to First Closure

| | **Specification:** Province-stratified Cox, clustered SE - closed, not destroyed (destroyed churches excluded) | | | |
|---|---|---|---|---|
| | (1) Pooled (1917-1991) | (2) Lenin era | (3) Stalin era | (4) Khrushchev era |
| Years since foundation (centuries, rel. to 1917) | 1.058*** | 0.833*** | 1.095*** | 1.050 |
| | (0.022) | (0.043) | (0.025) | (0.061) |
| Years since last renovation (centuries, rel. to 1917) | 0.733*** | 0.732*** | 0.747*** | 0.771** |
| | (0.021) | (0.068) | (0.024) | (0.094) |
| Material: wood | 0.638*** | 0.288*** | 0.639*** | 0.547* |
| | (0.041) | (0.080) | (0.041) | (0.172) |
| Material: stone | 0.839*** | 2.306*** | 0.790*** | 0.927 |
| | (0.049) | (0.422) | (0.051) | (0.117) |
| Material: other | 0.901 | 2.847*** | 0.830 | 0.506 |
| | (0.099) | (0.827) | (0.121) | (0.385) |
| Material: unknown | 0.383*** | 3.690*** | 0.293*** | 0.143*** |
| | (0.055) | (0.572) | (0.043) | (0.026) |
| Building type: church | 6.827*** | 6.425*** | 7.898*** | 3.932*** |
| | (1.108) | (2.857) | (1.420) | (0.880) |
| Building type: monastery | 32.012*** | 47.533*** | 25.595*** | 7.497** |
| | (8.999) | (21.759) | (7.789) | (6.408) |
| Denomination: Old Believer | 1.136 | 0.000*** | 1.277 | 1.660 |
| | (0.319) | (0.000) | (0.369) | (1.676) |
| Observations | 10492 | 10492 | 9858 | 3534 |
| Failures (events) | 7326 | 558 | 6320 | 276 |
| Province stratified | Yes | Yes | Yes | Yes |

*Notes:* Province-stratified Cox model; the event is a first closure. Hazard ratios; standard errors clustered by province. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C8: Cause-Specific Hazard: Time to First Destruction

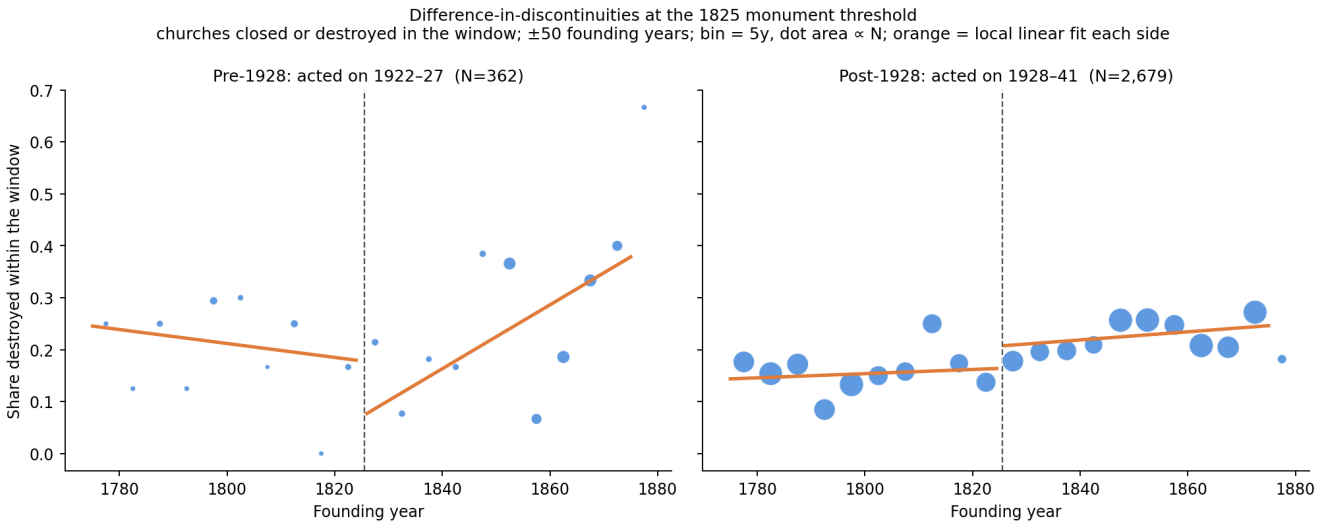
| | **Specification:** Province-stratified Cox, clustered SE - destroyed (closed-not-destroyed churches excluded) | | | |
|---|---|---|---|---|
| | (1) Pooled (1917-1991) | (2) Lenin era | (3) Stalin era | (4) Khrushchev era |
| Years since foundation (centuries, rel. to 1917) | 1.106*** | 0.897 | 1.122*** | 1.025 |
| | (0.029) | (0.141) | (0.032) | (0.051) |
| Years since last renovation (centuries, rel. to 1917) | 0.882*** | 0.867 | 0.897*** | 0.910 |
| | (0.037) | (0.188) | (0.036) | (0.073) |
| Material: wood | 1.068 | 3.667*** | 0.972 | 1.139 |
| | (0.091) | (1.439) | (0.100) | (0.171) |
| Material: stone | 0.927 | 3.647*** | 0.952 | 1.064 |
| | (0.091) | (1.466) | (0.124) | (0.147) |
| Material: other | 1.302** | 12.663*** | 1.225 | 1.417 |
| | (0.161) | (6.963) | (0.210) | (0.347) |
| Material: unknown | 0.382*** | 5.003*** | 0.409*** | 0.318*** |
| | (0.035) | (2.402) | (0.041) | (0.051) |
| Building type: church | 1.148 | 1.288 | 1.011 | 1.286* |
| | (0.131) | (0.467) | (0.121) | (0.196) |
| Building type: monastery | 1.353 | 9.944*** | 1.061 | 1.411 |
| | (0.253) | (4.671) | (0.202) | (0.468) |
| Denomination: Old Believer | 0.842 | 0.000 | 0.881 | 0.754 |
| | (0.214) | (.) | (0.332) | (0.355) |
| Observations | 8673 | 8673 | 8576 | 5130 |
| Failures (events) | 4698 | 77 | 3428 | 669 |
| Province stratified | Yes | Yes | Yes | Yes |

*Notes:* Province-stratified Cox model; the event is a first destruction. Hazard ratios; standard errors clustered by province. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C9: Survival Analysis: Time-Varying Coefficients

| | **Specification:** Pooled 1917-1991, time-varying coefficients | |
|---|---|---|
| | (1) Province-stratified | (2) Region observables |
| Baseline effect, at 1917 (t=0) | | |
| Years since foundation (centuries, rel. to 1917) | 1.045 | 1.034 |
| | (0.042) | (0.043) |
| Years since last renovation (centuries, rel. to 1917) | 0.721*** | 0.707*** |
| | (0.028) | (0.033) |
| Material: wood | 0.511*** | 0.595*** |
| | (0.057) | (0.059) |
| Material: stone | 1.419*** | 1.580*** |
| | (0.146) | (0.179) |
| Material: other | 1.459* | 1.514* |
| | (0.313) | (0.363) |
| Material: unknown | 2.268*** | 2.498*** |
| | (0.397) | (0.487) |
| Building type: church | 3.115*** | 2.860*** |
| | (0.880) | (0.825) |
| Building type: monastery | 42.193*** | 37.767*** |
| | (15.501) | (14.472) |
| Denomination: Old Believer | 1.216 | 1.274 |
| | (0.449) | (0.489) |
| Pop. within 100km, 1926 (ln) | 1.007 | 1.014 |
| | (0.010) | (0.010) |
| Distance to 1937 railroad, km (ln) | 0.911*** | 0.913*** |
| | (0.017) | (0.018) |
| Orthodoxy share, 1897 census (region) | | 0.998 |
| | | (0.003) |
| Churches per 100,000 pop., 1897 (region) | | 0.996*** |
| | | (0.001) |
| NKVD personnel per 100,000 pop. (region) | | 1.001*** |
| | | (0.000) |
| Bolsheviks vote share, 1917 (region) | | 0.995** |
| | | (0.002) |
| Kadets vote share, 1917 (region) | | 1.016*** |
| | | (0.006) |
| Rightists vote share, 1917 (region) | | 0.989 |
| | | (0.014) |
| Change per additional year (time interaction) | | |
| Years since foundation (centuries, rel. to 1917) | 1.001 | 1.001 |
| | (0.002) | (0.002) |
| Years since last renovation (centuries, rel. to 1917) | 1.005*** | 1.005*** |
| | (0.001) | (0.002) |
| Material: wood | 1.020*** | 1.014*** |
| | (0.004) | (0.004) |
| Material: stone | 0.977*** | 0.973*** |
| | (0.004) | (0.004) |
| Material: other | 0.985* | 0.985* |
| | (0.008) | (0.009) |
| Material: unknown | 0.921*** | 0.917*** |
| | (0.007) | (0.008) |
| Building type: church | 0.990 | 0.994 |
| | (0.008) | (0.009) |
| Building type: monastery | 0.893*** | 0.898*** |
| | (0.017) | (0.017) |
| Denomination: Old Believer | 0.999 | 0.998 |
| | (0.023) | (0.022) |
| Observations | 15998 | 15869 |
| Failures (events) | 12797 | 12705 |
| Province stratified | Yes | No |

*Notes:* Cox model with coefficients interacted with analysis time, as a continuous alternative to the era split. Hazard ratios; standard errors clustered by province. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.




*Notes:* Destroyed-within-window share by founding year, before and after 1928. Bins of five founding years, dot area proportional to bin size; lines are separate local linear fits on each side of the 1825 break.

Figure C1: The 1825 Discontinuity, Before and After 1928

Table C10: 1825 Difference-in-Discontinuities: Founding-Year Bandwidth

| | **Destroyed within the window (=1), among churches closed or destroyed in the window; 1825 threshold, diff-in-disc** | | | | | |
|---|---|---|---|---|---|---|
| | (1) 25y, 28–38 | (2) 25y, 28–41 | (3) 50y, 28–38 | (4) 50y, 28–41 | (5) 100y, 28–38 | (6) 100y, 28–41 |
| Jump at 1825, pre-1928 | -0.295** | -0.271** | -0.197* | -0.202* | -0.058 | -0.053 |
| | (0.114) | (0.107) | (0.102) | (0.104) | (0.068) | (0.068) |
| Post-1928 | -0.020 | -0.008 | 0.014 | -0.010 | 0.021 | 0.007 |
| | (0.106) | (0.106) | (0.083) | (0.082) | (0.056) | (0.053) |
| Diff-in-disc: jump × post-1928 | 0.373*** | 0.339*** | 0.251** | 0.271** | 0.113 | 0.106 |
| | (0.126) | (0.117) | (0.109) | (0.106) | (0.081) | (0.076) |
| Churches near cutoff | 919 | 1262 | 2182 | 3041 | 4315 | 5964 |

*Notes:* Table 7's specification, varying the founding-year bandwidth (25/50/100 years) and the post-1928 window. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C11: 1825 Difference-in-Discontinuities: Placebo Cutoffs

| | **Destroyed within the window (=1); placebo founding-year cutoffs; pre 1922–27 vs post 1928–41; ±50y** | | | | |
|---|---|---|---|---|---|
| | (1) 1775 | (2) 1800 | (3) 1825 (real) | (4) 1850 | (5) 1875 |
| Jump at cutoff, pre-1928 | 0.007 | -0.077 | -0.202* | -0.016 | -0.010 |
| | (0.124) | (0.103) | (0.104) | (0.062) | (0.067) |
| Post-1928 | 0.040 | -0.016 | -0.010 | 0.078 | -0.022 |
| | (0.097) | (0.052) | (0.082) | (0.062) | (0.056) |
| Diff-in-disc: jump × post-1928 | -0.013 | 0.111 | 0.271** | 0.032 | 0.036 |
| | (0.135) | (0.107) | (0.106) | (0.056) | (0.081) |
| Churches near cutoff | 2710 | 2868 | 3041 | 3158 | 3326 |

