

AUTOCRATIC RULE AND SOCIAL CAPITAL: EVIDENCE FROM IMPERIAL CHINA*

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Abstract:

This paper explores the impact of autocratic rule on social capital—defined as the beliefs, attitudes, norms and perceptions that support cooperation. Political repression is a distinguishing characteristic of autocratic regimes. Between 1660–1788, individuals in imperial China were persecuted if they were suspected of holding subversive attitudes towards the state. A difference-in-differences approach suggests that in an average prefecture, exposure to those literary inquisitions led to a decline of 38% in local charities—a key proxy of social capital. Consistent with the historical panel results, we find that in affected prefectures, individuals have lower levels of generalized trust in modern China. Taking advantage of institutional variation in 20th c. China, and two instrumental variables, we provide further evidence that political repression permanently reduced social capital. Furthermore, we find that individuals in prefectures with a legacy of literary inquisitions are more politically apathetic. These results indicate a potential vicious cycle in which autocratic rule becomes self-reinforcing through causing a permanent decline in social capital.

Keywords: Social Capital, Institutions, Autocracy, China

JEL Codes: D73, N45, Z1

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Terror can rule absolutely only over men who are isolated against each other and that, therefore, one of the primary concerns of all tyrannical government is to bring this isolation about.

Hannah Arendt (1951, p. 474)

I INTRODUCTION

The striking resilience of autocracy in China has attracted scholarly attention in recent years (Nathan, 2003). Though explanations have been offered, the combination of autocratic resilience and relative economic success, remains an unresolved puzzle. In this paper, we offer a new explanation to this puzzle by taking into account China’s long history as an autocratic state, how it has weakened civil society in the past, and how this has led to more autocracy.¹

The relationship between the state and civil society is a long-standing question in the social sciences. Alexis de Tocqueville argued in *Democracy in America* (1835) that a thriving civil society supports a vibrant democracy.² Meanwhile, Acemoglu and Robinson (2016) observe that state policies and behavior affect the nature and extent of social capital—i.e. those beliefs, attitudes, norms and perceptions that support cooperation. We provide empirical evidence connecting these two arguments, showing that the negative consequences of autocratic rule for civil society can in turn explain the resilience of modern day autocracies.

Understanding the historical trajectory of China, a long-standing autocracy, is of central importance for understanding how autocracy became entrenched over time. We focus on political repression—a distinguishing feature of autocratic rule—and investigate its role in China’s autocratic resilience via the transformation of civil society. The unique historical shock we exploit generated quasi-random variation in the perception of the autocratic state, providing novel evidence on the impact of autocracy on the fabric of society.

We examine a period during which the premodern autocratic imperial state came to be perfected. Following the Qing occupation of China in 1644, imperial China saw a new wave of political repression and a further entrenchment of autocratic rule. This major historical shock produced exogenous variation across time and space, in how that state was perceived by the population it governed. The intellectuals or gentry, who played an important role in civil society, saw new restrictions imposed on their behavior and speech and were subjected to persecutions—known as literary inquisitions. We explore the impact of these persecutions on civil society.

In terms of their impact on society, literary inquisition cases were far-reaching; this “expansive . . . repression involved the entire population” (Wang, 2002, p. 647). The early 19th century poet, Gong Zizhen, observed that intellectuals were disengaged from society, and withdrew from public

¹See Gregory, Schröder, and Sonin (2011) for a study of repression in the Soviet Union. In 2017, China is ranked 144th out of 145 countries on the 2015 CAF World Giving Index. <https://www.forbes.com/sites/ceibs/2016/07/26/chinas-philanthropy-gap/#302ef0682b56>

²This insight has been expanded upon by many social scientists who link social capital to democracy. See Fukuyama (1995), Fukuyama (2001), Putnam (1994), Tabellini (2008), Gorodnichenko and Roland (2015), and Martinez-Bravo, Padro-i-Miquel, Qian, Xu, and Yao (2017).

gatherings, in fear of literacy inquisitions. He lamented that when intellectuals in his time wrote books, they only did so only to make a living and that they had become indifferent to developing and spreading new ideas (Gong, 1991). Historians concur that “[f]ear of persecution left a deep negative impact on cultural and intellectual life” (Wang, 2002, p. 647). As other individuals had to report any “inappropriate” speech, the risks associated with developing close relations with one’s peers dramatically increased. According to historians, this policy of systematic repression “led to the formation of a social environment characterized by mutual deception”.

The following stylized facts are important to understanding the sources of variation that we rely on in this paper. First, there was no separation between the executive and the judiciary in imperial China. Embedded in the Confucian ideal of government was the notion that at each level of government, important decisions should be ultimately made by the magistrate, provincial governor or emperor—individuals believed to be “virtuous” because of the Confucian values they embodied—rather than by the law alone. Given this, inevitably, the determination of literary inquisitions cases was highly subjective and lacked consistency across cases. Second, in the process of investigating and prosecuting inquisitions cases, the sheer size of Qing China and institutional complexity of the personalized Chinese bureaucracy introduced a high degree of uncertainty and subjectivity.³ Third, the centralization of all political and legal authority in the hands of the emperor meant that his subjective judgment was particularly important. While at every level of the bureaucracy, there was room for discretion, the only individual with complete discretion was the emperor who was the final arbitrator of all inquisition cases (Huang, 1974, p. 208).⁴

The emperor could be both ruthless and, from time to time, unexpectedly lenient. For example, one individual was persecuted for writing: “Since the clear wind does not recognize words, Why does it flip through the pages of my book?” Since the Chinese character for “Qing” has the connotation “clear”, this could be interpreted as criticism of the Qing “who were implicitly depicted as illiterate barbarians masquerading as arbiters of literary tastes” (Gu, 2003, p. 127).

Another seemingly similar case ended very differently. The censors reported an author for the following passage: “Facing the bright moon, one becomes a good friend./Inhaling the clear wind, one falls a drunken lord.” These words were suspect as “‘bright moon’ could be viewed a reference to the salutary moral power of the (previous) Ming dynasty” (as “bright” is the same character as “Ming”). In this case, however, the scholar, his family and others involved in the case were spared punishment when the emperor changed his mind at the last minute, writing: “‘Clear wind’ and ‘bright moon’ are commonly used words in poetry and essays. How can one avoid using them?” (Gu, 2003, p. 127). Literary inquisitions indeed represented “the institutionalization of Imperial subjectivity” (Wakeman, 1998, p. 168).

To understand why the Qing state conducted literary inquisitions, we employ a simple signaling

³In an effort to combat nepotism, officials were routinely rotated every three years, so that their decisions were insulated from local influences. Within the bureaucracy, it was possible for cases to be dropped at any time by the magistrate or by the provincial governor or due to reprieves issued by the emperor.

⁴The emperor often had never met the individuals involved in cases passed along to him. This goes against the possibility that inquisition cases were mere artifacts of the premeditated removal of political opponents.

model. In this model, regimes that lack legitimacy use persecutions to signal strength and their ability to suppress all potential opposition. In a separating equilibrium, strong rulers persecute and their subjects are less likely to rebel as a result. This framework crystallizes the rationale behind persecutions in the absence of any overt opposition.

From the point of view of identification, the emperor’s subjective decision to dismiss, rather than proceed with, a case could arbitrarily delay a prefecture’s initial exposure to literary inquisitions by decades. The same holds true if an incident was dismissed at any stage of the bureaucratic process. In our historical panel, we make use of variation in both the location and timing of inquisition cases. Prefecture fixed effects deal with time invariant sources of endogeneity. Also, when we take a further step by restricting our sample to prefectures that had at least one literary inquisition case by the end of the sample period, we obtain very similar results.

The structure of our analysis is sketched in Figure 1. In our historical panel analysis, we first demonstrate that literary inquisitions had an impact on the number of individuals to becoming prominent or reputable. Using a dataset of well known individuals in imperial China, and a difference-in-differences approach, we find that following a persecution, there was a decline in the number of individuals becoming reputable in a prefecture, a decline that was most concentrated among individuals who came of age during the decade of a persecution. In an environment where any public attention could only increase the chance of persecution, individuals ceased to engage in activities that they would previously have considered safe and became more hesitant to put themselves at risk.

After verifying that literary inquisitions had a “chilling effect” on individuals, we begin our analysis of their effects on civil society. We measure social capital by the number of charities.⁵ These were small-scale, nonpartisan, local organizations that aided widows, looked after orphans, ran soup kitchens, paid for the cost of burials, and helped the poor.⁶ For clarity, we refer to them as “local charities” throughout.

We find that after a prefecture was exposed to a literary inquisition case, the number of charities in that prefecture fell by an average of 38%, relative to prefectures that never had a persecution, or prefectures that had not yet experienced a persecution. As the dataset we employ does not track

⁵These charities were apolitical. Unlike political organizations or societies, local charities were never directly targeted by the autocratic government. This makes it a “clean” measure of underlying social capital in our panel setting. A related logic is used in Satyanath, Voigtländer, and Voth (2017), in which political organizations are excluded from the pool of organizations when used to measure social capital.

⁶ Tsu (1912), Smith (1987), and Rankin (1990). This philanthropic activity reflected a “clearly articulated the concept of a ‘public’ or ‘communal’ sphere, as opposed to a ‘state’ or ‘private’ sphere” (Rowe, 2009, p. 119) Prior to 1600, the state, and especially the clan, provided most of social services. From the 1600s onwards, charities began to emerge that provided aid and relief on an indiscriminate basis and closely resembled modern charities. That said, the desire to establish charities was largely influenced by traditional Chinese values such as neo-Confucian ideology and Buddhist beliefs held by the gentry. We explain the connections between these intellectual movements and the formation of charities in more detail in Appendix 1.F. Charities played an important role in premodern China providing orphanages, disaster relief and other public goods (Simon, 2013) For more details about the role gentry played in the provision of disaster relief see Ch’ü (1962). Simon notes that “[i]n many cases, these private efforts were combined with the ones provided by local government officials or by emperors and kings” (Simon, 2013, p. 60). They were non-governmental organizations and played an important role alongside the government provision of disaster relief studied by Shiue (2004).

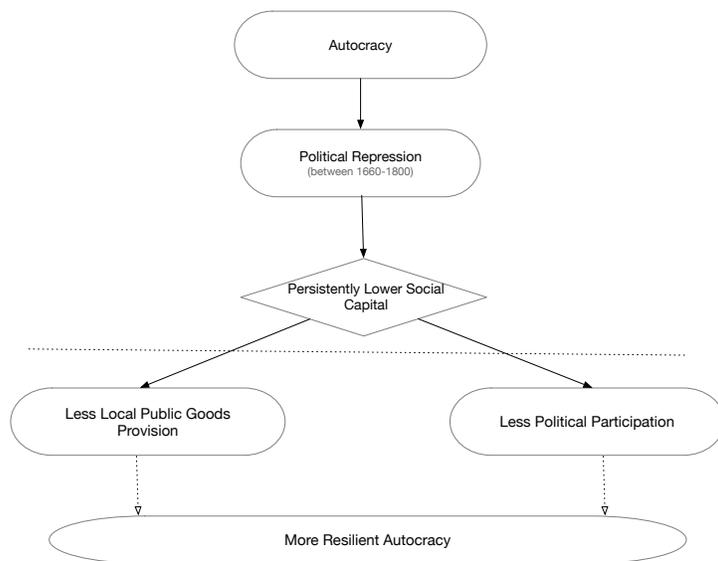


Figure 1: The structure of our analysis.

the closure of charities, the effects we find are purely driven by divergent patterns in the formation of new charities after a literary inquisition case. This allows us to conclude that there was a decline in successful collaborative effort in setting up charities in affected prefectures.

We map out the full dynamic response of local charities to literary inquisitions and show that the number of charities in affected prefectures gradually declined for three decades, relative to unaffected prefectures, and remained at a lower level thereafter. This lack of recovery suggests local societies in affected prefectures switched to a new equilibrium in which fewer charitable activities took place in general. To interpret this result, we rule out several alternative hypotheses, and conclude that this sustained decline in charitable activities following literary inquisitions is most consistent with the interpretation that literary inquisitions permanently altered beliefs and attitudes supportive of cooperation and participation in civil society, i.e. social capital.

As shown in Figure 1, for the second part of our analysis we consider outcomes directly shaped by social capital. We first regress literary inquisitions on indicators of social capital in the Chinese General Social Survey: literary inquisitions consistently predict a lower level of generalized trust, but do not affect trust between family members.

We next provide a snapshot of the provision of basic education in the early 20th century. In Qing and early Republican China, formal schooling at the level of basic education was rare. Primary schools were provided by local communities. If the Qing persecutions affected the cultural values that sustained this cooperation (i.e. social capital), it would have had negative consequences for the provision of public goods, including the provision of basic education. This should be more evident when the provision was informal and decentralized. We find that individuals born in the early 20th century were 5 percentage points less likely to be literate in prefectures that experienced persecutions in the Qing Dynasty. This is roughly a third of the average literacy rate of the cohort of individuals born in the 20th century who were surveyed in the 1982 census. These results are not driven by differential survivor rates between the literate and illiterate, and are not sensitive to

controlling for historical shocks such as the Taiping Rebellion, the exodus to Taiwan following the Chinese Civil War, and the Cultural Revolution.

Our historical panel analysis benefits from exploiting variation across both time and space. The analysis further made use of the fact that different prefectures were first exposed to persecutions in different points of time. When linking our treatment to modern outcomes, we lose this source of variation in timing.⁷ To establish causality in a cross-sectional setting, we construct two instrumental variables motivated by the character of the Qing take-over of China.

First, we exploit pre-existing levels of interactions between Manchus and Han Chinese as proxied for by a prefecture's distance to the pre-conquest Manchu capital. Distance to the pre-conquest Manchu capital predicts political persecutions in the first stage, but are unlikely to affect social capital through other channels. Second, we employ a prefecture's distance to the nearest base of the Eight Banners as an instrument. The Eight Banners were imperial armies that were predominately Manchu. The farther away a prefecture was from the Eight Banners, the more difficult for the Qing state to dispatch troops in a timely fashion in the event of popular unrest. The lack of nearby military presence aggravated the risks posed by unregulated speech. The first stage shows that distance to the nearest Eight Banners is positively correlated with the incidence of literary inquisitions. Our IV estimates are comparable to OLS estimates. We further demonstrate the validity of our instruments with a test of overidentifying restriction and a placebo test.

Next, we exploit urban-rural differences in the provision of basic education. Social capital should matter the most in places where public goods are provided locally and informally. For the most part of the 20th century, primary schools in rural China closely match this criteria. Indeed, we find that the effect of literary inquisitions on basic education is concentrated in the rural sample.

Similarly, we exploit policy variation in the provision of basic education over time. The negative effects of the Qing persecutions on literacy are evident for cohorts of individuals who reached schooling age before the Nationalist government began to centralize the education system in the 1930s. The centralization of the education system should have temporarily weakened the link between social capital and the provision of basic education and hence to literacy. Our results suggest that between the 1930s and 1960s, the effect of the Qing persecutions on basic education is much smaller. But a large negative effect re-emerges for the cohorts educated during the Cultural Revolution, when the provision of basic education became more dependent on local initiative, especially in rural China. The fact that we find a much larger effect when institutions were decentralized indicates that social capital is an important channel underlying the persistent effects of literary inquisitions.

Finally, we explore the question whether autocracy leads to more autocracy from several different angles. A recent survey of political attitudes of Chinese nationals, together with the Chinese General Social Survey, facilitates our attempt to answer this question. We find that individuals in affected prefectures are less likely to engage in community affairs, more politically apathetic, but

⁷Literary inquisitions began to reduce charitable activities shortly after those events took place. After two decades, the gap between charitable activities in affected and unaffected prefectures peaked, remaining more or less constant for subsequent decades.

actually have more progressive political attitudes. This implies that one consequence of political repression is that the individuals who are more likely to support democratic reform, are also less likely to be politically engaged. This, in turn, has implications for democratic self-governance. Autocracy is more likely to become entrenched if likely supporters of reform are dissuaded from political engagement. Echoing previous research that has found evidence for a virtuous democratic cycle as longer experience of democracy improves economic performance which in turn further helps to consolidate democracy, we point to the existence of a countervailing vicious autocratic cycle.⁸

II RELATIONSHIP TO THE LITERATURE

Our paper contributes to several strands of scholarship. First, we contribute to the literature on the importance of social capital. Following Tocqueville, scholars such as Putnam (1994, 2001) have argued that social capital is a crucial ingredient for democracy to function.⁹ Tabellini (2010) estimates the effects of cultural traits such as trust and respect for others, and confidence in individual self-determination on current regional economic development in Europe.

The literature has been greatly advanced by relying on historical experiments for sources of exogenous variation in contemporary social capital (Nunn and Wantchekon, 2011; Guiso, Sapienza, and Zingales, 2016). One of the main challenges that this approach faces is taking a sufficiently comprehensive view of the many different ways a historical event could have influenced society and the wide range of long-run effects it could produce. In this respect, our setting offers two advantages: (i) We have historical information to test whether, in the first place, the historical shock we examine indeed had an immediate impact on social capital. (ii) The historical shock in question was also highly specific and its reach was relatively well-defined. We show that literary inquisitions affected the position and mentality of intellectuals, but had few other consequences. In addition, usually, culture and institutions evolve together, which complicates the identification of culture as an independent transmission mechanism. In this paper, we can estimate the effects of the historical shock on social capital long after local institutions were abolished or lost most of their functions, as China increased the capacity of its highly centralized state after 1949. This aids empirical identification of the cultural channel as those local institutions no longer have an economic effect on local populations.¹⁰

⁸See (Persson and Tabellini, 2009) for discussion of a virtuous democratic cycle. For the evidence for the positive relationship between democracy and economic growth (Acemoglu, Naidu, Restrepo, and Robinson, 2017).

⁹There is a large literature on the relationship of social capital to democracy. Other studies find that the relationship between social capital and inclusive institutions is ambiguous. Acemoglu, Reed, and Robinson (2014) and Satyanath, Voigtländer, and Voth (2017) find that the relationship between autocracy, democracy and social capital can be more complex, particularly in the presence of political instability and extractive institutions. This suggests that social capital may be a necessary but not a sufficient condition for democracy to flourish. Recent research has also shown that social capital affects other variables such as the level of regulation (Aghion, Algan, Cahuc, and Shleifer, 2010).

¹⁰Had literary inquisitions had long-lasting negative economic effects, it would be less surprising to find that they also negatively affected trust and other measures of social capital. Similarly, if literary inquisitions led to different local institutions which persist to today, their effects on social capital will not be distinguishable from the direct effects of literary inquisitions on social capital. Such local institutions could be local charities or schools. Had they persisted to today they could influence social capital through a lower level of human capital, health, or more inequality and poverty.

More broadly, our work allows us to answer the question: How does the state shape society? This has been considered by numerous sociologists and political scientists such as Skocpol (1979), Moore (1966), and Ostrom (1997). We provide empirical evidence on the long-run consequences of rule by an unconstrained, autocratic, state.¹¹

Empirical evidence on the effects of the state on civil society is mixed. Recent research suggests that the presence of strong states can increase trust and help build a sense of common purpose (Becker, Boeckh, Hainz, and Woessmann, 2016; Johnson, 2015) and that bureaucratic states are associated with a legacy of greater social capital and public goods provision (Dell, Lane, and Querubin, 2017). In contrast, a pioneering study, using field experiments together with a historical case study of the Kuba Kingdom, suggests that the establishment of a powerful state can crowd out trust and pro-social values (Lowes, Nunn, Robinson, and Weigel, 2017).

One way to reconcile these findings is to recognize that states provide a *bundle* of institutions and that the effects of individual component of this bundle do not always coincide in sign. On the one hand, there are tangible benefits from the formation of a stable and centralized state (Besley and Persson, 2011). In contrast to sub-Saharan Africa, where Michalopoulos and Papaioannou (2014) have shown that national institutions have little impact away from the capital, China was a highly centralized state by premodern standards. The centralized institutions of a state like Qing China guaranteed internal peace and provided a stable environment in which commerce and markets could flourish (Pomeranz, 2000; Shiue and Keller, 2007). Strong states can provide an institutional framework that is conducive to the development of civil society. On the other hand, states are not built in a vacuum. The process through which political order is created and maintained can be extremely violent, particularly in autocratic states that lack political legitimacy, as was the case in Qing China. Holding other characteristics of Qing institutions constant, we find that the effect of a crucial aspect of the autocratic state—political repression—is negative on civil society.

We contribute to a nascent literature on the origin and persistence of autocratic regimes.¹² For most of history, autocracy has been the most prevalent form of government. While this changed with the waves of democratization that took place in the late 20th century (Huntington, 1993), recent years have seen democratic reversals and the strengthening of autocratic rule in many countries.¹³ In this paper, we uncover a novel mechanism through which political repression makes autocracy more stable in the long run: we show that a lower level of social capital is an important consequence of political repression, which, in turn, can cripple the decentralized provision of public goods leading individuals to be more favorably inclined to a strong centralized state. In addition, pervasive apathy and a lower level of political participation, both of which are legacies of autocratic rule, can make the population partially complicit in the institutional status quo. Through its effect on social

¹¹The Chinese state did not have the scope or power of a modern totalitarian state. As we document in the appendix a large historical literature points out that the fiscal and administrative capacity of the Chinese state was not particularly high (see Sng, 2014; Vries, 2015).

¹²See Giuliano and Nunn (2013), Galor and Klemp (2017), Bentzen, Kaarsen, and Wingender (2017), and Dower, Finkel, Gehlbach, and Nafziger (2017) for recent research on the roots of democracy and autocracy. Important treatments include Tullock (1987), Wintrobe (1998), and Mesqita, Morrow, Siverson, and Smith (2003).

¹³See discussions in Brownlee (2002), Nathan (2003), and Diamond and Plattner (2015).

capital, Qing-era political repression effectively reduced the possibility of democratic reform in the long-run.¹⁴

One virtue of our study is that our historical experiment is set within an existing autocracy. This helps us address the concern that societies have a different propensity for autocracy, due to underlying societal characteristics such as their level of population diversity (Galor and Klemp, 2017). In this case, predetermined characteristics that led to low social cohesion may also lead to autocracy. We mitigate this concern about negative selection by studying variation within a relative homogeneous environment with a similar amount of exposure in the past.

Political repression is often accompanied by violence. The Qing persecutions certainly involved the exercise of violence against potential political dissidents. However, the effects of the Qing persecutions, however, are not to be confused with the effect of mass violence, as in the case of Holocaust or Cultural Revolution.¹⁵ Mass violence tends to have direct economic consequences through the large-scale destruction of physical and human capital. Relatively few people were executed as a result of literary inquisitions. It was the psychological impact of the Qing persecutions that extended far and wide and well beyond those directly affected. Based on the pattern we observe in historical data, those persecutions led to a gradual process in the decline of social capital, which is power evidence that even in the absence of large-scale violence, autocratic rule can have powerful and long lasting negative effects on the fabric of society. Literary inquisitions represented a pure shock to the “collective conscience” of the intellectual class.

Finally, we shed new light on social capital and the path to democracy, particularly in modern China. Martinez-Bravo, Padro-i-Miquel, Qian, Xu, and Yao (2017) show that social capital is crucial to the success of formal institutions, when villages in China began to adopt democratic institutions. Our paper investigates the consequences of low social capital for public goods provision in 20th century China. Meanwhile, we provide new insights into China’s “authoritarian resilience” (Nathan, 2003; Perry, 2007; Gallagher and Hanson, 2013). Our findings also relate to work by Fisman and Wang (2010, 2015a, 2015b) which shows that personal connections and ties still affect political and economic outcomes in modern China. Our findings can be read in the context of recent studies of protests against authoritarian rule in Hong Kong (Cantoni, Yang, Yuchtman, and Zhang, 2016; Cantoni, Yang, Yuchtman, and Zhang, 2017). These studies point to the challenges involved in mobilizing individuals to protest against authoritarian rule. We show that past autocratic rule has helped to produce a culture of political disengagement and apathy, which might have perpetuated autocracy by lowering political participation, including political protests against autocracy.

¹⁴Studying Nazi Germany, Voigtländer and Voth (2014) show that public goods spending can help “buy” support for autocratic rule. Lichter, Loeffler, and Siegloch (2015) examine the impact of the Stasi during Communist rule on social capital. Employing data on the the total number of Stasi agents at the demise of East Germany, they study the effect of state surveillance.

¹⁵ Acemoglu, Hassan, and Robinson (2011) examine the legacy of the Holocaust in Russia. Waldinger (2010) finds negative effects of the expulsion of predominantly Jewish scientists in Germany. Giles, Park, and Wang (2015) use the “send-down” movement that took place during the Cultural Revolution to estimate the returns to schooling. They find that the Cultural Revolution reduced high school and college completion rates. Li, Rosenzweig, and Zhang (2010) find that individuals who were “rusticated” or sent into the countryside did not in general experience worse life outcomes; in fact in some dimensions they did better than individuals who were not sent down.

III HISTORICAL SETTING & CONCEPTUAL FRAMEWORK

POLITICAL LEGITIMACY IN QING CHINA

In imperial China, political institutions have always been authoritarian. The period we study, however, saw the *intensification* of imperial autocracy under the Qing dynasty. The power of the emperor became more absolute. The imperial state became more intrusive and repressive and increasingly willing to regulate ideas, speech and thoughts.

Recent scholarship has established that Qing China imposed relatively low taxes and provided few public goods (Sng, 2014; Vries, 2015). As Ma and Rubin (2017) document, this was perfectly compatible with the highly centralized nature of the Qing political system. The combination of low taxes and unconstrained autocratic rule reflected the equilibrium choices made by Qing rulers.¹⁶ The state in Qing China was a leviathan state in the sense that it dominated civil society despite having limited fiscal capacity.

The Qing state was more autocratic than previous dynasties in part because it had less legitimacy. Traditionally, Chinese rulers sought legitimacy in Confucianism. Confucianism provided powerful cultural support for autocratic rule. Obedience to imperial authority was seen as a natural extension of obedience to the head of the family. Unfortunately, for the Manchu Qing dynasty, this strategy was not readily available due to ethnocentricity of Han Chinese culture.¹⁷ A perceived lack of legitimacy generated a sense of insecurity was made worse by the fact that Manchu population was extremely small in comparison to the Han Chinese population they ruled (who made up more than 90% of the population of Qing China). To mitigate this, Qing rulers adopted a variety of strategies, including political repression.

From 1652 onwards, individuals were prohibited from meeting to discuss ideas and severe censorship was implemented banning individuals from owning suspect literature.¹⁸ Private academies, which in the late Ming period had become places where intellectuals could engage in policy debate, were shut down (Dardess, 2002) and the imperial academies were purged on the grounds that they were suspected of encouraging factionalism.¹⁹ The Qing also embarked on a campaign of propaganda. County magistrates organized lectures to instill the principle that the filial obedience sons owed their fathers extended to the emperor (Hung, 2011, pp. 35-36). In particular, Qing rulers became highly sensitive to comments by Han intellectuals, especially if they appeared to undermine the basis for Qing rule. They greatly expanded the scope of treason in the Qing Penal Code—any speech that can be inferred to embody hostility to the regime or raise questions about the legitimacy of the rulers, became sufficient to constitute the grounds for “treason”.

¹⁶Ma and Rubin (2017) argue that it was precisely the fact that the authority of the Qing emperor was unconstrained that meant that the state did not invest in administrative capacity.

¹⁷The emergence of a sense of Han Chinese ethnic/national identity is dated to the Song dynasty by historians (see Tackett, 2017). This ethnocentricity was strongly tied to Confucianism. The Qing state did try to seek legitimacy in an updated variant of Confucianism known as neo-Confucianism. See Appendix 1.F.

¹⁸This category even included “frivolous fiction”. Eventually three of the four classic works of Chinese literature were prohibited. Historians speculate that some of the later chapters of *The Dream of the Red Chamber* were destroyed by their author Cao Xueqin due to fear of being persecuted.