*Notes:* Table 7's specification run at placebo founding-year cutoffs of 1775, 1800, 1850, and 1875. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table C12: 1825 Difference-in-Discontinuities: Donut

| | **Destroyed within the window (=1), among churches closed or destroyed in the window — donut ±3 founding years** | | | |
|---|---|---|---|---|
| *Cutoff 1825 pre-window 1922–1927 ±50y donut ±3* | (1) 1928–33 | (2) 1928–38 | (3) 1928–41 | (4) 1953–63 |
| Jump at cutoff, pre-1928 | -0.174 | -0.178 | -0.184 | -0.171 |
| | (0.113) | (0.118) | (0.120) | (0.109) |
| Post-1928 (first action ≥ 1928) | -0.021 | 0.076 | 0.030 | 0.428** |
| | (0.086) | (0.100) | (0.095) | (0.176) |
| Diff-in-disc: jump × post-1928 | 0.359*** | 0.203 | 0.242** | 0.009 |
| | (0.119) | (0.122) | (0.117) | (0.205) |
| Churches near cutoff | 914 | 2066 | 2865 | 626 |
| pre-1928 | 347 | 347 | 347 | 347 |
| post-1928 | 567 | 1719 | 2518 | 279 |

*Notes:* Table 7's specification, dropping buildings founded within three years of 1825. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

# D Consequences: Additional Results

## D.1 Regional Evidence (ARENA)

Table 8 in the main text uses the closed-or-destroyed share. Tables D1 and D2 repeat it with the share purely closed and the share destroyed. No repression coefficient is significant in any of the three.

## D.2 Controlled Regressions and the Omitted-Variable Bound (WVS-7)

Table D3 gives the numbers behind Figure 5: the coefficient on the standardized local closed-or-destroyed share for all nine outcomes at each rung of the control ladder.

**How to read the omitted-variable-bound tables.** Following Oster (2019), let $\tilde{\beta}$ be the coefficient with a minimal control set and $\dot{\beta}$ the coefficient with the full set. If moving from the minimal to the full set barely changes the coefficient while raising the $R^2$ substantially, selection on unobservables would have to be implausibly strong to explain away the estimate. The statistic $\delta$ is how large selection on unobservables would have to be, relative to selection on the observed controls, to drive the coefficient to zero; $\delta > 1$ (in the same direction) means the estimate is robust to proportional selection. $\beta^*$ is the bias-adjusted coefficient under $\delta = 1$. Tables D4 and D5 report these two ways: with no province fixed effects (the across-province comparison), and with province fixed effects partialled out of both the short and the long model (the within-province comparison). The importance of religion clears the bound in the first, service attendance and frequent attendance in the second.

## D.3 The Instrument Bake-Off

The instrument bake-off was run more widely than the main text reports: twelve instrument sets (individual materials, wood and stone together, all materials, mean age, renovation recency, mean age and renovation together, two founding-year threshold shares, a raw shift-share, and the shift-share recentered under a material-only and an additive model, following Borusyak et al., 2022), three repression measures, four radii, and all nine outcomes. Table D6 gives the first-stage

Table D1: Repression (Closed) and Contemporary Religiosity (ARENA 2012)

| | **Dependent variable:** Religious affiliation, belief, and practice (ARENA 2012, %) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) Orthodox | (2) Believe in God | (3) Atheist | (4) Follow prescriptions | (5) Religion important | (6) Pray daily | (7) Parishioner | (8) Confess monthly+ |
| Closed (% of 1917 stock) | 0.028 | 0.052 | 0.014 | -0.071 | -0.004 | -0.019 | -0.011 | -0.012 |
| | (0.081) | (0.047) | (0.047) | (0.066) | (0.047) | (0.050) | (0.010) | (0.009) |
| Orthodoxy share (1897 census, %) | 0.265** | 0.035 | -0.052 | -0.142 | -0.118 | -0.064 | 0.017 | 0.017* |
| | (0.132) | (0.074) | (0.070) | (0.114) | (0.103) | (0.084) | (0.012) | (0.009) |
| Ethnic Russian (2012, %) | 0.177 | 0.183*** | 0.101** | -0.090 | -0.044 | -0.039 | 0.004 | 0.010 |
| | (0.120) | (0.051) | (0.047) | (0.081) | (0.035) | (0.036) | (0.013) | (0.007) |
| Urban share (2012, %) | 0.008 | 0.032 | 0.015 | -0.112 | -0.103* | -0.017 | -0.000 | -0.014 |
| | (0.121) | (0.071) | (0.044) | (0.098) | (0.052) | (0.045) | (0.025) | (0.011) |
| Constant | 0.714 | 1.645 | 7.313 | 53.731*** | 36.039*** | 22.530** | 1.369 | 1.543 |
| | (11.283) | (7.022) | (6.271) | (9.989) | (12.612) | (10.249) | (1.695) | (1.122) |
| Observations | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Mean of Dep. Variable | 39.60 | 25.15 | 12.97 | 21.76 | 15.16 | 11.45 | 2.30 | 1.89 |
| R-squared | 0.232 | 0.265 | 0.129 | 0.153 | 0.258 | 0.107 | 0.044 | 0.152 |

*Notes:* As Table 8, with the regional share closed as the regressor. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Kleibergen–Paap statistic for every instrument set at every radius and repression measure. A usable first stage ($F \geq 10$) appears for wood, mean age, and the raw and material-recentered shift-shares at 50–100 km for the closed-or-destroyed and destroyed measures; the additive-recentered shift-share and the founding-year thresholds never build one.

Figures D3–D7 show the two-stage estimate against OLS for each outcome, across all twelve instrument sets, three repression measures, and four radii. Where a first stage is usable, the two-stage estimates for service attendance and the importance of religion are negative and, for the practice measures, sometimes individually significant; nothing coheres for affiliation, identity, or belief. Of the roughly one thousand instrument-set $\times$ measure $\times$ radius $\times$ outcome cells with $F \geq 10$, the fraction with a 95% interval excluding zero is close to the 5% expected by chance.

Figures D8–D10 vary one design choice at a time for the closed-or-destroyed measure at 50 km: the sample (full versus Orthodox respondents), the treatment (continuous share versus above-median indicator), and the control block. The negative, imprecise practice association is stable across all of them.

Table D2: Repression (Destroyed) and Contemporary Religiosity (ARENA 2012)

| | **Dependent variable:** Religious affiliation, belief, and practice (ARENA 2012, %) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | (1) Orthodox | (2) Believe in God | (3) Atheist | (4) Follow prescriptions | (5) Religion important | (6) Pray daily | (7) Parishioner | (8) Confess monthly+ |
| Destroyed (% of 1917 stock) | -0.034 | -0.018 | -0.019 | -0.020 | 0.059* | -0.017 | 0.003 | 0.007 |
| | (0.078) | (0.043) | (0.033) | (0.074) | (0.033) | (0.037) | (0.010) | (0.007) |
| Orthodoxy share (1897 census, %) | 0.252* | 0.019 | -0.059 | -0.126 | -0.108 | -0.062 | 0.020 | 0.021** |
| | (0.145) | (0.070) | (0.066) | (0.120) | (0.092) | (0.080) | (0.012) | (0.009) |
| Ethnic Russian (2012, %) | 0.180 | 0.187*** | 0.102** | -0.094 | -0.046 | -0.040 | 0.004 | 0.009 |
| | (0.126) | (0.052) | (0.045) | (0.079) | (0.032) | (0.035) | (0.012) | (0.008) |
| Urban share (2012, %) | 0.001 | 0.026 | 0.011 | -0.109 | -0.095* | -0.018 | 0.001 | -0.012 |
| | (0.118) | (0.072) | (0.043) | (0.095) | (0.051) | (0.044) | (0.024) | (0.011) |
| Constant | 5.418 | 7.651 | 9.824** | 48.170*** | 32.143*** | 21.713** | 0.089 | -0.012 |
| | (11.233) | (5.897) | (4.358) | (11.741) | (9.867) | (8.229) | (1.273) | (0.833) |
| Observations | 76 | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| Mean of Dep. Variable | 39.60 | 25.15 | 12.97 | 21.76 | 15.16 | 11.45 | 2.30 | 1.89 |
| R-squared | 0.233 | 0.258 | 0.131 | 0.144 | 0.282 | 0.107 | 0.036 | 0.136 |

*Notes:* As Table 8, with the regional share destroyed as the regressor. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table D3: Control Ladder: Repression Coefficient by Outcome and Rung (WVS-7)

| Rung | Orth. | Ath. | R.per. | Org. | Att. | God | Imp. | Freq. | Rare |
|---|---|---|---|---|---|---|---|---|---|
| D (demographics) | 0.026 | -0.018 | 0.001 | 0.011 | -0.155*** | -0.005 | -0.113** | -0.087* | 0.133*** |
| +G (development/geo) | 0.090 | -0.032 | 0.024 | -0.035 | -0.128** | 0.019 | -0.135*** | -0.101* | 0.101** |
| +H (1897 religiosity) | 0.121** | -0.028 | 0.009 | -0.022 | -0.136** | 0.001 | -0.163*** | -0.106* | 0.107** |
| +P (determinants predictors) | 0.188*** | -0.034 | -0.006 | 0.027 | -0.100* | -0.004 | -0.173*** | -0.051 | 0.088 |
| +M (post-Soviet supply) | 0.193*** | -0.040 | -0.004 | 0.026 | -0.109* | -0.001 | -0.170*** | -0.060 | 0.097* |
| +FE (province) | 0.118 | -0.058 | 0.018 | 0.007 | -0.127* | 0.040 | -0.127* | -0.132** | 0.105 |

*Notes:* Each cell is the coefficient on the standardized local closed-or-destroyed share (50 km) in a regression of the standardized outcome, at the control rung named in the row. Column keys: Orth. = Orthodox affiliation; Ath. = atheist; R.per. = considers self religious; Org. = religious-organization member; Att. = service attendance; God = believes in God; Imp. = importance of religion; Freq. = attends at least monthly; Rare = attends less than yearly. Standard errors clustered on respondent location. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table D4: Omitted-Variable Bound: No Fixed Effects

| Outcome | $\tilde{\beta}$ (short) | $\dot{\beta}$ (long) | $\dot{R}^2$ | $\delta$ | $\beta^*$ |
|---|---|---|---|---|---|
| Orthodox | 0.026 | 0.193 | 0.166 | -2.32 | 0.338 |
| Atheist | -0.018 | -0.040 | 0.055 | -13.07 | -0.116 |
| Relig. person | 0.001 | -0.004 | 0.097 | -1.09 | -0.030 |
| Org. member | 0.011 | 0.026 | 0.051 | -15.83 | 0.044 |
| Attendance | -0.155 | -0.109 | 0.151 | 0.71 | 0.139 |
| Believe God | -0.005 | -0.001 | 0.090 | 0.24 | 0.013 |
| Importance | -0.113 | -0.170 | 0.142 | 4.02 | -0.286 |
| Frequent att. | -0.087 | -0.060 | 0.076 | 0.91 | 0.014 |
| Rare att. | 0.133 | 0.097 | 0.145 | 0.76 | -0.103 |