¹⁹See Chen and Jiang (1725), Huang (1974), and Wakeman (1998).

LITERARY INQUISITIONS

Relations between intellectuals and the state in imperial China were the product of long historical gestation. Under the first emperor of China tens of thousands of books were burned and hundreds of scholars executed in an attempt to build a unified ideology. This event, widely known as *fen shu keng ru* (210 BCE), set the tone for the relationship between rulers and intellectuals.²⁰ The Qing takeover of power after 1644 represents another major shock to the status of intellectuals.²¹ As foreign occupiers, the Manchu Qing rulers perceived that their right to rule was fragile in face of a Han Chinese majority. It quickly became necessary to regulate ideology: private academies were closed, curricula changed, societies shut down, and most dramatically, intellectuals were persecuted for their speech and writings even in the absence of any actual acts of opposition. As a result of these persecutions—known as literary inquisitions—the status of intellectuals became degraded further, their personal safety and that of their families put into question.

Literary inquisitions (*wénzìyù*) were “legal punishment for criminal acts committed through speech and written words expressed in various forms, including conversations, letters, essays, poems, pamphlets, books, dramas, novels, and diaries” (Fu, 1994, p. 131). As there was no independent legal system; all cases were investigated and processed by the imperial bureaucracy.

The ability to write and express ideas were key to the identity of intellectuals. Yet, throughout Chinese history, speech and writings were always restricted. Even prior to the Qing period, there was a long tradition of indirect or esoteric writing in Chinese history. As a survival strategy, writers were habituated to disguising their political views and criticisms in the form of poetry or historical commentaries. As a result, a wide range of speech and writings attracted the attention of the Qing government, from diaries, memorials, clan rules, genealogies, inscriptions, epitaphs, dictionaries to many others. The punishment they received could be “shockingly harsh” (Wang, 2002, p. 612).

Examining these cases closely we find cases where an individual displayed grief and nostalgia for previous (Han Chinese) dynasties, or interpreted a canonic Confucian text in his own way. In other cases, an individual used a character which turned out to offend the emperor, or employed language that the emperor decided that he did not like. Poetic works with “excessive anger” or “excessive hate,” could be offenses, as could expressions of “sorrow” regarding specific episodes in history, or even “[r]ash fortune-telling and discussion of military strategy . . . Most of the cases had an extremely tenuous link, if any, to anti-Manchu ideology” (Wang, 2002, p. 628).²²

The political repression that took place in the Qing period affected all of society, but it especially affected the class of intellectuals known as gentry. After 1000 AD, these individuals were typically

²⁰Further adjustments to the relationship between intellectuals and rulers occurred during the Song period under the shadow of Neo-Confucianism.

²¹A Google search, conducted in September 2017, yields 656,000 results for “fen shu keng ru” (in Chinese). “Wen zi yu” (literary inquisitions) gives 947,000 results.

²²Though they were studied by numerous scholars in the early and mid-20th century (e.g. Goodrich (1935), Ch’i-ch’ao (1959), and Wiens (1969)), the literary inquisitions have not been the subject of a major study among modern historians with the exception of Wang (2014). The existing literature comprises either narrative accounts, detailed case studies (Spence, 2001), or comparatively brief mentions in more general accounts of Qing China. See, for example, Gernet (1972, p. 506), Huang (1974, pp. 204–208), Guy (1987, pp. 166–179), and Kuhn (2002)). We explicitly compare the Qing literary inquisitions to earlier persecutions in Appendix 1.B.

graduates of the imperial examination system used to recruit candidates into the bureaucracy. But only a portion of the intellectuals served in the bureaucracy; the rest, did not serve the government formally. They were prominent in local society, assuming important roles in schools and charities, which remained relatively independent of the state. In the absence of an European style aristocracy, these were the only individuals who possessed any degree of influence or local power.

In Figure A.1 (Appendix 1.A), we illustrate the steps taken in a typical literary inquisition case. The procedure involved was highly centralized. The Qing empire had a highly centralized and hierarchical bureaucracy that was subordinated to the emperor. The authority of the emperor was replicated at the provincial level in the authority of the governor, at the prefecture level in the authority of prefect, and at the county level in the authority of magistrate. Governors, prefects and magistrates were all appointed and rotated regularly. As a result, they did not have to respond to local interests or concerns. Governors were responsible to the emperor alone.²³ All information concerning potential literary inquisition cases was passed up the chain of command, eventually reaching the emperor. Governors who failed to investigate cases, or to pass relevant information to the emperor, could be punished as were others who failed to inform the authorities.

The decision to execute an individual was always made by the emperor and no offense had to be specified in advance for an investigation to occur and “[t]he range of accusations that could lead to a literary inquisition was virtually unlimited” (Wang, 2002, p. 634). In the vast majority of cases, the emperor had never met and never heard of the offending individual.

A closer look at those cases suggests that individuals from vastly different backgrounds were persecuted, ranging from poets to dictionary makers and from peddlers to fortune tellers.²⁴ The very arbitrariness of the literary inquisitions elevated the perceived power of the emperor. The additional shock of a literary inquisition case arising, against the backdrop of an already highly restrictive atmosphere, confirmed the absolute power possessed by emperor.

EXAMPLE CASES

A Petitioner Individuals could not easily anticipate what might arouse the anger of the emperor. For example, Liu Zhengyu, a graduate of the lower level (shengyuan) exams, tried to impress the emperor by submitting a proposal to reduce the frequency of peasant unrest. The magistrate passed it on to the provincial governor. The governor passed the document to the emperor. It was an offense according to the Qing penal code for Liu to suggest state policy to his superiors and the governor suggested that his shengyuan status to be taken from him for his presumption (but not because he suspected him of treason). The emperor, however, reviewed the entire proposal. He took offense at Liu’s suggestion that the dress code for officials be changed, insisting that this was a suggestion that the dress should revert to what it has been in Ming times. Though there was no evidence that this was Liu’s intent, he was immediately executed.

²³The Yongzheng emperor instituted an elaborate system which allowed lower-level officials to directly report to the emperor in secrecy. This institutional change further strengthened emperor’s control over the bureaucracy.

²⁴None of the literary inquisitions cases, for instance, were about ethnic conflict.

A Dictionary Maker The character of these persecutions is further illustrated by the case of Wang Xihou, a dictionary maker, accused by a village member. Wang was a respected figure in his village. Having spent his life preparing for and taking exams, and compiling dictionaries, he posed no threat to the emperor. Nevertheless, although the governor general and provincial governor did not find anything overtly treasonous in Wang's dictionary, when he passed the case to the Qianlong emperor, the emperor decided that Wang should be punished on the grounds that the dictionary did not show sufficient deference to the dictionary commissioned by the Qianlong emperor's grandfather (Reischauer and Fairbank, 1958, p. 382). Specifically, while praising the Kangxi dictionary Wang Xihou also commented that despite having 46,000 characters, it was still missing some entries. This incident occurred at a time when the Qianlong emperor's sensitivity to literary offenses was particularly acute. He was furious at Wang Xihou and at the provisional governor who failed to find anything overly treasonous in Wang's writings, and who was nearly executed himself and was eventually exiled. Over 100 individuals ended up being investigated. The publishers of the dictionary and those who wrote a preface for it were punished as were Wang's associates. Wang Xihou himself was sentenced to nine familial exterminations, the most severe punishment available. He was executed, as were all his sons, and 21 other members of his family were enslaved.²⁵

A Writer's Descendants There was no statute of limitations in imperial China. In 1730 a literary inquisition case brought to light the writings of a certain Qu Dajun who had served various Ming loyalist movements fighting the Manchus and had died in 1696. But over thirty years later, fearing persecution, Qu Dajun's son turned himself in for possessing his father's books as these books contained many passages that could be interpreted as being critical of the Qing. Through these actions, he spared himself execution and was instead exiled. However, almost 50 years later in 1774, two of his distant relatives were punished for the possession of Qu Dajun's writings. Ironically one was a half-literate peddler, the other an illiterate, who seems to have preserved his writings out of reverence in spite of being unable to read them.

A MODEL

How can we rationalize such capricious persecutions? Why would the Qing state devote precious resources to punishing individuals who were highly unlikely to pose a direct threat? A simple signaling model can be used to understand how literary inquisitions were employed by the Qing emperors. In the canonical Spence (1973) signaling model, an informed party takes a costly action to communicate their type to an uninformed party. We adapt this framework to describe the situation facing the Qing rulers of China. In our model, rulers vary according to their legitimacy and strength. Legitimacy is common knowledge, but their strength is known to the ruler and not observed by the population, who rebel if they believe the ruler to be illegitimate and weak. Rulers have the option of conducting persecutions to reveal their strength. But because these persecutions are costly and require considerable administrative capabilities—suspects have to be found and interrogated,

²⁵Further detail about the case of Wang Xihou case are provided in Appendix 1.D.

witnesses questioned, books and writings collected and studied—they are less costly for a strong ruler to undertake and more costly for a weak ruler.

There is a separating equilibrium in which strong rulers from dynasties that lack legitimacy employ political persecutions to signal their strength and ability to root out opposition. Weak rulers find it too costly to conduct literary inquisitions. Rulers from legitimate dynasties have less need to signal their strength and will be less likely to use persecutions. (see Appendix 2).²⁶

This framework rationalizes several features of the Qing literary inquisitions and sheds light on the example cases we reviewed. First, persecutions can occur in the absence of actual opposition. This is consistent with what we observe in Qing China where literary inquisitions were not directed at open critics of the regime (as there were none) nor at specific regions or provinces. The choice of targets necessarily had a random component to it.

Second, there did not seem to be much consistency in the handling of literary inquisitions cases. Since the primary goal of those persecutions was to signal the strength of a ruler, whether a decision was made in line with an objective criteria was of secondary importance. It is, therefore, not too surprising that the fate of the individual cases was highly variable given that it was up to the opinion of the emperor and the criteria employed to determine guilt were subjective and impossible to anticipate. Imperial paranoia determined the fate of individuals involved in literary inquisition cases. The guilt of those accused of “word crime” was “in the eye of the beholder” i.e. the emperor (Fu, 1994, p. 134).

Third, there was an emphasis on public punishment: “[p]ublic executions of literary culprits were so visible and publicized that most people felt one must be very careful while making open oral and written expressions” (Fu, 1994, p. 133). This allowed the authorities to signal the strength and repressive capabilities of the state, but it also served the purpose of deterrence. Consistent with a Beckerian (1968) framework in which it is rational to impose as severe a penalty as possible in order to deter hard-to-detect crimes, in the majority of cases individuals were executed in public, often through *Lingchi* (slow slicing).²⁷

²⁶Hence these persecutions differed from decentralized persecution of religious minorities or witches in Europe as scapegoats for economic downturns or disasters. These persecutions were often a way to minimize social disorder by placing the blame on a specific minorities. This was not why literary inquisitions took place. Literary inquisition took place during the High Qing period, a period during which the autocratic Chinese state was strong. As ethnic Manchus the Qing lacked the legitimacy of native Han dynasties. The Kangxi, Yongzheng emperor, and Qianlong emperors, however, were among the most powerful and successful rulers in Chinese history. The emperors who followed them, the Jiaqing emperor (r. 1796-1820), the Daoguang emperor (r. 1820-1850), and the Xianfeng emperor (r. 1850-1861) were notably weaker rulers and they did not engage in persecutions.

²⁷Lingchi can be translated as death by a thousand cuts. Literary inquisition cases were prominent and widely publicized. Guy observes that “the emperor was using the Wang case to make a statement to the literary community about his determination to preserve his dynasty’s reputation. The singling out of one offender, repugnant though it may seem today, was not an uncommon means of communicating, in the 18th century to a large and diffuse community uncertain of Imperial directions” (Guy, 1987, p. 176). We detail other punishments used in literary inquisition cases in Appendix 1.A.1.

IV THE IMPACT OF POLITICAL REPRESSION ON SOCIAL CAPITAL IN IMPERIAL CHINA

A DATA SOURCES

Data on literary inquisitions are from *Qing chao wen zi yu an* (Qing literary inquisition cases) (Zhang and Du, 1991). These have been collected and compiled by historians. A total of 86 cases are included in *Qing chao wen zi yu an*, dating from 1661 to 1788. Zhang and Du (1991) is built on archival work done by historians at the Qing Imperial Archives in the 1930s, *Qing chao wen zi yu dang* (Archives of Museum of Forbidden City, 1934).²⁸ Those records confirm that individuals were investigated for speech and writing unaccompanied by overt acts of opposition.²⁹

China proper was divided into 18 provinces and 275 prefectures. Figure 2 depicts the prefectural boundaries of Qing China and displays the prefectures associated with victims of literary inquisitions per quarter century.³⁰

Regarding outcome variables, we first use Jiang (2005), a modern compendium of reputable figures in Qing China, to estimate the effect of literary inquisitions on the cohort size of reputable individuals. This is to verify whether literary inquisitions had any sort of impact on society. Jiang (2005) is encyclopedic. It includes approximately 25,000 individuals, who were born between 1562 and 1949, and well known for reasons that included economic and political prominence, importance in science and technology, medicine and healthcare, education, literary scholarship, artistic or poetic achievements, or other actions that left an impact on society. For each individual, we have information on their name, birth year, and hometown.³¹ In our main analysis, we focus on individuals born between 1640 and 1819 from prefectures in our matched sample.³² The resulting dataset comprises 3,509 individuals.³³

Our main outcome variable is the number of local charities, which we use as a measure of social capital. Social capital refers to the values and beliefs that support cooperation (Guiso,

²⁸Historians compiled 65 cases from three main sources: the archives of the Grand Council, palace memorials and veritable records. All of them were primary sources.

²⁹Magistrates, prefects and provincial governors were made personally responsible for detecting “literary offenses”. Officials could be punished for omissions made by their staff; “[t]he names, ages, and addresses of suspicious men were transmitted to government offices” (Wang, 2002, p. 622). Given this incentive system, it is therefore highly unlikely that officials would fail to report cases to the emperor. As we detail in Appendix 3.D.1, we also employ a more expansive list of so called “literary cases” in Table A.11. Many of those cases concerned openly anti-Manchu movements or an outcome of factional politics among government officials. The results we obtain using a more expansive list have the same sign as our main estimates but are far less precisely estimated.

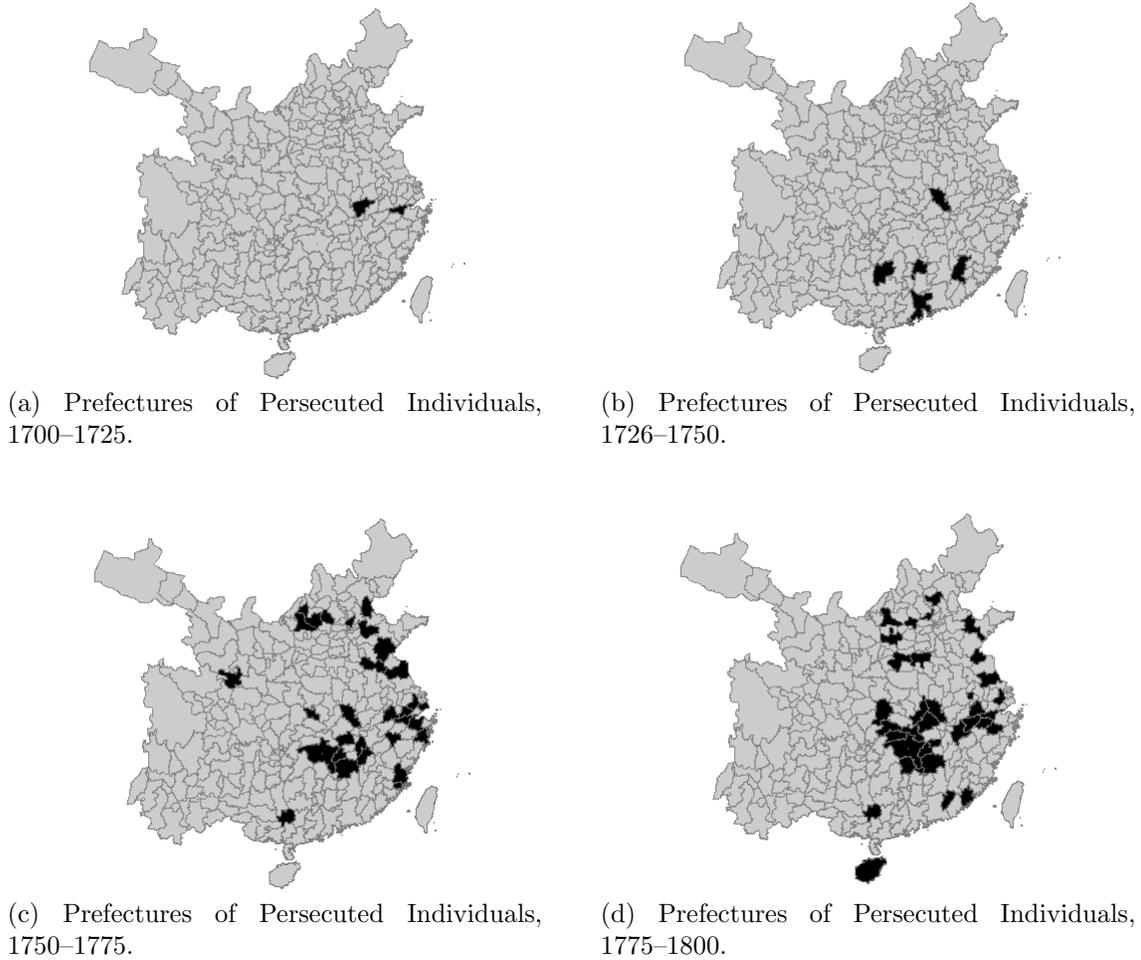
³⁰There were three levels of administration in imperial China: the province, the prefecture and the county. There were seven to thirteen prefectures per province. The average size of a prefecture in our matched sample was 15,000 square kilometers. The average size of prefectures in the entire Qing empire was larger than that in China proper. Summary statistics for all data used in our analysis are provided in Appendix 3.A.

³¹In our dataset, we have information on birth years for 19,780 individuals. Jiang (2005) also mentions if an individual had an alternative name and the original source on which the entry is based.

³²More details on matching are available in Section 3.B

³³While potential sampling issues might make this data problematic in a cross-section setting, our panel setting allows us to exploit variation over time within a prefecture. To note, because Jiang (2005) was compiled long after the collapse of the Qing Dynasty, his selection criterion for a particular prefecture would have no reason to change in fear of risks of persecution.

Figure 2: Prefectures of individuals persecuted as a result of a literary inquisition per quarter century: 1725, 1750, 1775, 1800.



Sapienza, and Zingales, 2011).³⁴ Charity data are taken from Liang (2001). This is regarded as the most comprehensive compilation of charities in Qing China. For each charity, we know its name, location, date of foundation, and the original source Liang consulted. To the best of our knowledge, we pioneered the use of this database in statistical analysis in social sciences. Liang built her database based on primary sources, most of which were local gazetteers.³⁵ These charities relied on cooperation between members of the same community, but often of different clans; they were small-scale organizations; and there was no formal registration system.³⁶ They provided help for the

³⁴Social capital thus defined refers to bridging rather than bonding social capital. It closely maps into the concept of generalized trust and is separate from family ties or individual-level, relationship-based advantages individuals obtain from belonging to certain groups which may advantage them without increasing societal level cooperation.

³⁵Local gazetteers are one of the most important data sources used in research based on Chinese history. There are large differences in gazetteer availability across prefectures, but as seen in Table A.9, our matched sample has nice properties in terms of balancedness in gazetteer availability. Within our matched sample, treated and untreated prefectures have a similar number of gazetteers, prefecture-level gazetteers or county-level gazetteers, regardless of the gazetteer database in question.

³⁶Historians have documented that, while traditionally these services were provided within the clan (Greif and

indigent, support of orphans, famine relief, and helped to cover the costs of burials. Local charities were often highly specialized and concentrated in providing a specific service to the community. During the period we study, we are not aware of any changes in the policies or regulations faced by charities.³⁷

We include two types of controls: (i) time-invariant characteristics. Some time-invariant prefecture characteristics could have a time-varying effect on local charities, such as other measures of social capital (Buddhist temples, funding agencies and linguistic fragmentation), urbanization, trade and levels of development. We control for those characteristics interacted with decade fixed effects. We do the same for possible determinants of the location of literary inquisitions, such as the number of conflicts in early Qing (1644-1690), the number of academies during the Ming period, and the number of individuals who refused to work for the Qing government after the collapse of the Ming; and (ii) time-varying factors. On the demand side, natural disasters such as floods might increase demand for charity services. We use the Central Meteorological Bureau of China (1981) for information on floods and droughts. Conflicts also increased demand for charities. We take conflict data from Chen (1939). We then control for the flow of human capital, as proxied by the number of examination graduates (jinshi) who acquired their degree during that decade (Zhu and Xie, 1980). Lastly, we look at alternative outcomes for which we do not expect to see an effect, such as government-sponsored academies, coded from Ji (1996). Additional variables are used in further robustness checks. For details on all the variables see Appendix 3.F.

B IDENTIFICATION

We estimate the effect of literary inquisitions on local charities in a difference-in-differences framework. We use the prefecture-decade as the unit of observation. Different prefectures in our sample received treatments at different points in time. Therefore, for each decade, the composition of our treatment and control groups is different. At each point in time, the control group comprises all prefecture-decades that have not seen a literary inquisition case.³⁸

The key assumption is that, in the absence of the treatment, i.e. a literary inquisition case, the change in the number of local charities would have been the same for both affected and unaffected prefectures.

We consider a prefecture “treated” when it is exposed to a literary inquisition case, where exposure is defined as the first occurrence of a persecution of an individual from the prefecture in question. We also experiment with alternative specifications in which we estimate the effects of subsequent cases separately. A literary inquisition case would have sent out a clear signal about the autocratic nature of the regime, and the absolute and arbitrary power possessed by the emperor.

Tabellini, 2012), by the Qing period these voluntary associations had expanded to provide relief to those outside of the clan; they were seen to represent a contribution to the community (Rowe, 2009).

³⁷It is worth pointing out that to be a source of potential bias such changes in policy stance would have to be region specific. In China, however, local magistrates were given no authority to make laws or institute policies on their own.

³⁸For prefectures that never had an inquisition, all prefecture-decades are in the control group. For prefectures eventually affected by literary inquisitions, the prefecture-decades prior to the first literary inquisition case is in the control group, all prefecture-decades afterwards are in the treatment group.

This would deliver a shock to individuals' understanding of their status relative to the state. Previous assumptions about the type of activities going to get one into trouble were overturned—from this point onwards, it became clear that instead of overt acts of opposition, speech and thoughts alone, could be grounds for punishment, and that all of this was entirely subject to the interpretation and will of the emperor. It was also a shock to interpersonal relationships. In such a climate of suspicion, the dominant strategy for an individual was always to report if he saw any behavior that could turn into a literary inquisition case. This posed severe constraints on the quality of ties and connections that could develop horizontally between individuals.

Each literary inquisition was largely an exogenous shock to subjects living in the prefecture. The Qing Imperial Archives contain extremely detailed information about literary inquisition cases. Many cases had origins in civil disputes that were largely apolitical.³⁹ They were the type of cases that could happen virtually anywhere in the country. Unlike regular criminal cases in which clear legal clauses would apply, there was no widely agreed upon criterion for what counted as an offense for which an individuals should be punished. Whether an investigation took place depended on the discretion of magistrate, prefect, provincial governor, and ultimately on the attitude of the emperor. At no point could this process be easily influenced by those who were outside of the bureaucratic system (that is to say, virtually all subjects in the prefecture). Even if incidents emerged locally and the probability of which were determined by prefecture characteristics, the process through which they had to go through to reach the imperial court was so uncertain that the outcome of two incidents from two prefectures that were similar in every dimension, would not be the same. The nature of the political process governing literary inquisitions that we discussed in Section III thus generated quasi-experimental variation in both the location, and especially the timing of first literary inquisition case for each location.

In examining the impact of literary inquisitions at the level of the prefecture, we are not claiming that there was no effect of those literary inquisition cases on aggregate. If information about persecutions had spread freely, any attempt to detect the local impact of a literary inquisition case would be unconvincing. But information did not flow freely in the premodern world. The absence of newspapers or other forms of media meant that information spread slowly and within a limited geographical range. Although a small number of individuals were probably exposed to such information regardless of where those literary inquisition cases took place, the vast majority of the population, including the local gentry, had much better knowledge of literary inquisition cases in their own locality.⁴⁰ Thus we expect there to have been a substantial local component to the effect of an literary inquisition case.

We examine the effect of literary inquisitions on populations in the prefecture that the perse-

³⁹For this reason, inquisition cases tended to be bottom-up, but highly isolated events. This made literary inquisitions very different from European witchcraft trials. There were no waves of literary inquisition cases as occurred in the European witch panics) and which were often driven by local economic shocks and bad weather. The closest that China experienced to such mass-driven panics was the soul-stealers episode studied by Kuhn (1990).

⁴⁰One channel through which information spread within a local area was the imperial examination system. The gentry were basically individuals who passed a certain level of imperial exams. A far larger number of individuals sat for the prefecture-level exams than for say, province-level and national-level exams.

cuted individual belonged to. Confucian culture, ancestor worship, and the agnatic lineage system meant that an individual’s families, clans and his identity were firmly lodged in his hometown. At a policy level, migration, county-to-county, prefecture-to-prefecture or province-to-province, was strictly controlled by the Confucian state. Although it was quite common for educated individuals (particularly those who graduated from the examination system) to be employed in another province or prefecture, they routinely returned to their home prefectures. Internal migration took place mainly in the form of poor and marginal individuals moving into previously unsettled regions. Data tend to be poor for those regions. We exclude them from our main sample.

B.1 Matching

One of the key assumptions of a difference-in-differences estimation strategy is that potential outcomes are independent of treatment status, conditional on past outcomes (Abadie, 2005). When control units are vastly different from treated units, this assumption often does not hold. One solution is to match on pre-treatment covariates and to discard units which are not sufficiently similar to the treated units.

Literary inquisition cases largely arose as a byproduct of idiosyncratic actions of individuals. Nevertheless, prefecture characteristics could still play a role in determining the likelihood of a literary inquisition. For example, typically, some level of literacy was a precondition for an individual to have produced speech and writings in the first place. There was, so to speak, a mechanical relationship between the proportion of literate individuals and the occurrence of literary inquisition cases. As expected, “treated” prefectures—prefectures that experienced a literary inquisition case—differed systematically from untreated prefectures in terms of characteristics such as population, prior stock of human capital, and economic development. Because in prefectures with better initial conditions, the number of charities would likely have been much higher in the absence of a persecution, a simple comparison between treated and untreated prefectures will mask the impact of literary inquisitions, producing biased coefficients of the effect of literary inquisitions.

Following best practice described in Ho, Imai, King, and Stuart (2007), before implementing a difference-in-differences estimation, we apply matching methods to the raw data and construct a comparison group more comparable to the prefectures affected by literary inquisitions (see Heckman, Ichimura, and Todd, 1997; Dehejia and Wahba, 2002; Abadie, 2005). From the late Ming period onwards, the number of local charities was on the rise. Prefectures with very different characteristics were likely to experience differential trends in the provision of charity.

We condition our sample on a minimal set of pre-treatment covariates, such as literacy, population size, agricultural suitability, the number of courier routes and socioeconomic macroregions. Literacy rates for premodern China are not readily available at the prefecture level; in our matching analysis we include the number of Ming jinshi (graduates of the metropolitan exam throughout the Ming dynasty (1368-1644)) as a measure of the human capital stock in a prefecture (see Jiang and Kung, 2015). Because the number of Ming jinshi also reflects the strength of local gentry, in the absence of literary inquisitions, prefectures with more Ming jinshi could have experienced differential trends in the formation of local charities. To control for underlying differences in economic

fundamentals between prefectures, we include estimates of population in 1600 and agricultural suitability. We also include the number of courier routes and ruggedness in our set of pre-treatment covariates.