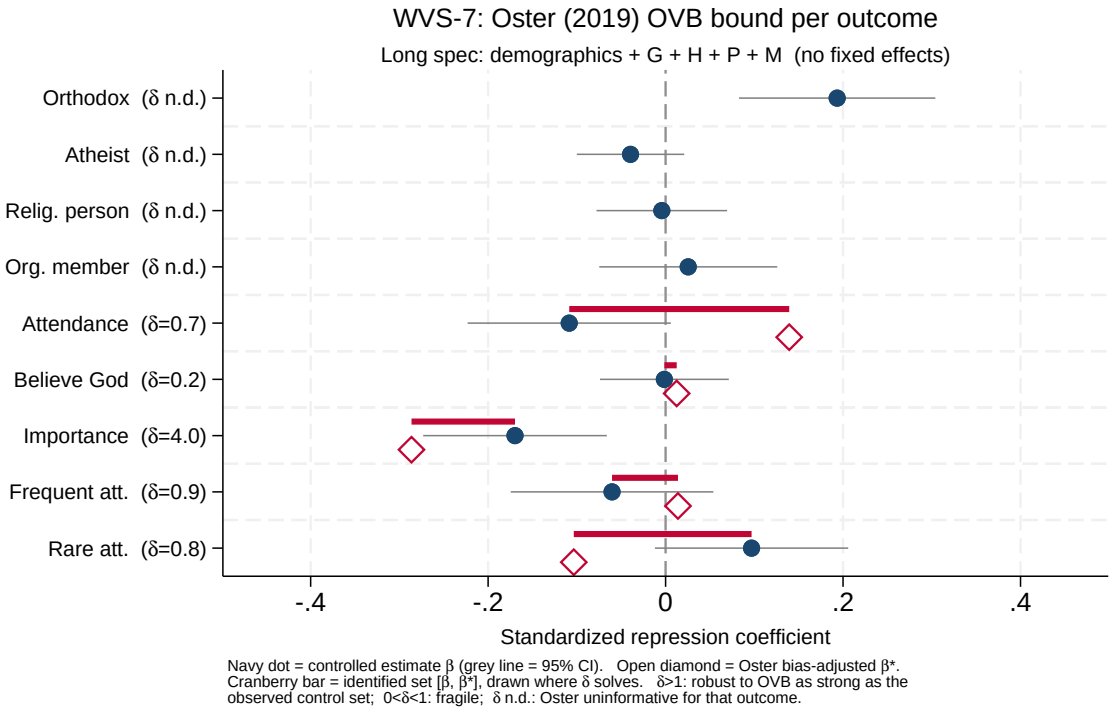
Table D5: Omitted-Variable Bound: Province Fixed Effects in Both Models

| Outcome | $\tilde{\beta}$ (D+FE) | $\dot{\beta}$ (long+FE) | $\dot{R}^2$ | $\delta$ | $\beta^*$ |
|---|---|---|---|---|---|
| Orthodox | 0.155 | 0.118 | 0.267 | 0.60 | -0.315 |
| Atheist | -0.026 | -0.058 | 0.093 | -1.76 | -0.224 |
| Relig. person | 0.007 | 0.018 | 0.136 | -0.92 | 0.395 |
| Org. member | 0.008 | 0.007 | 0.089 | 1.99 | 0.006 |
| Attendance | -0.095 | -0.127 | 0.206 | 9.45 | -0.412 |
| Believe God | -0.019 | 0.040 | 0.132 | -0.43 | 0.252 |
| Importance | -0.146 | -0.127 | 0.199 | 0.43 | n.d. |
| Frequent att. | -0.096 | -0.132 | 0.113 | 25.93 | -0.248 |
| Rare att. | 0.059 | 0.105 | 0.203 | -2.47 | 0.424 |

Table D6: First-Stage Strength by Instrument Set, Measure, and Radius (WVS-7)

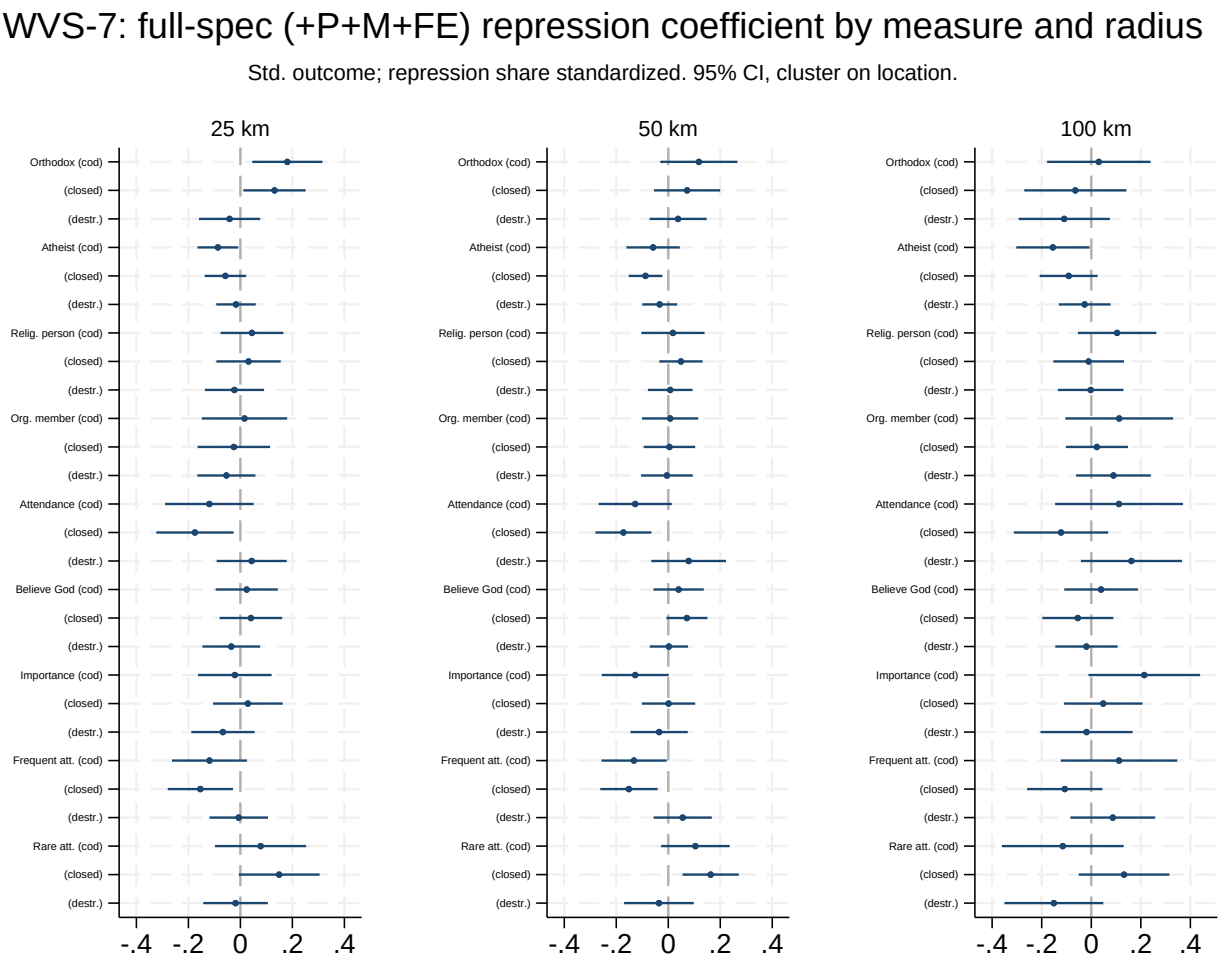
| Instrument set | 10 km | 25 km | 50 km | 100 km |
|---|---|---|---|---|
| *Repression measure: Closed or destroyed* | | | | |
| Wood share | 0.06 | 2.62 | 11.21 | 18.32 |
| Stone share | 0.13 | 6.88 | 3.81 | 5.89 |
| Wood + stone | 0.12 | 3.85 | 5.99 | 11.87 |
| All materials (wood+stone+other) | 0.24 | 3.24 | 3.91 | 6.57 |
| Mean age | 8.78 | 13.04 | 13.10 | 28.33 |
| Mean renovation recency | 27.87 | 21.37 | 7.65 | 42.06 |
| Mean age + renovation | 20.95 | 13.90 | 6.15 | 24.02 |
| Share founded after 1825 | 2.22 | 0.20 | 2.49 | 9.84 |
| Share after 1825 + share before 1725 | 1.45 | 3.88 | 3.82 | 9.19 |
| Shift-share (raw) | 27.11 | 11.81 | 12.52 | 5.62 |
| Shift-share, recentered (material model) | 7.36 | 11.73 | 12.79 | 5.38 |
| Shift-share, recentered (additive model) | 7.62 | 5.03 | 3.22 | 0.71 |
| *Repression measure: Closed* | | | | |
| Wood share | 0.64 | 1.28 | 2.99 | 0.57 |
| Stone share | 2.72 | 14.29 | 3.87 | 0.32 |
| Wood + stone | 2.34 | 7.41 | 2.48 | 0.71 |
| All materials (wood+stone+other) | 1.63 | 7.94 | 10.26 | 9.12 |
| Mean age | 1.83 | 2.29 | 3.29 | 9.45 |
| Mean renovation recency | 30.67 | 12.12 | 9.38 | 10.33 |
| Mean age + renovation | 18.12 | 6.74 | 4.97 | 5.24 |
| Share founded after 1825 | 0.55 | 0.17 | 0.36 | 2.30 |
| Share after 1825 + share before 1725 | 0.30 | 1.45 | 2.35 | 6.42 |
| Shift-share (raw) | 22.44 | 9.33 | 13.58 | 18.37 |
| Shift-share, recentered (material model) | 9.64 | 11.65 | 11.90 | 6.36 |
| Shift-share, recentered (additive model) | 9.95 | 0.41 | 1.44 | 0.57 |
| *Repression measure: Destroyed* | | | | |
| Wood share | 0.02 | 4.64 | 9.76 | 13.85 |
| Stone share | 1.67 | 0.06 | 2.73 | 0.24 |
| Wood + stone | 0.86 | 2.93 | 8.30 | 10.35 |
| All materials (wood+stone+other) | 10.57 | 6.27 | 7.05 | 22.28 |
| Mean age | 0.63 | 13.34 | 7.77 | 2.91 |
| Mean renovation recency | 1.29 | 9.98 | 1.77 | 5.14 |
| Mean age + renovation | 0.64 | 7.28 | 4.46 | 2.65 |
| Share founded after 1825 | 0.01 | 2.17 | 0.93 | 2.47 |
| Share after 1825 + share before 1725 | 2.46 | 3.88 | 1.88 | 1.46 |
| Shift-share (raw) | 3.23 | 5.45 | 16.22 | 32.08 |
| Shift-share, recentered (material model) | 0.09 | 0.10 | 1.32 | 4.25 |
| Shift-share, recentered (additive model) | 1.67 | 1.86 | 0.00 | 3.57 |

*Notes:* Kleibergen–Paap Wald $F$, main controls, no fixed effects.