To reflect deep-rooted regional differences, we take into account the socioeconomic macroregion a prefecture belongs to.⁴¹ These socioeconomic macroregions were vast areas with their own internal market systems and urban networks. Each of those regions were of the size of several major European nations. We mainly rely on propensity score matching to fulfill our matching task. However, we also report results using Coarsened Exact Matching (CEM), which is less model dependent than propensity score matching (Table A.7).

We show in Table A.5a that in our raw data, our treatment and control groups are unbalanced on a number of characteristics, including both economic fundamentals and human capital stock. After matching we obtain a balanced sample as shown in Table A.5c. Reassuringly, the prefectures in the matched sample are even balanced on characteristics that are not part of the set of the pretreatment covariates we condition our sample upon (Table A.6), including the initial number of charities. This suggests that we indeed have a comparable treatment and control group.

C INITIAL EXAMINATION: THE EFFECTS ON REPUTABLE INDIVIDUALS

First, we establish that literary inquisitions indeed had an impact on the number of individuals becoming notable or reputable in a prefecture.⁴² We look at different age cohorts of reputable individuals (aged between 15-30, 31-45 and 46-60). For each decade, there was an average of 2 to 2.5 reputable individuals in each prefecture within each of the above age groups. The cohort of individuals that were affected the most by literary inquisitions comprised individuals aged between 15-30 during the decade when a prefecture was affected by literary inquisitions. Exposure to literary inquisitions resulted in a 36% ($-0.36 = -0.903 \div 2.476$) decline in the number of individuals becoming reputable (Table A.10). For older cohorts signs are negative, but coefficient estimates are much smaller and imprecisely estimated. Our interpretation is that older cohorts were less affected by literary inquisitions. By the time they witnessed or were informed of literary inquisitions, they would have already produced their influential writings or have done whatever important activities that led them to becoming well-known.

As reputable individuals are recorded based on their hometown, these results are highly unlikely to reflect migration away from prefectures after a literary inquisition. Assuming that the size of local gentry remained relatively stable just before and after the shock, the change in the number of individual achieving enough to being recorded as a reputable individual is best explained by individuals going out of their way to avoid publicity and visibility.⁴³

⁴¹The socioeconomic macroregions identified by Skinner, Henderson, and Berman (2013) are based on Skinner (1977). This data is used in Xue (2016). Details on all our variables are provided in Appendix 3.F.

⁴²Note, this is different from saying that literary inquisitions had an impact on the level of human capital or the size of local gentry. In fact, we specifically control for the number of jinshi who obtained their degree during that decade, which is the best time-varying proxy we have for the flow of human capital.

⁴³Details of our specification can be found in Appendix 3.C.3.

Table 1: The Impact of Literary Inquisitions on Local Charities

	# Local Charities			
	(1)	(2)	(3)	(4)
Literary Inquisition	-0.750*	-0.988**	-1.024**	-1.024**
	(0.419)	(0.419)	(0.506)	(0.469)
Initial Pop. Density \times FE	Yes	Yes	Yes	Yes
Ming Jinshi \times FE	No	Yes	Yes	Yes
Latitude/Longitude \times FE	No	No	Yes	Yes
Socioeconomic Macroregion \times FE	No	No	Yes	Yes
Decade FE	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes
Clustering	One-Way	One-Way	One-Way	Two-Way
Observations	1417	1417	1417	1417
Adjusted R^2	0.779	0.792	0.828	0.828

This table reports difference-in-differences estimates of the effect of literary inquisitions on the number of local charities. The unit of observation is the prefecture-decade. Column 1 presents our results controlling only for the interaction between decade fixed effects and log population in 1600. Column 2 controls for the interaction between the number of Ming-era jinshi and Skinner’s socioeconomic macroregion fixed effects with decade fixed effects. Column 3 is our baseline specification. It additionally controls for latitude and longitude interacted with decade fixed effects. In Column 4 we repeat the same specification as in column 3, and cluster our standard errors by both prefecture and decade (Cameron and Miller, 2015). In all other specifications robust standard errors are clustered at the prefecture level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

D LOCAL CHARITIES: BASELINE RESULTS

We examine the effects of literary inquisitions on local charities by estimating the following equation:

$$\text{Local Charities}_{p,d} = \beta \text{Literary Inquisition}_{p,d} + \Omega_p + \Lambda_d + \mathbf{X}'_p \Lambda_d + \epsilon_{p,d}, \quad (1)$$

where $\text{Local Charities}_{p,d}$ denotes the number of local charities in Prefecture p , and Decade d . $\text{Literary Inquisition}_{p,d}$ is an indicator variable that becomes equal to one in the decade d following the first literary inquisition case in prefecture p . Ω_p is a vector of prefecture fixed effects. Λ_d is a vector of decade fixed effects.⁴⁴

A number of prefecture characteristics are possibly correlated with both the chance of being exposed to literary inquisition cases and with the ability of local individuals to build charities. Those characteristics could have time-varying effects on local charities. In our main specification, we control for $\mathbf{X}'_p \Lambda_d$ where \mathbf{X}_p includes the number of Ming jinshi, Skinner’s socioeconomic macroregions and latitude and longitude.

Table A.18, column 1, suggests that after seeing the first literary inquisition case, the number of local charities in a prefecture fell by about 28% ($-0.28 = -0.75 \div 2.679$) relative to the sample

⁴⁴In Appendix 3D, we show that as an alternative to using the number of local charities as an outcome variable, we can use the number of charities per capita and obtain very similar results (Table A.19).

mean. As we add more controls, we arrive at an estimate of a reduction of 1.024 local charities in a decade, or 38% ($0.38 = -1.024 \div 2.679$) of the sample mean (column 3). From now onwards we refer to this as the baseline specification. This was a substantial decline in the number of local charities. As one of the best measures of social capital, this decline in local charities is a telltale sign of social decay following the literary inquisitions.

Now we ask: how did political repression lead to a decline in charitable activities at a more micro level? First, because our data source only documents the date of foundation of new charities, the decline we observe has to be driven by new charities, rather than the closure of existing charities. Mirroring our results on the trend in reputable individuals, a decline in local charities can be caused by individuals withdrawing from society. Many literary inquisition cases were associated with hundreds of arrests. Those who associated with the persecuted individual were often implicated as well. On the other hand, an individual's peers were often proximate causes of investigation. They had the necessary information about an individual to report him to the government. The risk of persecution greatly increased the costs of social interactions.

These effects could have been cumulative though we cannot test this. To the extent that charities and other forms of social participation helped to build trust and a community spirit, the negative impact of persecutions on local organizations could itself have had a further impact on social capital, leading to more social decay. In Section H, we explore the dynamic effects of literary inquisitions on local charities.

In interpreting these results, it is important to keep in mind that the policies and laws pertaining to establishing charities remained unchanged in this period: it remained easy and low cost to establish local charities (Smith, 1987). Unlike the White Lotus Society and the like, local charities were never banned or discouraged, and they did not need to go underground.⁴⁵ In the period after 1600, many parts of China were showing signs of transitioning from a traditional clan-based system of mutual aid to reliance on more impersonal forms of charity, which involved individuals organizing to provide help to outsiders. This transition appears to have been impeded or slowed down due to literary inquisitions. This interpretation is entirely in keeping with our main conclusion that literary inquisitions led to a decline in civic activity, an emasculation of the public sphere and a decline in generalized trust.

A decline in the number of local charities may not have been the only change that took place. The character of local charities could have changed as well.⁴⁶ Unfortunately, we only have information on the name, location, date of foundation, and the original source for each charity. We cannot estimate the effects of literary inquisitions on the intensive margin of local charities.

As literary inquisitions led to deaths and in a few cases the destruction of property, there may certainly have been a short-run effect of individual deaths on local society. However, given the total size of local gentry (roughly 740,000 in 1840 (Chang, 1955)), we do not expect the relatively small number of deaths caused by literary inquisitions to be large enough to reduce local charities by a

⁴⁵This was until 1949. The communist regime banned charitable organizations.

⁴⁶Liang (2001, p. 169) observes that the founders of charities in the Qing period were less charismatic compared to their predecessors in the Ming period.

third of its mean for the next hundred of years.⁴⁷ In other words, the persistent decline in local charities cannot be explained by the killing of local gentry.

To ensure that we are identifying the effects of literary inquisitions on social capital, in the remainder of this section, we consider factors which might have been possible determinants of inquisition cases and also correlated with the number of local charities. These include prefecture characteristics which might have prompted the Qing government to be more likely to persecute individuals from these regions. We also control for initial levels of social capital, economic development and urbanization and for time-varying factors such as natural disasters that may affected the demand for local charities.

E LOCAL CHARITIES: INITIAL CONDITIONS

The historical evidence we have reviewed suggests that cases were highly idiosyncratic and had to be processed through a complicated bureaucratic system. Thus it was largely coincidental whether a case would reach the imperial court in the end. In constructing our main sample, we already matched our treatment and control groups on factors such as average literacy in the prefecture, as proxied for by the number of examination candidates during the Ming period, as a first step to mitigate differential trends in the formation of local charities arising from different prefecture characteristics. In Table A.12, we take a closer look at political economy factors. The reasoning is that these could have simultaneously affected the chance of literary inquisitions and produced differential trends in the formation of local charities.

E.1 The Political Economy of Literary Inquisitions

Han opposition to Manchu rule. The literary inquisitions were rooted in tensions between Qing rulers and the Han Chinese population. Such tensions were particularly acute during the Ming-Qing transition. In contrast, the peak of the literary inquisitions was more than 100 years after the Qing takeover, and those cases did not reflect actual anti-Manchu activities unlike earlier events. Nevertheless, these earlier events could still reveal valuable information about the characteristics of a particular location.

We first look at conflicts that took place between 1644 and 1690—before Qing acquired control over entire China proper and after the collapse of Ming. We then look at the individuals who refused to work for the Qing government—Ming loyalists who had a strong ideological commitment to the Ming dynasty.

We use the number of conflicts between 1644 and 1690 as a summary measure of opposition to Qing rule—more conflicts reflected more intense opposition. If areas which showed more opposition to Qing rule had differential trends in the formation of local charities, our estimates would be biased. We address this concern by including the number of the conflicts between 1644 and 1690 interacted with decade fixed effects (column 1). Our estimates remain unaffected.⁴⁸

⁴⁷After the first literary inquisition case, $\text{Literary Inquisition}_{p,d}$ becomes equal to one, each prefecture lost one to several hundreds of individuals. Some of those would be part of the local gentry.

⁴⁸These results are robust to an alternative classification of Ming-Qing battles that focuses on the period between 1634-1649.

Ming loyalists were those who worked for the Ming government, but refused to serve the Qing government after 1644. Notable opponents of the Qing, like Qu Dajun, devoted themselves to various Ming loyalist movements. In several literary inquisition cases, individuals were in trouble for possessing books written by one of those Ming loyalists. In many other cases, nostalgia towards the Ming Dynasty was an important trigger that could anger the emperor, and was often sufficient grounds for an individual to be charged with “treason”.

We coded our data on Ming loyalists from Sun (1985). This allows us to construct a measure of *the number of Ming loyalists* at a prefecture level which serves as a second proxy for disapproval of Qing rule. If such a sentiment was reflected in speech and writings, it would increase the probability of literary inquisitions in that prefecture.⁴⁹ Column 2 suggests that adding loyalty to the Ming dynasty to the regression does not affect the estimated effect of literary inquisitions on local charities.

Independent Academies and Anti-Authoritarianism. We also consider the significance of the independent academies that emerged during the Ming period. In the late Ming period, intellectuals formed academies in order to discuss ideas and to influence policymaking (Peterson, 2002, p. 479). Historians describe these as part of a vibrant proto-liberal and “anti-authoritarian” intellectual culture that arose and helped form a nascent public sphere in late Ming China (Rankin, 1990; Wakeman, 1998; Hung, 2011).

One of the first policies the Qing regime implemented was to abolish those academies. Nevertheless, the anti-authoritarian intellectual traditions pursued by those Ming-era academies remained influential into the Qing period and were deemed as a threat to Qing rule. This could influence the probability of literary inquisitions on the margin. Moreover, if Ming-era academies were the product of deep-rooted political preferences held by individuals in those prefectures, or alternatively, if the social interactions and discussions in those academies helped to produce political preferences that led to differential trends in the formation of local charities, this could lead to biased estimates. To address this, we include an interaction term between the number of Ming-era academies and decade fixed effects. The estimated effect of literary inquisitions remains stable (column 3).

E.2 Initial social capital.

In our matched sample prefectures with literary inquisitions and those without had roughly the same number of local charities in 1700 (Table A.5). All else equal, this should reduce the possibility that those prefectures would have experienced differential trends in the formation of local charities even in the absence of literary inquisitions. As data on local charities in 1700 may not be of the best quality, in Table 2, we control for proxies, or important determinants, of social capital, interacted with decade fixed effects (Panel A). Note that region-level trends in the formation of local charities, are already accounted for in the baseline regressions by the inclusion of socioeconomic regions interacted with decade fixed effects.

⁴⁹Having more Ming loyalists was also linked to greater solidarity among intellectuals. In the early decades of Qing rule, it was not unusual for intellectuals to sanction those who “betrayed” the movement to collaborate with Qing. Solidarity among intellectuals in the 1600s could be a characteristic that was positively correlated with the prevalence of local charities—both in 1600s and later on—but its effect could vary over time.

In columns 1 to 5, we control for local charities in 1700, Buddhist temples in 1700, funding agencies in 1700, linguistic fragmentation index, and the first principle component of the first four variables, interacted with decade fixed effects. Martinez-Bravo, Padro-i-Miquel, Qian, Xu, and Yao (2017) show that Buddhist temples are a proxy for social capital in modern China. Funding agencies were local organizations that accepted donations to support the travel of examination candidate to capital cities. The linguistic fragmentation index is the same as in Bai and Jia (2016). Our coefficients of interest remain relatively stable across all columns.⁵⁰

E.3 Economic and State Development

Commerce and economic prosperity can lead to institutional change. One common mechanism is that trade empowers local economic elites who then press for more inclusive institutions (Acemoglu, Johnson, and Robinson, 2005; Angelucci, Meraglia, and Voigtländer, 2017). It is also possible that such elites might come into conflict with the ruler—as took place frequently in European history.