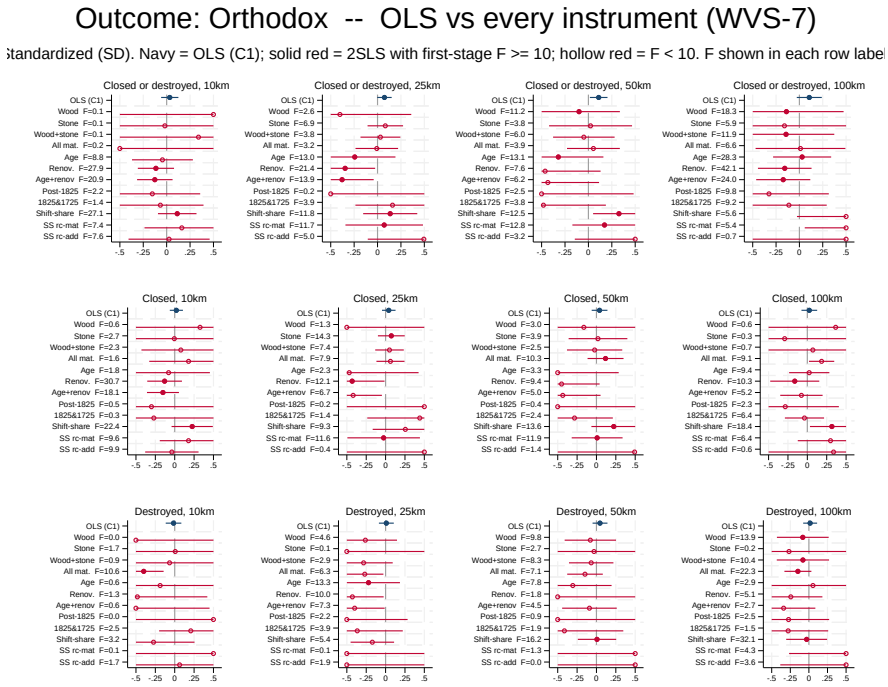

*Notes:* Navy dot: the controlled estimate $\dot{\beta}$ with its 95% confidence interval. Open diamond: the bias-adjusted $\beta^*$. The bar joins them; a bar clear of zero is robust. $\delta$ is printed in each row label.

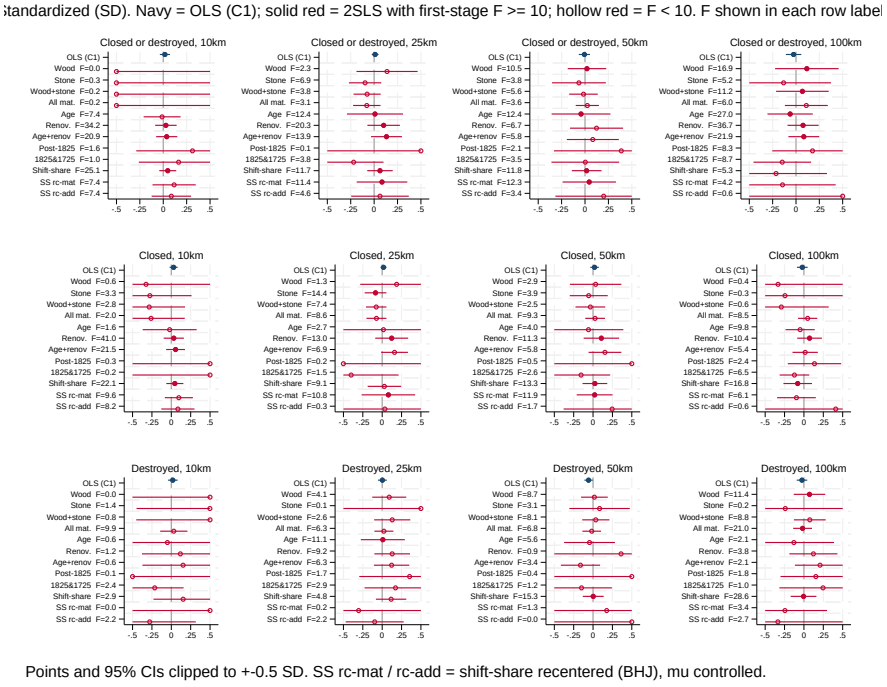
Figure D1: Omitted-Variable Bound, No Fixed Effects (WVS-7)




*Notes:* The full-specification coefficient (demographics, geography, historical religiosity, determinants-half predictors, post-Soviet supply, province fixed effects) for each of three repression measures and three radii, all nine outcomes. The negative practice-intensity signal is concentrated in the closed and closed-or-destroyed measures at 25–50 km.

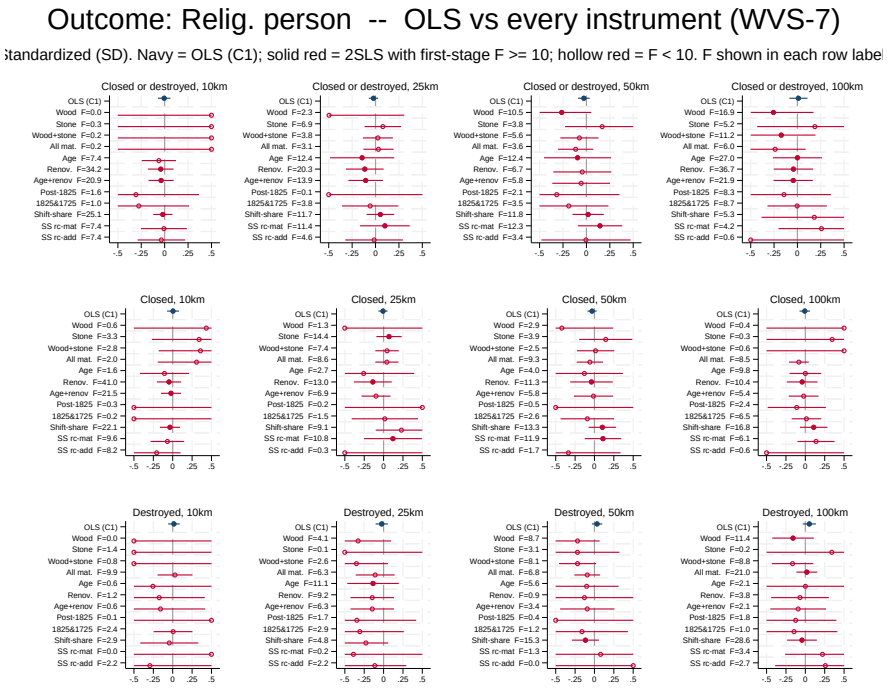
Figure D2: Robustness Across Repression Measure and Radius (WVS-7)




*Notes:* OLS versus two-stage estimates for Orthodox affiliation (top) and atheism (bottom), by repression measure (rows within each panel) and radius (columns); one series per instrument set. Hollow markers: first-stage $F < 10$.

Figure D3: Instrumental-Variables Estimates by Outcome: Affiliation and Atheism (WVS-7)



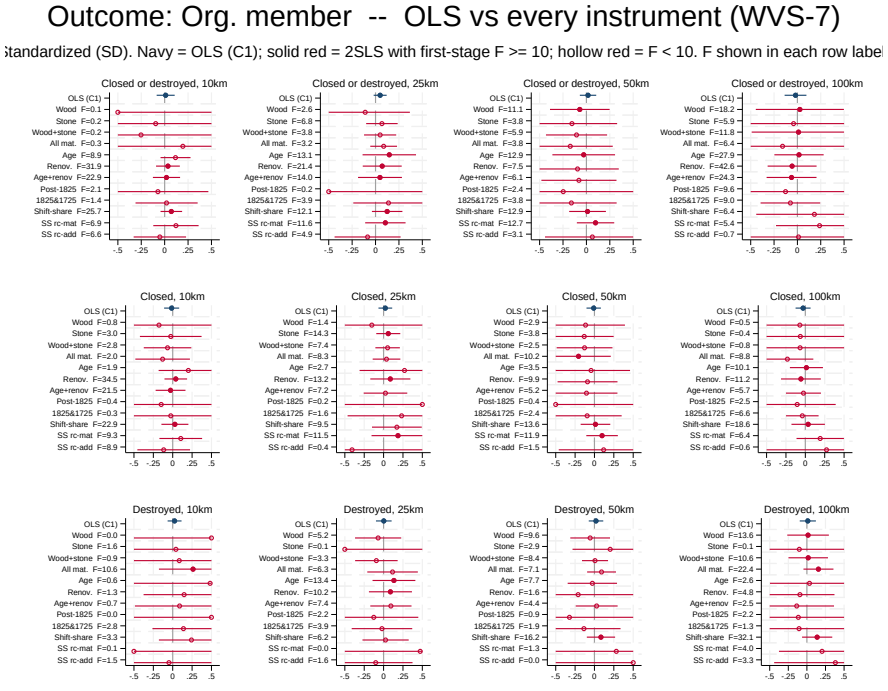
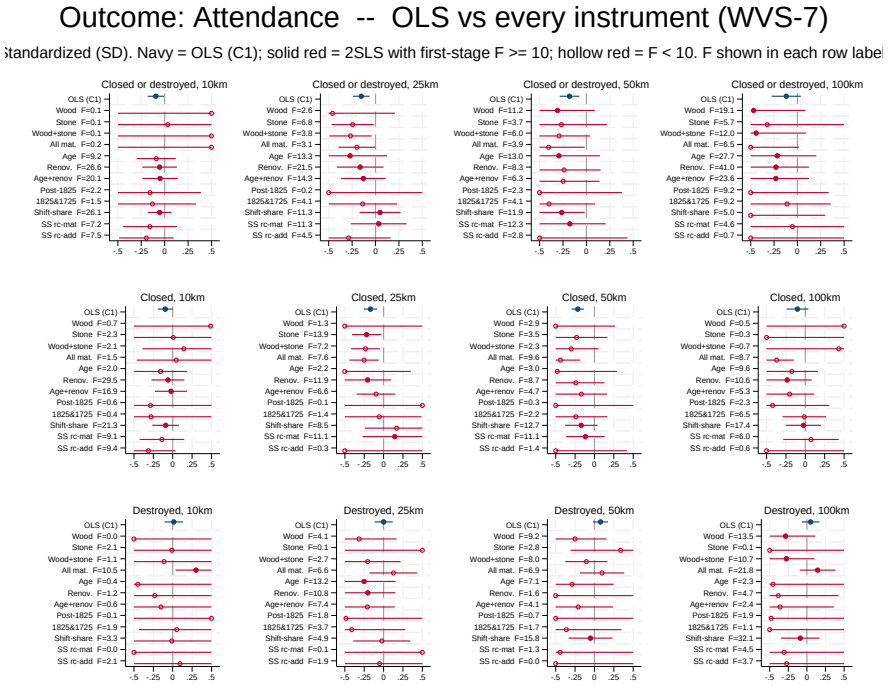




Figure D4: Instrumental-Variables Estimates by Outcome: Religious Self-Identification and Organizational Membership (WVS-7)



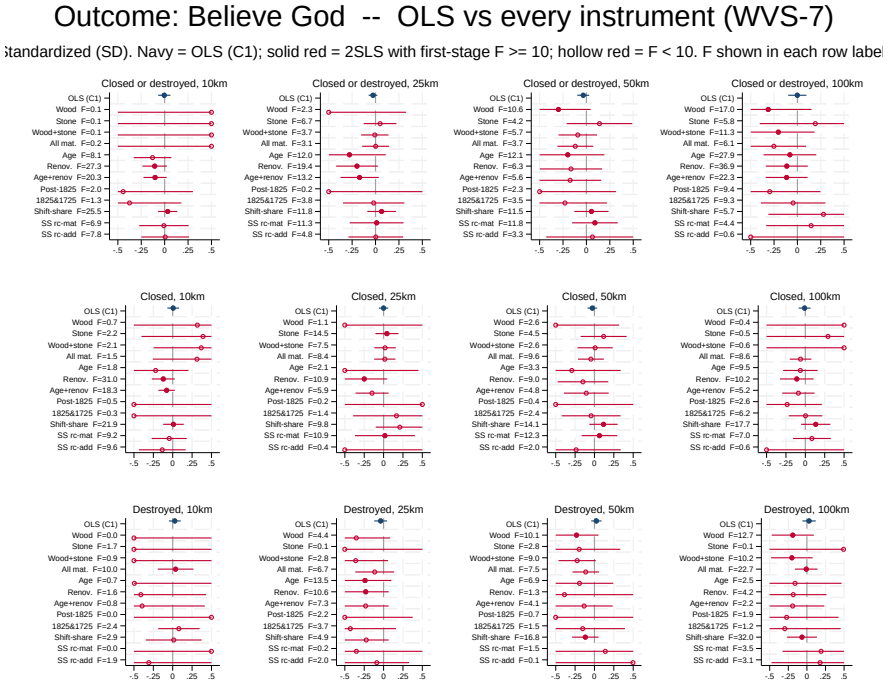
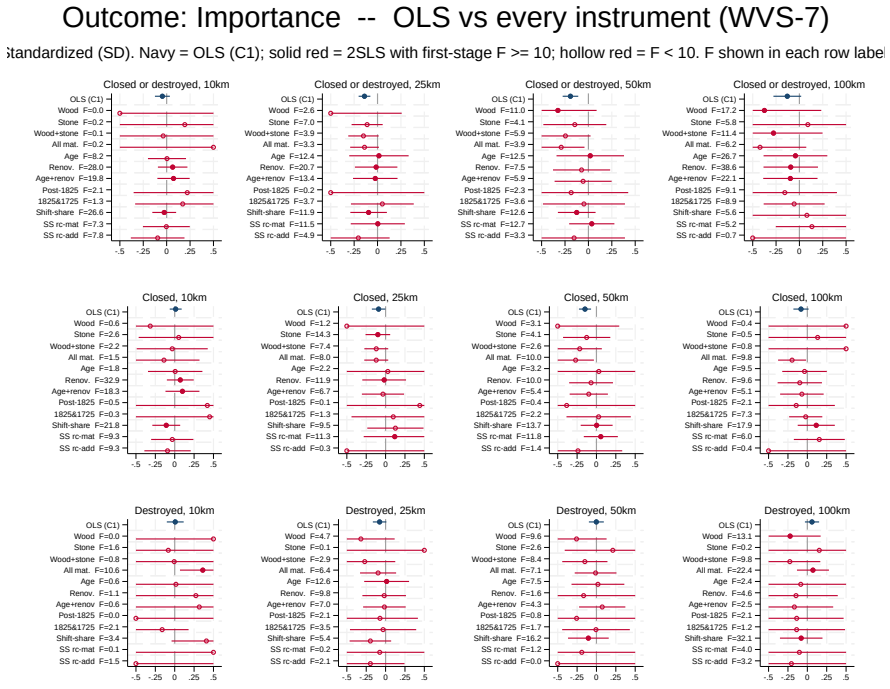




Figure D5: Instrumental-Variables Estimates by Outcome: Service Attendance and Belief in God (WVS-7)



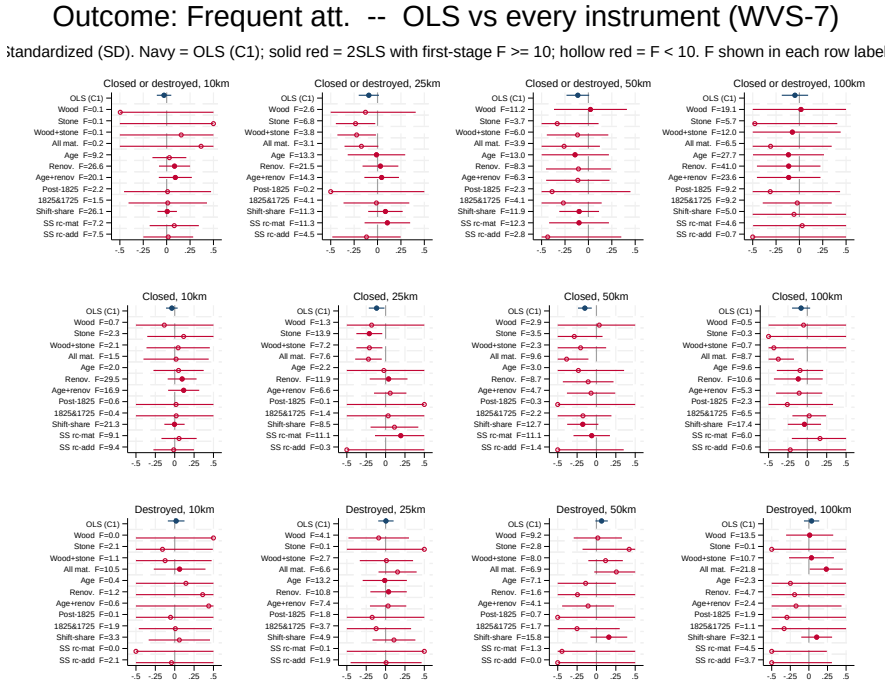




Figure D6: Instrumental-Variables Estimates by Outcome: Importance of Religion and Frequent Attendance (WVS-7)

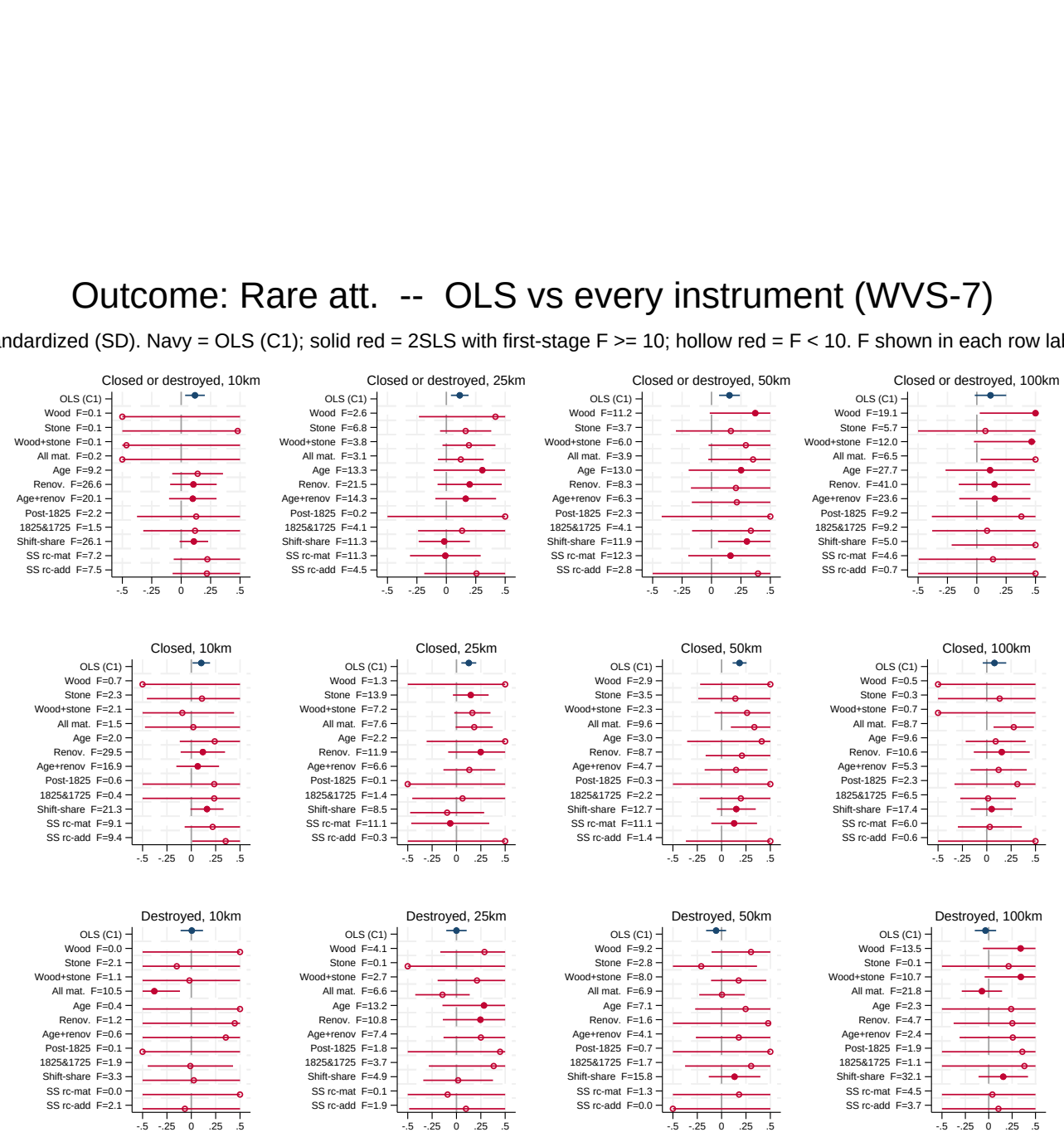
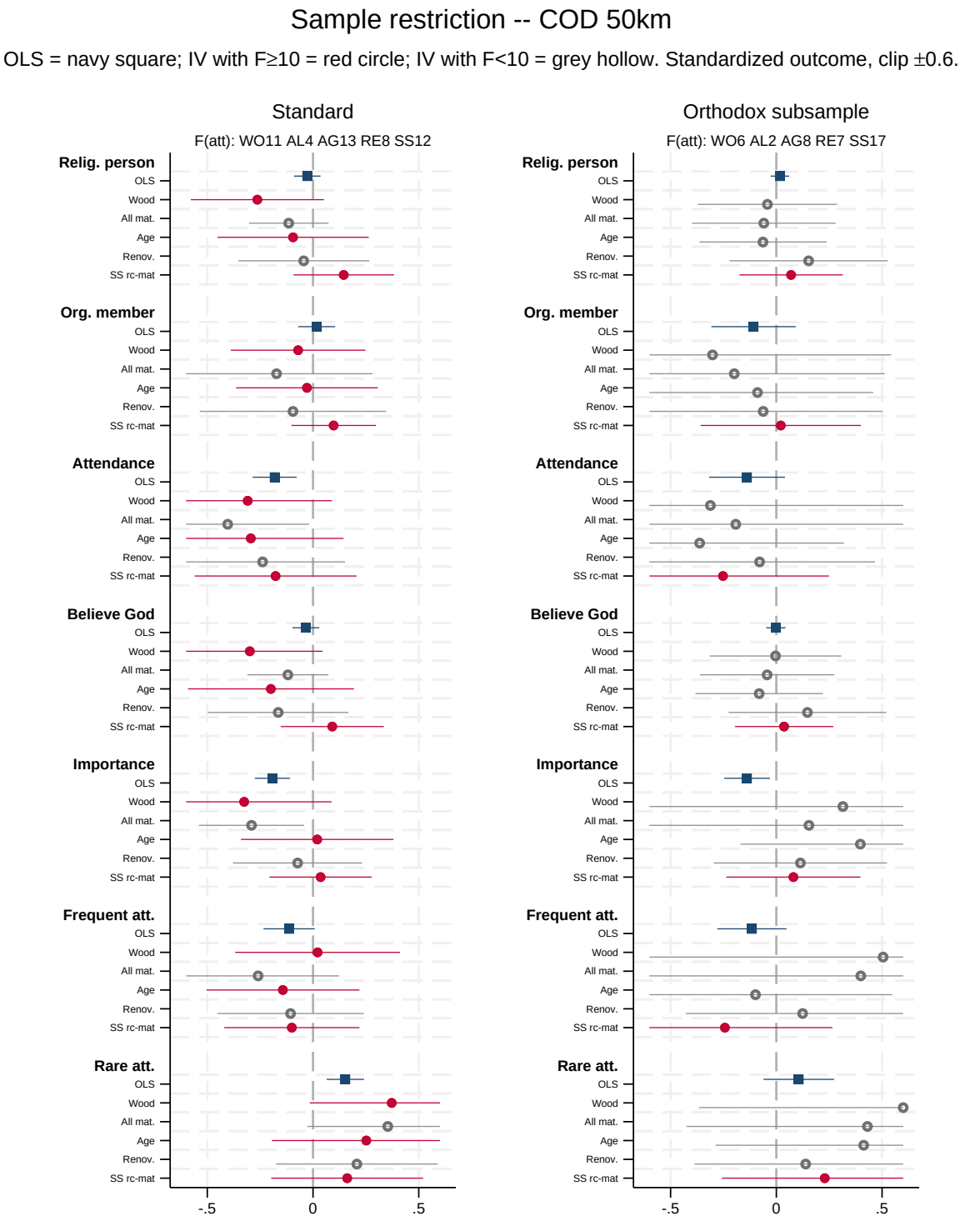



Figure D7: Instrumental-Variables Estimates by Outcome: Rare Attendance (WVS-7)




*Notes:* Full sample versus Orthodox respondents only. OLS = navy square; instrument $F \geq 10$ = filled, $F < 10$ = hollow.