Although there was no strict equivalent in the case of China, commerce and economic prosperity was also a non-negligible factors in the political landscape. Richer areas, with more commercial activities, were a breeding ground for an anti-authoritarianism tradition, and managed to develop impersonal charities earlier and in larger numbers. As established in Section IV.E.1, the former factor made it possible that these regions might have attracted the attention of Qing ruler, affecting the probability of a literary inquisition case ending up in the imperial court on the margin.

In Table 2, Panel B, we interact local economic factors with decade fixed effects. First we include the interaction between agricultural suitability and decade fixed effects (column 6). Next we consider urbanization. Satyanath, Voigtländer, and Voth (2017) find that urbanization predicts association density in Weimar Germany. The first charities in China emerged in the late Ming period in urban areas to help the urban poor. We use various estimates of total urban population from 1393—the only available year for which estimates of the urban population exist—for this purpose (column 7). To account for the degree of commercialization, we use distance to either the Grand Canal or the Yangtze (column 8) and distance to the coast (column 9). Finally, in column 10, we control for a prefecture’s proximity to the nearest imperial courier route. Imperial courier routes were used by the state to deliver palace memorials or manuscripts. We expect to capture state presence with this variable. Overall, our estimates do not vary greatly across columns.

F THE DEMAND FOR CHARITIES.

There were several factors shaping the demand for charities. Natural disasters tended to increase the demand for charities as “the need for aid was thus defined by the emergency” (Smith, 1987, p. 310). If natural disasters increased the probability of literary inquisitions, we would underestimate the effect of persecutions on local charities. The same logic applies to conflicts. There is also the possibility that literary inquisitions could have incited conflicts due to being perceived as “unjust”. So first, in Table A.13, we show that literary inquisitions were not a response to natural disasters or

⁵⁰We re-estimate our main specification with funding agencies as an alternative outcome and find quite similar results. Literary inquisitions have a negative effect on the formation of funding agencies, but the coefficient is just below the threshold for statistical significance.

Table 2: The Impact of Literary Inquisitions on Local Charities: Initial Social Capital and Economic Conditions

Panel A: Initial Social Capital					
	# Local Charities				
	Initial Charities (1)	Buddhist Temples (2)	Funding Agencies (3)	Fragmentation Index (4)	1st Principle Component (5)
Literary Inquisition	-0.927* (0.494)	-1.056** (0.523)	-1.024** (0.510)	-1.034** (0.491)	-0.892* (0.493)
Baseline Controls \times FE	Yes	Yes	Yes	Yes	Yes
Decade FE	Yes	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes	Yes
Observations	1417	1417	1417	1404	1404
Adjusted R^2	0.841	0.827	0.826	0.829	0.833

Panel B: Economic Development and State Capacity					
	# Local Charities				
	Ag. Suitability (6)	Urbanization (7)	Yangtze/Grand Canal (8)	Coast (9)	Courier Routes (10)
Literary Inquisition	-0.999* (0.508)	-1.663** (0.637)	-0.993** (0.475)	-1.120** (0.519)	-1.022** (0.505)
Baseline Controls \times FE	Yes	Yes	Yes	Yes	Yes
Decade FE	Yes	Yes	Yes	Yes	Yes
Prefecture FE	Yes	Yes	Yes	Yes	Yes
Observations	1417	1417	1417	1417	1417

This table reports difference-in-differences estimates of the effect of literary inquisitions on the number of local charities controlling for initial social capital and initial economic conditions interacted with decade fixed effects. Baseline controls include Ming-era jinshi, log population in 1600, latitude and longitude, and socioeconomic macroregion fixed effects. In all columns we use the same controls as in column 3 of Table A.18. Columns 1 to 5 control for the interaction between decade fixed effects and the initial number of local charities, Buddhist temples, the number of funding agencies to support examination candidates, ethnolinguistic fragmentation and the 1st principal component of all the above measures of social capital. Columns 6 to 10, control for interaction between decade fixed effects and agricultural suitability, urbanization during the Ming Dynasty, whether a prefecture is located on the Yangtze River or the Grand Canal, whether a prefecture is located on the coast, and whether a prefecture had a courier route. In all specifications robust standard errors are clustered at the prefecture level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

conflicts (Panel A); nor did conflicts break out in the aftermath of literary inquisitions (Panel B). Next, we explicitly control for the intensity of natural disasters and the number of conflicts during each decade (Table A.17, columns 1–2).

In addition, we consider the “supply” side of charities. Similar to Section IV.C, we rely on the number of newly-minted jinshi during that decade to capture a change in human capital. (Table A.17, column 3). For our purpose, it is important to know whether there was a change in the extensive margin of the pool of individuals who were capable enough to organize and donate to charities. Although jinshi were only a small subset of such individuals, it is the best time-varying measure that we can find for such a purpose.

G ADDITIONAL ROBUSTNESS CHECKS

First, we confirm that our results are not driven by prefectures with particularly large or small numbers of gentry. The effects are present for prefectures with both above and below the median number of examination candidates and quotas for the examination system (Table A.20).

Second, we consider the impact of government spending. If the imperial authorities discriminated against affected prefectures after a literary inquisition case broke out, they could decide to how many resources to be allocated to those prefectures. Disaster relief and tax relief were one of the major government expenditures in Qing China. Controlling for a time-varying measure of disaster relief or tax relief does not change our results (Table A.21).

Third we look at an alternative outcome variable: government sponsored academies. We do not expect to see any impact of literary inquisitions on government sponsored academies and indeed find no such effect (Table A.23).

Fourth, we then address concerns about spatial spillovers and contagion. As all decisions concerning literary inquisitions were carried out within a centralized bureaucracy, there was no mechanism for cases to be geographically clustered, or to spread from one prefecture to the next. Moreover, although a specific case could make the emperor more suspicious and paranoid and perhaps more likely to punish individuals involved in future cases, it was far more common to see cases being correlated in time, rather than in space.⁵¹ As a robustness check, we correct for spatial autocorrelation and find little evidence for spatial spillovers (Table A.18).

Finally, we conduct a range of other robustness checks in Appendix 3.D. Our results are unchanged when we: (a) use different time periods and vary the starting date and ending date of our analysis (Table A.14, columns 1-4); (b) drop prefectures which had no charities by 1750 (Table A.14, column 5); (c) drop prefectures which had no charities by 1830 (Table A.14, column 6); drop prefectures which had no Ming jinshi (column 7); (d) omit prefectures which are reported as having a large number of immigrants (Table A.14, column 8); and (e) use 50-year time periods (Table A.22).⁵²

H DYNAMIC EFFECTS

Using a fully flexible model, we trace out the full dynamic response of local charities to literary inquisitions. Figure A.6 plots the coefficients from this regression confirming that literary inquisitions had a long-lasting impact on local charities, keeping the number of local charities persistently low in every single decade following the persecution.⁵³

⁵¹For example, the year 1761 saw five inquisition cases but these affected very disparate parts of the country. The distance between the first case and the second case was 824 km. 460 and 352 km respectively separated the second and third, and third and fourth cases that occurred that year, while the final case took place 1542 km away from the fourth case.

⁵²We do this to avoid concerns about serial autocorrelation as it reduces time-series variation. In our main analysis, we focus on the periods prior to and shortly after an inquisition. A relatively small number of periods minimize the chances of false rejections in differences-in-differences setup (Bertrand and Mullainathan, 2004).

⁵³After 1840, local charities flourished in part due to Western influence, but this growth was highly variable. In some regions the growth of charities was relatively stagnant in comparison to other regions. Our results suggest that a legacy of literary inquisitions can explain part of this variation.

Such a pattern suggests that prefectures affected by literary inquisitions, after a few decades of adjustment and adaption, eventually settled into a new equilibrium in which fewer local charities existed. This pattern lends support to our social capital hypothesis: social capital was gradually eroded until it reached a lower steady state, as reflected in fewer charities.

Due to the critical function played by local charities, and the lack of capacity for the premodern state to invest in the provision of social services or insurance, a decline in local charities could lead to a governance vacuum. Coupled with a possible decline in other local organizations, such as examination funding agencies, prefectures affected by literary inquisitions may also have experienced the under provision of public goods.

The contemporaneous effects of such under provision of public goods make it difficult to say if social capital was the main transmission mechanism underlying the persistent effects of literary inquisitions. To shed further light on this, in the next section, we examine the effects of literary inquisitions in several new contexts: generalized trust, the informal/decentralized vs. formal/centralized provision of public goods, political participation and political views. By introducing several new sources of variation, we hope to distinguish the social capital hypothesis from competing explanations for the persistent decline in local charities in Qing China.

V THE EFFECTS OF POLITICAL REPRESSION ON SOCIAL CAPITAL TODAY

The first part of our analysis suggests that the persecutions of the Qing period had an immediate impact on charity formation that last throughout the Qing Dynasty. To narrow down possible interpretations of our results, we consider the effects of the Qing persecutions after the collapse of the empire and in a different political and institutional setting. We first document the negative correlation between the Qing persecutions and generalized trust in modern China. Then we examine the impact of the Qing persecutions on the formal and informal provision of basic education in centralized and decentralized systems. Figure 3 provides a timeline illustrating the key cutoff points in our analysis. Throughout, we employ the same sample as used in the historical panel. This means we continue to have a sample of prefectures balanced on pre-1700 characteristics for our analysis of modern China.

A GENERALIZED TRUST

We first use the Chinese General Social Survey (CGSS) to demonstrate some intriguing correlations between literary inquisitions and modern culture. We focus on generalized trust, the most widely used measure of social capital. As individual level controls, we include fixed effects for gender, age, and the level of education. Contemporary controls include log per capita income and the proportion of the population belonging to ethnic minorities, the percentage urban and the percentage enrolled in primary education. We also control for linguistic fragmentation.

According to Table 3, the Qing persecutions reduced generalized trust. The magnitude of this effect is economically meaningful: a history of political repression is associated with a 1/6th of standard deviation reduction ($0.167 = 0.179 \div 1.07$) in trust (column 3).⁵⁴ Our coefficient

⁵⁴These results are robust to controlling for the number of death during the Cultural Revolution.

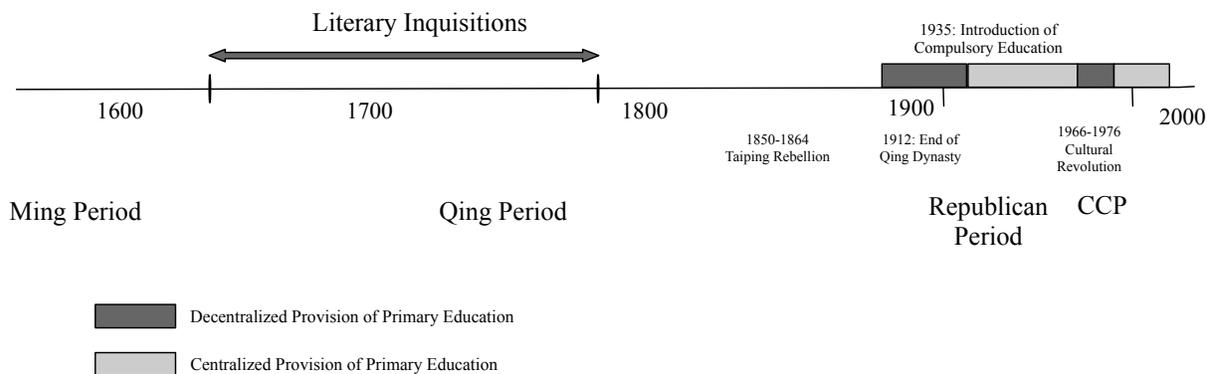


Figure 3: A timeline of the literary inquisitions and key events

estimates of interest remain stable when we include individual characteristics such as age, gender, and education (column 2), and control for contemporary factors that the literature has shown to be correlated with trust (Alesina and Ferrara, 2002; Butler, Giuliano, and Guiso, 2014) (column 3).

We do not expect the Qing persecutions to affect trust between family members. Compared to generalized trust, trust within the family is a form of particularized trust, with little connection to the public sphere or civic activity. Literary inquisitions mainly increased the risk of dealing with outsiders. The Qing state encouraged individuals to denounce their peers or superiors to the authorities, but unlike modern totalitarian states, individuals were not expected to denounce family members (who were, in any case, punished collectively with the perpetrator).⁵⁵ Columns 4–6 of Table 3 confirm that there is no effect on trust within families.

This is a striking result. In modern China, the state has taken over most of the functions of local organizations. Self-governing local charities no longer exist. The differences in generalized trust clearly do not rely on the continued presence of local charities.⁵⁶ This increases our confidence that reduced social capital was (i) a consequence of literary inquisitions and (ii) is the main explanation for the persistent effects of literary inquisitions.

B THE PROVISION OF PUBLIC GOODS

We have demonstrated that a correlation consists between the Qing persecutions and generalized trust in the 21st century. Logically speaking, if we can find an effect of the Qing persecutions today, we should be able to find evidence of persistence in the 20th century. China in the 20th century went through radical political and economic changes, providing rich variation in the institutional constraints faced by basic education. We examine the differential impact of the Qing persecutions on the provision of basic education, depending on the institutional constraints. Had social capital decreased as a consequence of literary inquisitions, we should see an effect of literary inquisitions on basic education when and where social capital was a determinant of the provision of basic education.

Education in all premodern societies tended to be decentralized and informal. In imperial

⁵⁵Collective punishment of family members was a long-standing tradition in imperial Chinese laws, arising from a conflict between the requirement of being loyal to the state and filial piety.

⁵⁶ After 1949, the state instituted stringent rules against the formation of local organizations. In the meantime, the state gained substantial capacity and superseded most of the functions of the remaining local organizations.