Figure D8: Instrumental-Variables Robustness: Sample Restriction (WVS-7)

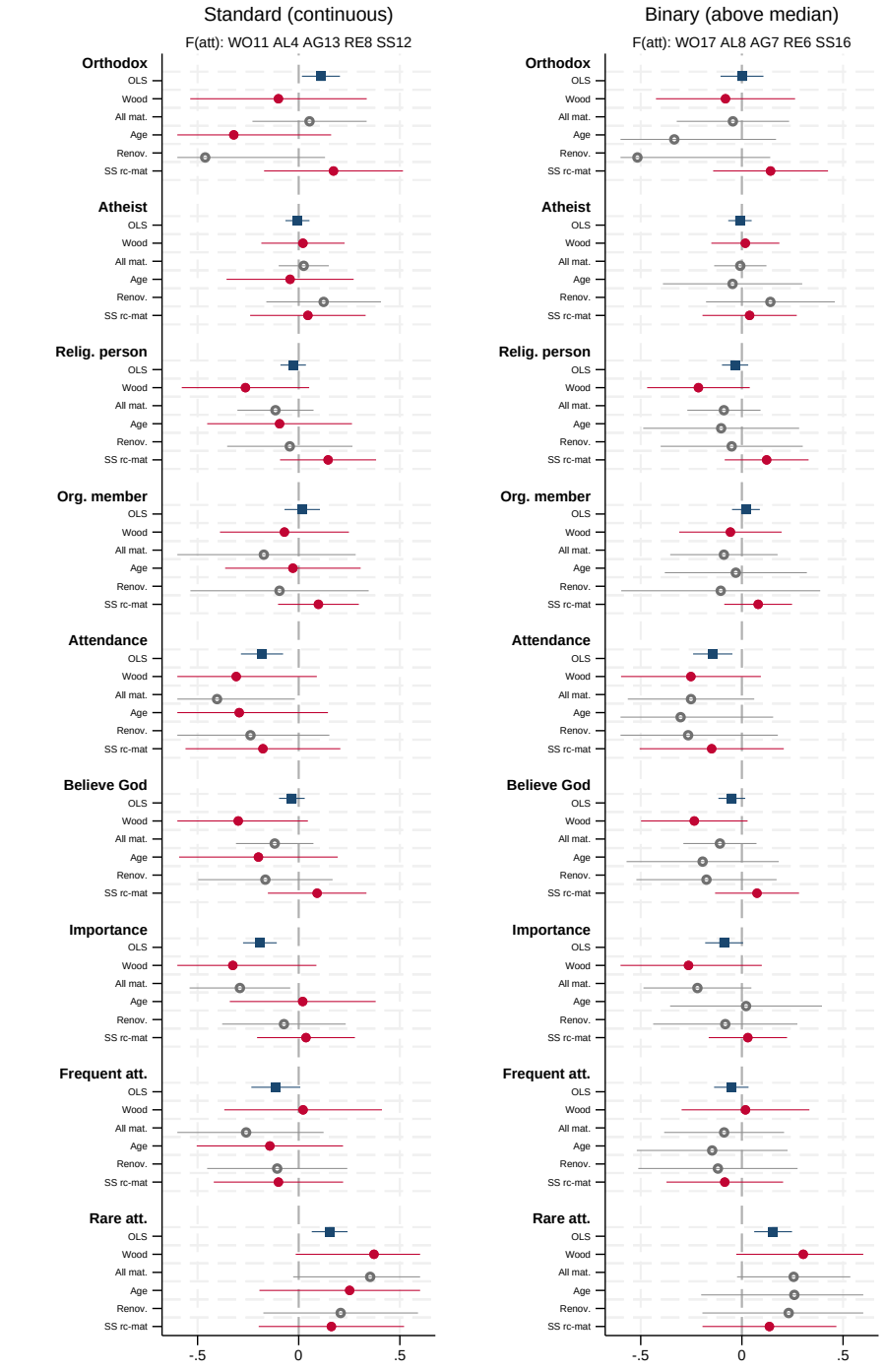



Figure D9: Instrumental-Variables Robustness: Treatment Definition (WVS-7)

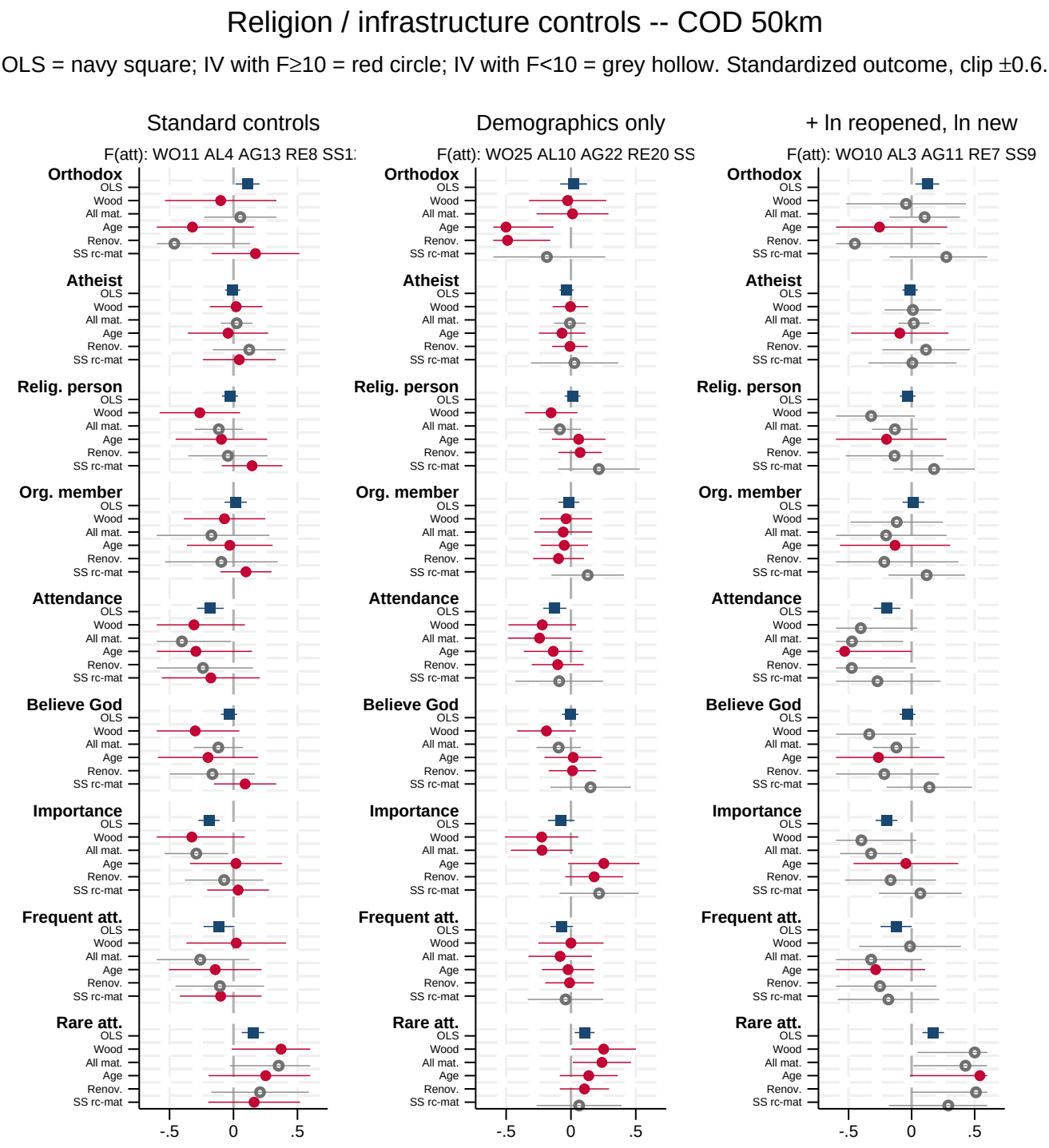



Figure D10: Instrumental-Variables Robustness: Control Block (WVS-7)

# E Discussion: Additional Results

## E.1 Repression and the Memory of Repression (Life in Transition Survey)

Table E1 regresses, by a linear probability model with province fixed effects, indicators for whether a respondent's family experienced political repression under communism – by relation, and pooled – on the standardized local closed-or-destroyed share, and on the same split by era. The local closure share predicts remembering repression weakly and diffusely: the pooled coefficient is significant at the 10 percent level, but so is a non-religious-repression placebo (column 6), so the measure is not picking up religious repression specifically. Figure E1 plots the coefficients.

## E.2 Cohort Analysis (RLMS)

Table E2 gives the birth-year ranges and sample sizes for the formative-years regime cohorts used in Figure 7. Figure E2 overlays the controlled cohort profiles for the four religiosity outcomes on a common axis.

## E.3 Tests for a Local Repression Gradient (RLMS)

Figure E3 repeats the median-split cohort gap of Figure 8 varying the repression measure, the catchment radius, and the sample; Figure E4 shows the cohort profiles themselves for above- and below-median areas. Table E3 varies the childhood-exposure specification of Table 9 one design choice at a time, and Figure E5 and Table E4 report an age-of-exposure event study. No specification produces a local gradient.

## E.4 Decomposition of the Post-Soviet Religious Rise (RLMS)

Table E5 decomposes the change in four religiosity outcomes between 1998–2003 and 2019–2024 by two methods: a panel-structure decomposition (attrition selection, net within-person switching, entry/refreshment) and a cohort decomposition (within-cohort change, cohort replacement). Table E6 reports within-person switching rates by birth decade and by ethnicity.

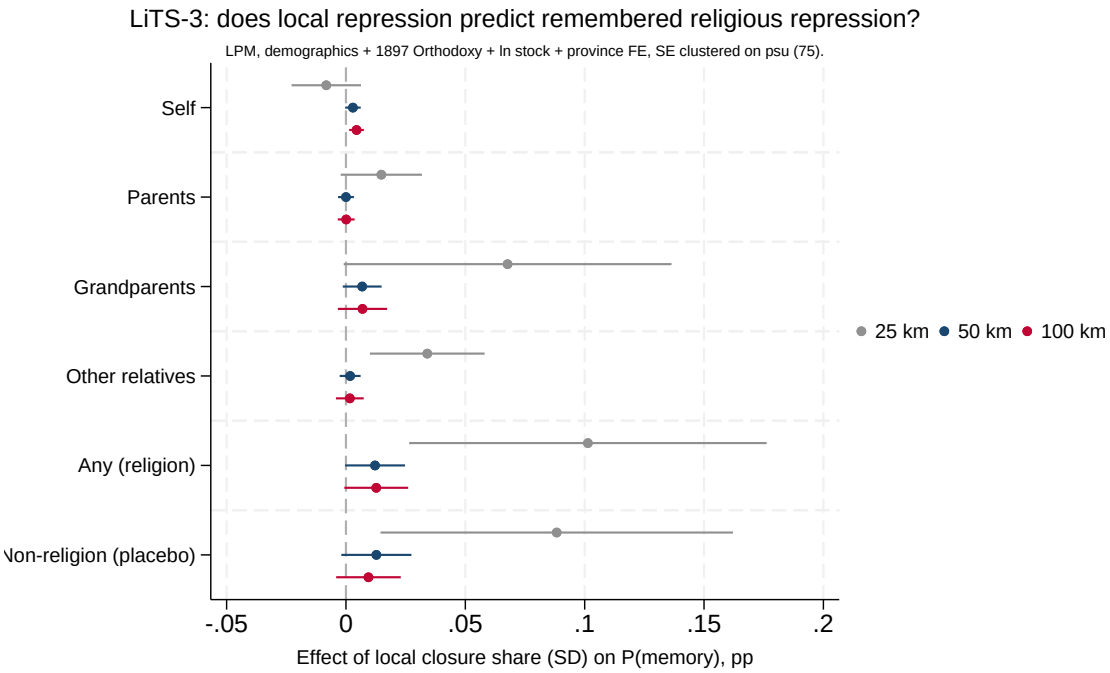
Table E1: Local Repression Intensity and Family Memory of Repression (Life in Transition Survey)

| | *Panel A: local closure share (50km), LPM, province FE* | | | | | |
|---|---|---|---|---|---|---|
| | (1) Self | (2) Parents | (3) Grandpar. | (4) Other rel. | (5) Any relig. | (6) Placebo |
| Local closure share (SD) | 0.003* | 0.000 | 0.007 | 0.002 | 0.012* | 0.013* |
| | (0.002) | (0.002) | (0.004) | (0.002) | (0.006) | (0.007) |
| Outcome mean | 0.016 | 0.025 | 0.058 | 0.022 | 0.100 | 0.143 |
| N | 1,383 | 1,383 | 1,383 | 1,383 | 1,383 | 1,383 |
| | *Panel B: closure share by era (50km)* | | | | | |
| Stalin-era closure share (SD) | 0.003* | -0.004 | -0.001 | -0.004 | 0.001 | 0.012 |
| | (0.002) | (0.002) | (0.008) | (0.004) | (0.008) | (0.011) |
| Khrushchev-era closure share (SD) | -0.003 | -0.004 | 0.015 | -0.005 | 0.011 | 0.006 |
| | (0.003) | (0.004) | (0.013) | (0.006) | (0.016) | (0.020) |
| N | 1,383 | 1,383 | 1,383 | 1,383 | 1,383 | 1,383 |

*Notes:* Linear probability model, province fixed effects, standard errors clustered on the sampled unit. Outcomes: family repression reported for the respondent (self), parents, grandparents, other relatives, any relative for religious reasons, and (placebo) any relative for non-religious reasons. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

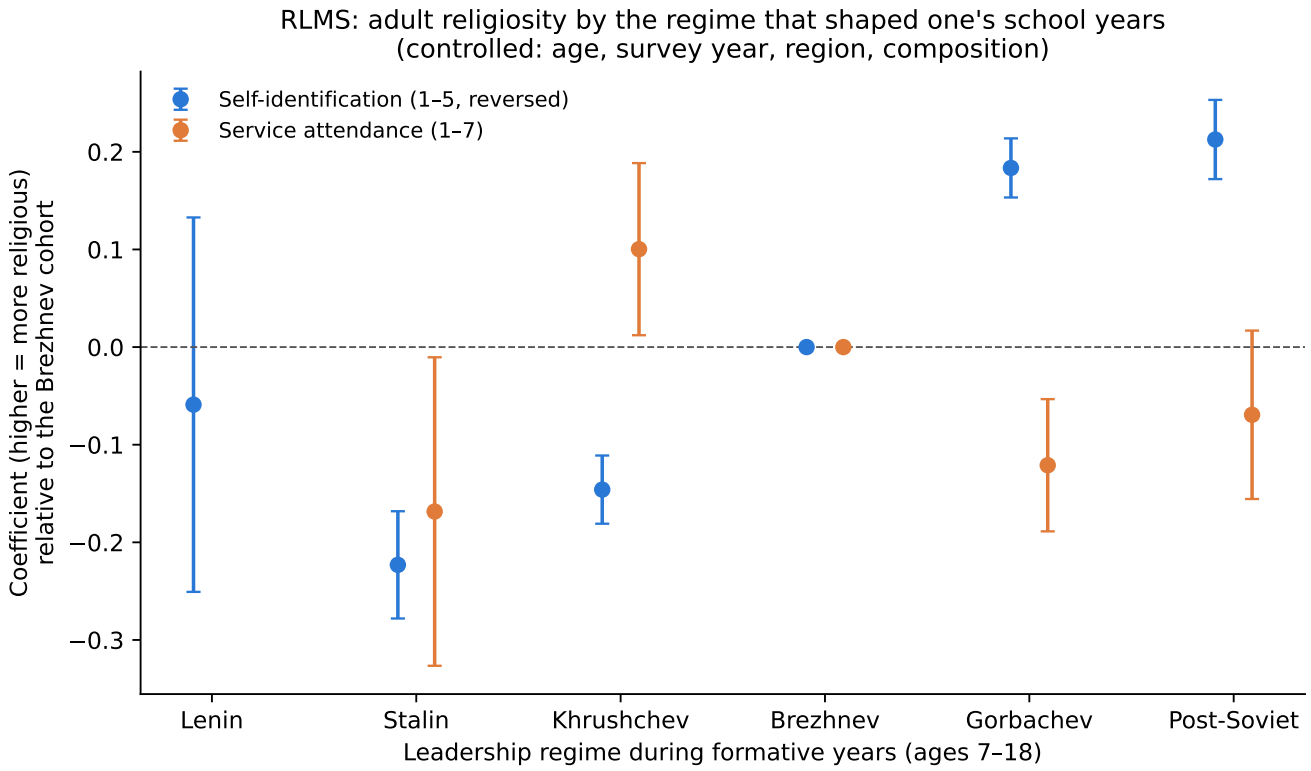
Table E2: Formative-Years Regime Cohorts (RLMS)

| Formative-years regime | Birth years | N (self-ID sample) |
|---|---|---|
| Lenin | 1899–1911 | 161 |
| Stalin | 1912–1941 | 28,975 |
| Khrushchev | 1942–1952 | 29,087 |
| Brezhnev | 1953–1972 | 82,765 |
| Gorbachev | 1973–1979 | 33,739 |
| Post-Soviet | 1980–2010 | 84,548 |



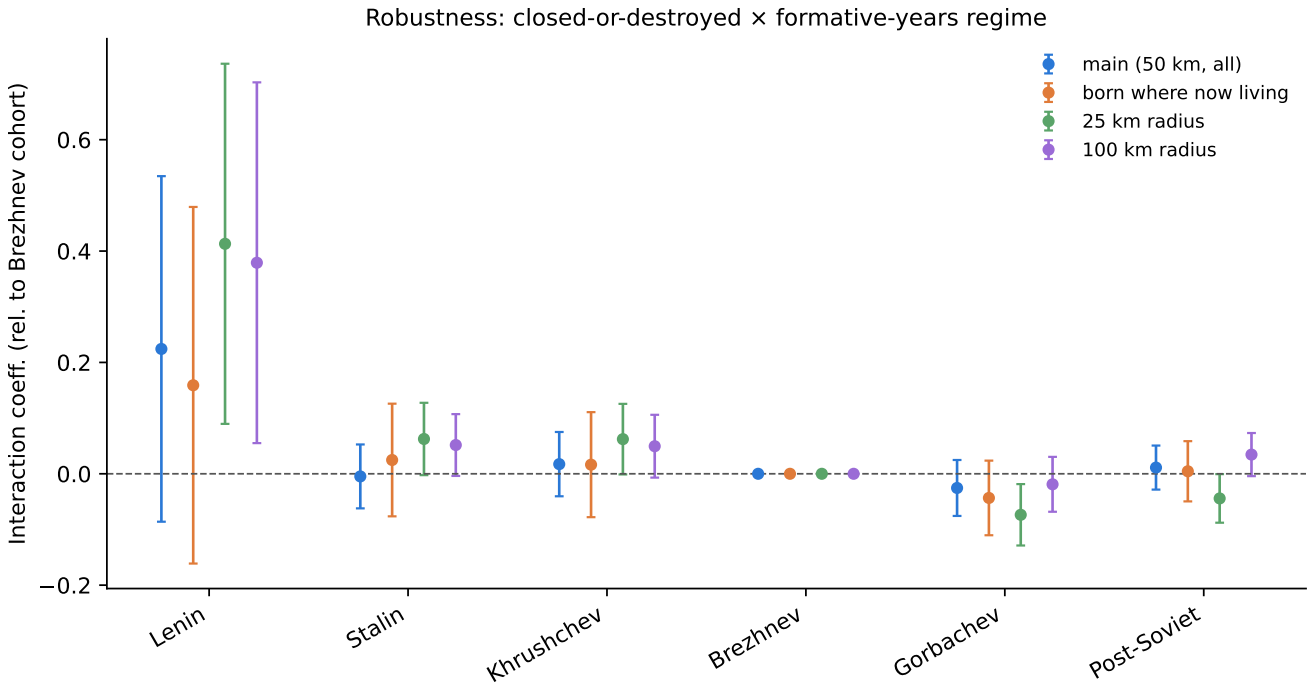

*Notes:* Coefficients from Table E1, Panel A, with 95% confidence intervals.

Figure E1: Local Repression Intensity and Family Memory of Repression (Life in Transition Survey)




*Notes:* Controlled cohort profiles (age quadratic and survey-decade fixed effects) for religious self-identification and three attendance measures, on a standardized axis.

Figure E2: Cohort Profiles of Religiosity, Four Outcomes (RLMS)