Table 3: Long-Run Analysis: Literary Inquisitions and Generalized Trust (CGSS)

	Generalized Trust			Trust in Family		
	(1)	(2)	(3)	(4)	(5)	(6)
Mean of Dep. Var	3.477	3.477	3.486	4.798	4.798	4.796
Literary Inquisition	-0.187** (0.0845)	-0.158* (0.0921)	-0.179* (0.0915)	0.0397 (0.0460)	0.0340 (0.0438)	-0.000251 (0.0383)
Individual Controls	No	Yes	Yes	No	Yes	Yes
Contemporary Controls	No	No	Yes	No	No	Yes
Socioeconomic Macroregion FE	No	No	Yes	No	No	Yes
Observations	3346	3343	3246	3345	3341	3244
Adjusted R^2	0.00354	0.0293	0.0481	0.000581	-0.000423	0.0152

This table reports OLS estimates of the relationship between literary inquisitions and trust in modern China. The dependent variables are on a 1-5 scale. Columns 1–3 examine the relationship between literary inquisitions and generalized trust. Columns 4–6 show that there is no relationship between literary inquisitions and trust within the family. Individual controls include fixed effects for gender, age, and the level of education. Apart from the linguistic fragmentation index, contemporary controls are the same as in Table 6, including log GDP per capita, log population in 2010, years of schooling, share of urban population and share of agricultural workforce. Robust standard errors are clustered at the prefecture level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

China, the state did not actively govern at a local level and provided very few public goods.⁵⁷ Basic education were the responsibility of clans and to a less extent, of local gentry.⁵⁸ Starting from the 1900s, the provision of basic education gradually shifted from a clan-based to a village-based system. The system remained highly informal. Not until the 1930s, under the Nationalist government, did the primary schooling system finally take off, and become much more centralized. This centralization continued through the Communist period until the Cultural Revolution, which saw the disruption of central direction and the devolution of education funding.

B.1 Basic Education in Early 20th Century China: OLS Estimates

We start by taking a snapshot of the provision of basic education in early 20th century China. This is the period that we expect social capital to make a difference for educational outcomes through affecting the informal provision of basic education.⁵⁹ We reconstruct the cohort of individuals who

⁵⁷See Feuerwerker (1980), Kuhn (2002), Sng (2014), and Vries (2015).

⁵⁸In particular, local gentry played a key role in the provision of basic education. The same individuals who were responsible for the organizing the provision of local charities in the Qing period also played a vital role in schooling. Basic education was the responsibility of either families or locally provided schools run on a voluntary basis by local gentry. Teaching was an “honorable profession for the gentry” and many “took the attitude that when they were accepted by the government, they should step into officialdom, and that if they were not in government service, they should be engaged in teaching” (Chang, 1962).

⁵⁹The consequences of lower social capital should manifest themselves most strongly when institutions are informal and decentralized (see Ostrom, 2000). Knack and Keefer (1997) similarly note that social capital produces higher levels of cooperation and that this enables individuals to overcome the local collective action problems that typically besets the provision of public goods. Such collective action problems are a particularly acute in societies with low state capacity, where states are unable to provide basic public goods or where ethnolinguistic fractionalization is high (Alesina and Ferrara, 2000). In line with this prediction, Hollard and Sene (2016) show that in sub-Saharan Africa social capital improves the provision of health care.

were educated during that period from the 1982 census. These were individuals who were at least 70 in 1982 (i.e. born before 1912). The assumption is that based on the years in which those individuals were born, they were most likely educated in the decentralized primary schooling system.

We estimate the effect of literary inquisitions on the provision of basic education in the early 20th century using the following equation:

$$\text{Literate}_{p,i} = \alpha + \beta \text{LiteraryInquisition}_p + \Omega \mathbf{X}_p + \Theta \mathbf{X}_i + \Gamma_{\text{prov}} + \Psi_m + \epsilon_{p,i}. \quad (2)$$

The dependent variable $\text{Literate}_{p,i}$ is a dummy variable that is equal to one if an individual was literate when surveyed in 1982. We control for prefecture-level variables \mathbf{X}_p that are known to be determinants of literacy or of social capital in the literature.⁶⁰ The vector \mathbf{X}_i contains individual level characteristics such as gender, household size, and marital status. Γ_{prov} and Ψ_m are province fixed effects and socioeconomic macroregion fixed effects.

\mathbf{X}_p includes historical and geographical factors such as agricultural suitability, population density in 1820, per capita taxation in 1820, distance to Beijing, distance to the nearest courier route, whether a prefecture was on the Grand Canal or Yangtze river, on the coast, or was an important center of transport and communication (Chong), and business (Fan), difficult to tax (Pi) or affected by high crime (Nan), whether a prefecture was a treaty port and ruggedness. Most of those covariates are standard controls that take into account economic and political conditions. Variables such as per capita taxation in 1820, distance to Beijing and distance to the nearest courier route are included to account for the impact of the state.

In \mathbf{X}_p , we also include two measures of historical human capital: the density of jinshi degree holders and per capita quota for shengyuan degrees. The second measure also captures variation in the institutions responsible for producing human capital as the quota was stipulated by the state. In our preferred specification (column 4), we also include population size in 1982, the percentage of population older than 65 in 1982, and the percentage of the population who are Manchu.⁶¹

Table 4 reports the effects of literary inquisitions on literacy in the early 20th century. According to our preferred specification, in a prefecture with a legacy of literary inquisitions, the probability of individuals being literate decreases by 5.2 percentage points (column 4).⁶² The magnitude of this effect is relatively large: on average only 15% of individual aged 70 or above in 1982 were literate. It is worth mentioning that this is comparable in size to the effect we find in the historical panel: approximately a third of the mean of the dependent variable. In column 2, we restrict our sample to 80 year olds only. The magnitude of the effect is again close to a third of the mean ($0.26 = 0.0283 \div 0.108$).

We do not find a statistically significant effect of literary inquisitions on middle or high school education among 70 year olds (Table A.25). The long-run effect of literary inquisitions appears to

⁶⁰We describe the process involved in matching different datasets in detail in Appendix 3.C.2.

⁶¹In all specifications we use the same sample as in our prefecture level DID and, as in those estimations, we employ a caliper size of 0.002.

⁶²In Table A.24 we show that these results are also robust to controlling for conditions prior to the literary inquisitions, such as the number of Ming jinshi, Ming-era academies, and Ming loyalists.

Table 4: Basic Education in the Early 20th Century: Main Specification

	Literate			
	(1)	(2)	(3)	(4)
Mean of Dep. Var.	0.153	0.108	0.153	0.153
Literary Inquisition	-0.0447** (0.0205)	-0.0283* (0.0166)	-0.0453** (0.0206)	-0.0524** (0.0220)
Log Jinshi Density	0.0136 (0.0153)	0.00559 (0.0104)	0.0266 (0.0163)	0.0336** (0.0163)
Over 80 Year Olds Only	No	Yes	No	No
Individual Controls	No	No	Yes	Yes
Contemporary Controls	No	No	No	Yes
Historical and Geographical Controls	Yes	Yes	Yes	Yes
Observations	72658	12035	72658	72658
Adjusted R^2	0.0340	0.0244	0.233	0.233

This table reports OLS estimates of the relationship between literary inquisitions and literacy in the early 20th century. The dependent variable is whether an individual is literate. All individuals were over 70 when surveyed in 1982. All specifications include province fixed effects and socioeconomic macroregion fixed effects. Individual controls include gender, marital status, and the number of couples in the household. Contemporary controls include log population, % aged over 65, and % Manchu. Historical and geographical controls include examination (shengyuang) quota in 1820, per capita taxation in 1820, agricultural suitability, population density in 1820, per capita taxation in 1820, distance to Beijing, distance to the nearest courier route, whether a prefecture was on the Grand Canal or Yangtze river, on the coast, or was an important center of transport and communication (Chong), and business (Fan), difficult to tax (Pi) or affected by high crime (Nan), whether a prefecture was a treaty port and ruggedness. Column 1 just includes our historical and geographical controls. Column 2 focuses only on individuals aged 80 or greater in 1982. Column 3 adds individual level controls. Column 4 is our preferred specification (and baseline) which includes all sets of controls. Robust standard errors, clustered at the prefecture level, are reported in parentheses. There are 72 clusters. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

be concentrated among the least educated. This null result highlights the social capital channel—given that middle and high schools were often directly funded by provincial governments, there was no obvious way for middle and high school education to be affected by a lack of social capital. This is consistent with our understanding that literary inquisitions affected the mentalities of the local gentry, their trust in each other and their participation in public affairs, but did not affect all aspects of society indiscriminately.

We acknowledge the possibility that 70 year olds surveyed in 1982 could have become literate after 1930s as adults. Compared with the younger generations, however, their opportunities to do so were slim. By the time of the anti-illiteracy campaigns of the 1950s, they were already in their 40s and 50s and they would have been extremely unlikely to have opportunities to acquire literary earlier (see Peterson, 1994). For our estimates to be biased, though, the probability for individuals to be re-educated at a later age has to be correlated with the Qing persecutions.

It is possible that literate and illiterate individuals were not equally represented in the census, i.e. due to differential survival rates. If the rich are more likely to live longer and to be literate and if regions which had greater numbers of richer and more educated individuals were more likely to experience literary inquisitions, then our estimates might be biased. To address this, we control

for the age structure of a prefecture’s population. In addition, since differential survival probability is likely greater for the older cohort, we show in Section D that the same results hold for a much younger cohort similarly educated under a decentralized schooling system.

C BASIC EDUCATION IN EARLY 20TH CENTURY CHINA: POLITICAL AND DEMOGRAPHIC SHOCKS

China experienced tremendous political turmoil from the middle of the 19th century to the Cultural Revolution of the 1960s. One might suspect that some of those events were the actual forces behind low literacy rates, and just happened to be correlated with the incidence of literary inquisitions. We check our results against three major historical events: the Taiping Rebellion, the exodus to Taiwan in 1949, and the Cultural Revolution.

First, we account for the Taiping Rebellion which struck China between 1850 and 1864. The Taiping Rebellion was a major shock to the population, affecting the local gentry, and local social capital. If prefectures exposed to the Taiping Rebellion also had literary inquisitions, we might be picking up the effects of the Taiping Rebellion instead.

The impact of the Taiping rebellion was twofold: on the one hand, the Taiping rebellion was associated with tremendous destruction—modern estimates suggest that the conflict caused the population to fall by as much as 20 million (Platt, 2012). On the other hand, areas that were affected by the Taiping rebellion saw greater local autonomy in subsequent decades as the Qing responded to the rebellion by empowering local intellectuals and gentry to raise taxes and armies to fight the rebels (see Kuhn, 1979).

Based on Table A.22, the gap in the number of local charities between affected and unaffected prefectures continued through the Taiping Rebellion. Here we explicitly control for exposure to the Taiping Rebellion. Table A.28 summarizes our estimates controlling for whether or how long a prefecture was occupied by the Taiping troops. In column 3, we see a negative and statistically significant effect of logged months occupied by Taiping troops, possibly suggesting that the negative effects of the large-scale destruction outweighed the benefits of more local autonomy after the Taiping Rebellion. However, the estimated effect of a literary inquisition does not change at all, suggesting that the effect of the Taiping Rebellion is more or less independent of that of the literary inquisitions.

Second, we investigate the effects of the exodus to Taiwan in 1949. During the transition to the Communist regime, about two million individuals left for Taiwan. The average migrant to Taiwan was more educated than the average individual in his cohort. If the decision to flee to Taiwan in 1949 was correlated with the Qing persecutions, we would risk overestimating the negative effect of Qing persecutions.

We collect new data to provide an estimate of the percentage of the population who migrated to Taiwan in 1949.⁶³ We construct our measures of out-migration from genealogy records available at the Taiwan Family Genealogy Catalogue Database (TFGCD). The TFGCD is a database that

⁶³Taiwan was the main destination for migrants. We focus on Taiwan in this paper, but there were certainly other destinations for out-migration.

aggregates information from a range of sources, the most important of which is the Taiwan special collection maintained by the Genealogical Society of Utah (GSU). We determine the prefecture of origin of the clans featured in those genealogical records, and construct a crude measure of out-migration at a prefecture level. In Appendix 3.E.4, we provide a detailed description of our approach, including the procedures taken to construct those variables and the associated caveats concerning their use. Table A.29 shows that our baseline results are not affected regardless of the measures we use.

Finally, we look into another major historical shock: the Cultural Revolution (1966-1976). The Cultural Revolution was an extremely violent period. Victims of the Cultural Revolution were more likely to have been relatively well-to-do (the landed class, the educated etc. . . .) in previous regimes. Given that the educated died at a higher rate than the uneducated during the Cultural Revolution, if literary inquisitions are correlated with unobserved prefecture characteristics that predict more Cultural Revolution deaths, we would overestimate the negative effect of the Qing persecutions. Using data on the number of victims from Walder (2014), we examine the effects of the Cultural Revolution in Table A.30. In all columns except for column 6, we get the expected signs for the effects of the Cultural Revolution, but this has no impact on the estimated effect of the Qing persecutions. Hence our results are not confounded by the large-scale violence that took place during the Cultural Revolution. Details of variable construction are provided in Appendix 3.D⁶⁴

C.1 Basic Education in Early 20th Century China: IV Estimates

We have accounted for the impact of major historical shocks and shown that none of them has a material impact on our estimates. Nevertheless, literary inquisitions might still be correlated with unobserved characteristics of the prefecture which would introduce omitted variable bias. While for our historical panel analysis we are able to exploit variation in the timing of an inquisition for identification, such variation is not available in a cross-sectional analysis. Instead, we rely on instrumental variables for sources of plausibly exogenous variation in literary inquisitions to aid our estimation.

One source of variation in the probability of a prefecture experiencing literary inquisitions was the amount of knowledge Manchu rulers had of their subject population, the Han Chinese. As explained earlier, many literary inquisition cases were replete with misunderstandings and misapprehensions. The emperor did not have sufficient information to judge a case, but he was the one with the final say. The error band around his decision making was substantial. When a case originated from a place that the emperor found relatively alien, this information problem was exacerbated. Given that the emperor’s primary concern was instilling obedience and deterring potential opposition, and had no reason to care about false positives (see the model in Section 2), this could easily lead to more persecutions taking place: “just to be on the safe side”. Due to their history, people from some parts of China had more interactions with the Manchus prior to the Qing conquest.