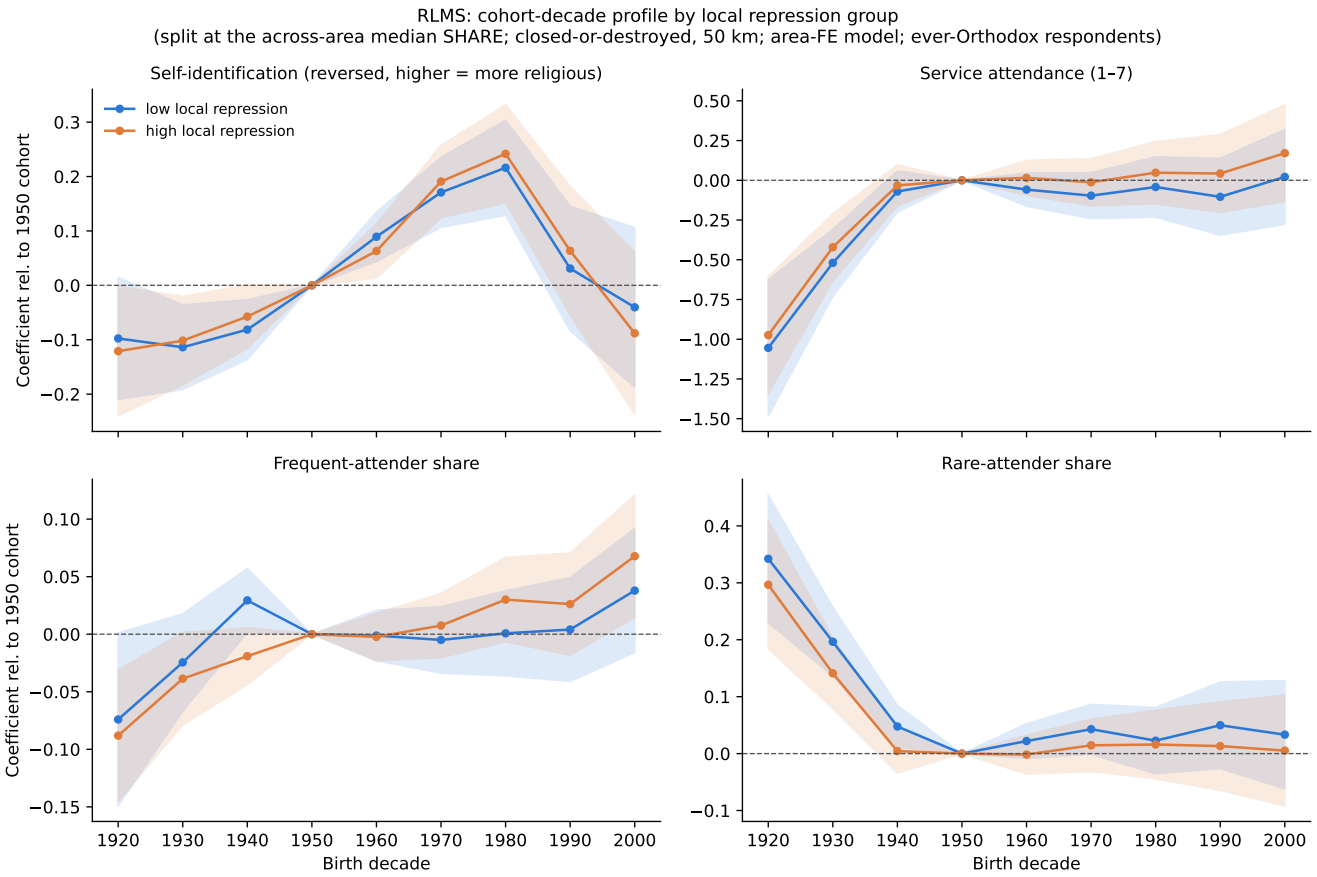

*Notes:* The high-minus-low repression gap by cohort, for the main specification and for born-here-only, 25 km, and 100 km variants.

Figure E3: Median-Split Gap: Robustness (RLMS)

Table E3: Childhood Repression Exposure: Robustness (RLMS)

| Dimension | Variant | Self-ID (reversed) | Attendance (1–7) | Frequent attender | Rare attender | Orthodox ID |
|---|---|---|---|---|---|---|
| Closure measure | closed or destroyed | -0.001 | 0.013 | 0.007 | -0.009 | -0.006 |
| | closed only | 0.000 | 0.014 | 0.009 | -0.011 | -0.004 |
| | destroyed only | -0.012 | 0.015 | 0.006 | -0.012 | -0.010* |
| Catchment radius | 25 km | 0.001 | 0.011 | -0.004 | -0.011 | -0.005 |
| | 50 km | -0.001 | 0.013 | 0.007 | -0.009 | -0.006 |
| | 100 km | 0.003 | 0.004 | 0.019 | 0.001 | -0.015 |
| Sample | born here | -0.001 | 0.013 | 0.007 | -0.009 | -0.006 |
| | ever-Orthodox | 0.001 | 0.007 | -0.005 | -0.010 | -0.002 |
| | everyone | 0.001 | 0.006 | -0.005 | -0.009 | -0.005 |
| Formative window | ages 7–18 | -0.001 | 0.013 | 0.007 | -0.009 | -0.006 |
| | ages 0–6 | -0.000 | -0.006 | -0.007 | 0.001 | 0.006 |
| | ages 19–25 | -0.007 | -0.008 | 0.007 | 0.008 | -0.010* |
| Exposure form | linear (per SD) | -0.001 | 0.013 | 0.007 | -0.009 | -0.006 |
| | above-median gap | 0.031 | 0.045 | 0.037 | -0.035 | 0.006 |
| | top-quartile gap | 0.012 | 0.048 | 0.046 | -0.037 | -0.000 |

*Notes:* The full-control specification of Table 9 (age quadratic and decade fixed effects), varying the closure measure, catchment radius, sample, and formative age window one at a time. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.



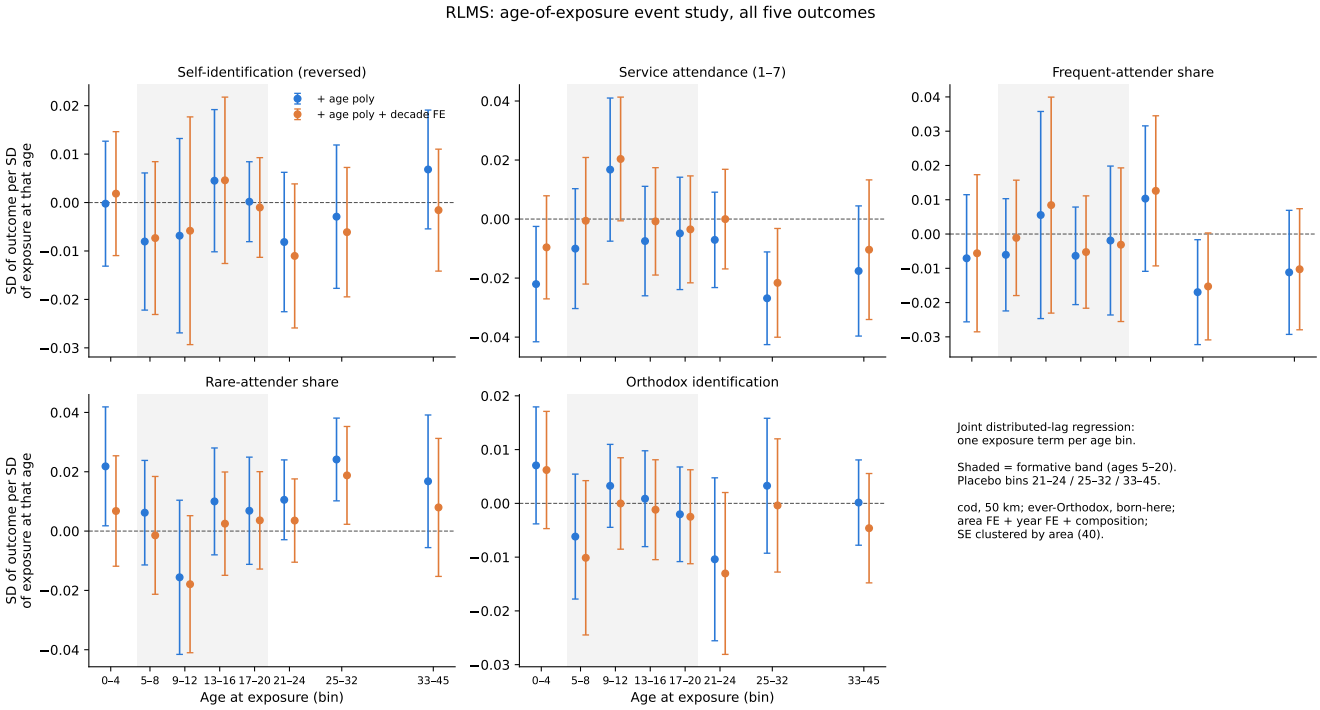

*Notes:* Controlled cohort profiles of religiosity for respondents from above-median and below-median repression areas, plotted separately.

Figure E4: Cohort Profiles by Repression Intensity (RLMS)

Table E4: Age-of-Exposure Event Study (RLMS)

| Age at exposure | Self-identification | Service attendance | Frequent-attender share | Rare-attender share | Orthodox identification |
|---|---|---|---|---|---|
| 0–4 | 0.002 | -0.010 | -0.006 | 0.007 | 0.006 |
| 5–8 (formative) | -0.007 | -0.001 | -0.001 | -0.001 | -0.010 |
| 9–12 (formative) | -0.006 | 0.020 | 0.008 | -0.018 | -0.000 |
| 13–16 (formative) | 0.005 | -0.001 | -0.005 | 0.003 | -0.001 |
| 17–20 (formative) | -0.001 | -0.003 | -0.003 | 0.004 | -0.002 |
| 21–24 | -0.011 | -0.000 | 0.013 | 0.004 | -0.013 |
| 25–32 | -0.006 | -0.022* | -0.015 | 0.019* | -0.000 |
| 33–45 | -0.002 | -0.010 | -0.010 | 0.008 | -0.005 |

*Notes:* Coefficient on standardized local closure exposure in each age bin, from one joint distributed-lag regression per outcome. The formative bins are ages 5–20.




*Notes:* Distributed-lag regression of each religiosity outcome on standardized local closure exposure in eight age bins, entered jointly, with an age quadratic and decade fixed effects. Bars are 95% confidence intervals.

Figure E5: Age-of-Exposure Event Study (RLMS)

Table E5: Decomposition of the Change in Religiosity, 1998–2003 to 2019–2024 (RLMS)

| | Believer (self-ID) | Believer age 30–60 | Orthodox (denom.) | Any religion |
|---|---|---|---|---|
| **Total change** $\Delta$ (share t0 $\rightarrow$ t1, pp) | | | | |
| $\Delta$ | 5.8 [ 5.0, 6.6] | 9.6 [ 8.6, 10.8] | 2.3 [ 1.5, 3.2] | 2.0 [ 1.3, 2.6] |
| **Panel A: panel-structure decomposition** | | | | |
| Attrition selection | 2.2 [ 1.2, 3.3] | 4.9 [ 2.8, 6.8] | -0.1 [ -1.3, 1.1] | 1.6 [ 0.7, 2.5] |
| Net within-person switching | 9.6 [ 8.2, 10.7] | 8.3 [ 6.1, 10.5] | 3.9 [ 2.7, 5.1] | 3.7 [ 2.6, 4.7] |
| Entry / refreshment | -6.0 [ -6.9, -5.0] | -3.6 [ -5.4, -1.8] | -1.5 [ -2.7, -0.2] | -3.3 [ -4.1, -2.4] |
| **Panel B: cohort decomposition** | | | | |
| Within-cohort change | 10.1 [ 9.0, 11.0] | 9.8 [ 8.4, 11.3] | 4.9 [ 3.5, 6.2] | 3.7 [ 2.6, 4.9] |
| Cohort replacement | -4.2 [ -4.9, -3.5] | -0.2 [ -1.2, 0.9] | -2.6 [ -3.7, -1.5] | -1.7 [ -2.8, -0.7] |
| Share at t0 (%) | 70.8 | 68.2 | 79.6 | 87.0 |
| Share at t1 (%) | 76.6 | 77.8 | 81.9 | 88.9 |
| Balanced-panel N (people) | 3,500 | 1,122 | 2,693 | 2,693 |

*Notes:* Balanced-panel decomposition; bracketed figures are bootstrap 95% confidence intervals over resampled individuals. "Believer (self-ID)": considers self a believer; "age 30–60": restricted to that age band at both endpoints; "Orthodox (denom.)": Orthodox denomination; "Any religion": any denomination.

Table E6: Within-Person Switching Into Belief, by Group (RLMS)

| Group | N | Believer share t0 | Believer share t1 | $\Delta$ (pp) |
|---|---|---|---|---|
| **By birth decade** | | | | |
| 1920s | 32 | 86.1 | 89.2 | 3.1 |
| 1930s | 287 | 79.5 | 85.8 | 6.3 |
| 1940s | 441 | 72.3 | 84.2 | 11.9 |
| 1950s | 797 | 68.8 | 81.7 | 12.9 |
| 1960s | 779 | 72.6 | 82.2 | 9.7 |
| 1970s | 808 | 75.4 | 82.6 | 7.2 |
| 1980s | 356 | 72.8 | 80.1 | 7.3 |
| **By ethnicity** | | | | |
| Ethnic Russian | 2,830 | 70.7 | 81.3 | 10.6 |
| Non-Russian | 651 | 82.9 | 88.6 | 5.7 |

*Notes:* Believer (self-ID) share at the first and last observation for individuals observed at both, by birth decade and by ethnicity.