⁶⁴Based on column 1, a one-standard-deviation increase in the number of deaths per capita is associated with a reduction of literary rates by 2 percentage points.

Where there was a greater history of such interaction, the Manchus would have had slightly more knowledge about the local Han population, and in addition, less distrust and antipathy towards them.⁶⁵

Distance to Shenyang provides an exogenous variation in the level of interaction between Han Chinese and Manchus prior to the Qing conquest. Shenyang (Mukden) was an important ancestral homeland of Manchus. Upon the formation of the Manchu state in the early 1600s, Shenyang became the Manchu capital until Manchus invaded China in 1644. A nice feature of this instrument is that throughout its history, Shenyang was never an important economic or political center for China proper, the area of focus in this paper. Besides, as soon as Manchus took control over China proper, they ceased to use Shenyang as their capital city, further diminishing its economic and political relevance. Given a lack of relevance of Shenyang to prefectures in China proper, it is highly unlikely for social capital in those prefectures to be systematically correlated with distance to Shenyang. This helps our instrument to satisfy the exclusion restriction.⁶⁶

Another factor that could shift the probability of literary inquisitions on the margin, was the availability of the means of the Qing state had to crack down on conflicts, had revolts and uprisings taken place as a result of anti-manchu ideas that went unpunished. We collect data on the locations of army bases staffed by Eight Banners in Qing China. There were 31 such bases in Qing China. The Eight Banners were the most loyal and capable forces available to the emperor and the units trusted to subdue unrest. They were predominantly Manchus.⁶⁷

The rationale behind the instrument is that prefectures within a few days' march of the Eight Banners were easier to control and less of a threat than those located farther away from the nearest Eight Banner forces. Hence, all else equal, the emperor would have been more comfortable "tolerating" incidents that he had little information of and which were ambiguous in nature (which was almost all of them) and would have seen less need to send out a costly signal about his power in the first place. Below we demonstrate how our instrument satisfies the exclusion restriction and why distance to the nearest Eight Banner base is unlikely to affect modern social capital through other channels.

The Eight Banners were widely dispersed around the empire for both external defense and to maintain internal order. The median distance of a prefecture's to the nearest Eight Banner army base in our data is 150km. The maximum distance is 400 km. If the units involved were mounted

⁶⁵Likewise, Han Chinese from parts of China with little interactions with the Manchus prior to the Qing Conquest, also had less distrust and antipathy to the Qing rule. In Shandong, for example, Chinese displayed markedly different attitudes towards the Manchus. The two peoples had a history of cultural and economic interactions in the period before the Qing conquest (Wakeman, 1985), including a history of sea-borne trade with one another.

⁶⁶Shenyang did remained of cultural significance to the Manchu rulers of China after 1644. The Qianlong emperor even commissioned an "Ode to Mukden".

⁶⁷The Eight Banners were the most effective component of the Qing army and was trusted and relied upon by the Qing emperors. According to Kuhn (1979, p. 10): "The Eight Banners could of course be expected to render the most undeviating loyalty to the throne; descendants of the original Manchu conquerors and their Chinese allies, they had been brought under the close political control of the royal family". There was also the Green Standard Army, made up of Han Chinese, which was much larger but poorly trained and not trusted to deal with unrest or rebellions.

and not larger than a few hundred men, they would be easily able to cover 150km in between 2 and 3 days but it could take them more than a week to reach a location 400 km away.⁶⁸

In an ideal world the Eight Banners would have been located to best counter threats to the regime and in equilibrium the threat of rebellion would be equalized across regions. In reality, the locations of the Eight Banners were sharply constrained by several political and geographic factors that were not present in previous regimes, as evidenced by the locations of the Eight Banners in the Qing period being very different to those of imperial army in prior dynasties. In particular, the number of bannermen was small and, as they were predominantly cavalry, they needed to be stationed near forage that was key to maintaining their horses and hence their effectiveness as a fighting force. For that reason, the expected damage caused by rebellions was uneven across regions.

From the perspective of the emperor, the Eight Banners were an important means of political control. In the event of an uprising, the Eight Banners would be directed to suppress it immediately. But they were not an integral part of the state *per se*. Thus this is not a measure of state capacity. Bannermen were isolated from Han Chinese. From around 1000 AD onwards, China was ruled by a centralized civilian bureaucracy. The Eight Banners had their own laws and did not govern Han Chinese (Elliott, 2001). This reduces the chances of there being additional effects from proximity to Eight Banners bases, further ensuring that our instrument satisfies the exclusion restriction.

Table 5 reports our results using (a.) distance to Shenyang (columns 1–2) (b.) distance to the nearest Eight Banner base (columns 3–5), and (c.) both (columns 6–8). In the first stage, distance to Shenyang increases the probability of literary inquisitions. Similarly, distance to the Eight Banners increases the chance of literary inquisitions. First stage results show that both instruments are relevant. The F-statistic is reasonably high so we do not have weak instruments. Panel A summarizes the second stage estimates. In columns 1–2, we report results using distance to Shenyang as an instrument. In columns 3–5, we employ distance to the nearest Eight Banner base. In column 5 we control for distance to the nearest Ming army base, so if there was something special about being near an army base, such as more order and security, it would be accounted for. In columns 6–8 we include both instruments and test the overidentifying restrictions. Across specifications we find a strong and very consistent negative effect of the Qing persecutions on literacy. The magnitude of these coefficients are slightly larger than those we obtain using OLS, but are still comparable. Moreover, our instruments pass the overidentification test (columns 6–8): the p-values (0.81, 0.82 and 0.92) for the Hansen J-statistics do not reject the null that both instruments are valid.⁶⁹

In Table A.31, we use the distance to the nearest courier route as a placebo instrument. Distance to a courier route is one measure of state capacity.⁷⁰ First stage results suggest that distance to the nearest courier route does not predict literary inquisitions. This helps to ease concern that state

⁶⁸For discussions of the speed of movement of premodern military forces we are indebted to a discussion with Andrea Matranga. For a detailed discussion of how fast premodern armies could move see Engels (1978).

⁶⁹The joint null hypothesis is that the excluded instruments are correctly excluded and estimating equation is correctly specified. If the null hypothesis is rejected, then at least one instrument is not valid.

⁷⁰This is a similar idea to Acemoglu, Garcia-Jimeno, and Robinson (2015) and has been used in Xue (2016).

capacity is driving our results in Table 5.

D FROM DECENTRALIZATION TO CENTRALIZATION

We have shown that the Qing persecutions reduced the provision of basic education, when the schooling system was informal and decentralized. One way to test our hypothesis would be to see whether a more centralized schooling system changes the estimated effect of the Qing persecutions on basic education. Going beyond our sample of 70 year olds, we now include all individuals who were at least 15 years old in 1982.

Compared to urban China, basic education in rural China was more informal and decentralized. State building efforts in rural areas began in the late 19th century but never made major progress (Kuhn, 2002). Rural China was much less affected by the centralizing policies of both Nationalist and Communist governments. If it is true that literary inquisitions mainly affected basic education through the channel of social capital, the effect should be much stronger for rural China. In keeping with this prediction, when we split the sample, we find a negative effect of literary inquisition for the rural sample, but not for the urban sample (Table A.26).⁷¹

The difference between rural and urban China provides the first source of variation in the degree of centralization and formalization in the schooling system that we exploit. The second source of variation is engendered by the educational campaign by both Nationalist and Communist governments starting from the 1930s. With the 1982 census, we can utilize this source of variation by exploiting cohort-to-cohort differences in educational levels. Following the same logic as in Section V.B.1, we identify cohorts of individuals who were educated under a decentralized schooling system, as well as cohorts of individuals educated under a centralized system. They are individuals who were born before 1929 (decentralized schooling), individuals born between 1929 and 1959 (centralized schooling), and individuals born after 1959 (decentralized schooling). If we are right about social capital being a channel underlying the persistent effects of literary inquisitions, the effects should be strongest for individuals born before 1929 and after 1959.

In June 1935, the Nationalist government passed a compulsory education law. The provision of basic education was no longer just a product of local decisions. Efforts to formalize and centralize basic education continued during the Communist period. In line with our prediction, the estimated effect of literary inquisitions on basic education is halved for individuals born after 1929 and before 1959, compared to the estimated effect for individuals before 1929.

The schooling system went through another phase of decentralization during the Cultural Revolution. After 1965, the responsibilities of basic education was increasingly delegated to local communities, referred to as “production brigades”.⁷² Increased reliance on local communities is evident in aggregate statistics: education spending was 6.36% of the state budget in 1966, and decreased to 4.24% in 1970. As soon as primary and secondary education increased reliance on local funding,

⁷¹We cannot rule out the alternative explanation that cultural values are simply less persistent in an urban setting. Voigtländer and Voth (2012), for example, find that the transmission of medieval antisemitism was attenuated in larger cities.

⁷²During the Maoist period, “production brigades” were the basic accounting and farming production unit in the people’s commune system of the People’s Republic of China. Most of these were replaced by villages after 1984.

Table 5: Basic Education in the Early 20th Century: IV Estimates

	Literate							
	Log Distance to Shenyang		Distance to Eight Banners		Both Instruments Together			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Literary Inquisition	-0.0939 ⁺ (0.0604)	-0.116 ^{**} (0.0578)	-0.0790 ^{***} (0.0301)	-0.101 ^{***} (0.0342)	-0.109 ^{***} (0.0362)	-0.0838 ^{***} (0.0316)	-0.106 ^{***} (0.0304)	-0.112 ^{***} (0.0309)
Log Jinshi Density	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporary Controls	No	Yes	Yes	No	Yes	Yes	No	Yes
Historical and Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
Observations	72659	72659	72659	72659	72659	72659	72659	72659
Panel B: First Stage IV Estimates								
Log Distance to Shenyang	1.0771 ^{***} (0.323)	1.0175 ^{***} (0.299)				0.8154 ^{***} (0.254)	0.7710 ^{***} (0.256)	0.7855 ^{**} (0.257)
Distance to nearest Eight Banners Army Base			0.0024 ^{***} (0.001)	0.0025 ^{***} (0.001)	0.0024 ^{***} (0.001)	0.0021 ^{***} (0.003)	0.0022 ^{***} (0.002)	0.0021 ^{***} (0.003)
Log Jinshi Density	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Distance to nearest Ming Army Base	No	No	No	No	Yes	No	No	Yes
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Contemporary Controls	No	Yes	Yes	No	Yes	Yes	No	Yes
Historical and Geographical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	72659	72659	72659	72659	72659	72659	72659	72659
Kleibergen-Paap Wald rk F Statistic	11.10	11.58	11.45	10.45	9.87	10.90	9.85	9.54
Hansen J Statistic	0.00	0.00	0.00	0.00	0.00	0.059	0.054	0.011

This table reports our IV estimates for the effects of literary inquisitions on literacy in the early 20th century. The dependent variable is whether an individual is literate. All individuals were over 70 when surveyed in 1982. All specifications include province fixed effects and socioeconomic macroregion fixed effects. Columns 1–2 report results using distance to Shenyang as an instrument. Columns 3–5 employ distance to the nearest Eight Banners army bases as an instrument. Columns 6–8 employ both instruments together. Distance to nearest Ming army base is controlled for in columns 5 and 8. Columns 2, 4 and 7 have the same controls as in column 4 of Table 4. We report the Kleibergen-Paap Wald F statistic which suggests that we do not weak instruments. Robust standard errors clustered at the prefecture level are reported in parentheses. ⁺ $p < 0.15$, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

the gap in access to basic education between affected and unaffected prefectures re-emerged. For cohorts born after 1959 and educated during the Cultural Revolution, the effect of literary inquisitions on basic education is comparable to what it was under previous episodes of decentralization (Table A.27). Note that the gap in basic education between affected and unaffected prefectures re-emerged after being subject to a centralized schooling system for a long period (≈ 30 years), suggesting that our finding cannot be easily explained by human capital or more transitory aspects of school building.

To summarize, our analysis based on literacy outcomes in the 1982 census, indicates that the Qing persecutions was associated with the under provision of basic education. We establish causality with two instrument variables. Our findings are robust to accounting for major shocks such as the Taiping Rebellion, exodus to Taiwan and the Cultural Revolution. The negative effect of literary inquisitions on basic education is muted for the urban sample and much smaller for generations educated in a centralized schooling system. This provides further evidence that the effect of literary inquisitions on basic education indeed operated through the channel of social capital.

VI POLITICAL REPRESSION, POLITICAL ATTITUDES AND AUTHORITARIAN RESILIENCE

We have gone to considerable lengths to provide evidence that the Qing persecutions reduced social capital. One important characteristic of social capital is that it is associated with higher political participation. Putnam (2001) argued that low social capital undermines both civic engagement and reduces the willingness of individuals to participate in politics. So do we see a lower level of political participation in prefectures affected by literary inquisitions in the past? Important as this question is for testing our social capital hypothesis, it is also of independent interest as active political participation is crucial for the transition from autocracy to democracy.

It is not an easy task to think about political participation in China—most forms of political participation such as protests and competitive election are illegal in today’s China. Also, the fact that China remains autocratic today makes it difficult to know whether the lack of political participation is due to apathy or disapproval of autocracy. Fortunately, there is a form of political participation we can readily examine: volunteering on local committees or making suggestions to local committees. Local committees are self-governed, and are not part of the autocratic government.⁷³ Attitudes towards autocracy *per se* will not contaminate our results.

In Table 6 we investigate the impact of the Qing persecutions on attitudes and behavior associated with political participation using data from the Chinese General Social Survey (CGSS). We start with attitudinal questions. In columns 1-2, individuals in prefectures with a legacy of literary inquisitions say they are less likely to think that people like themselves can have an impact on government. We interpret this as reflecting disinterest in politics, or political apathy. But as explained earlier, this attitude can be specific to the type of regime governing modern China: had it not been for the fact that China is an autocracy, the same respondents could have a very different

⁷³We include both committees for urban residents (*juweihui*) and for rural residents (*cunweihui*).

Table 6: Authoritarian Resilience? Evidence from Political and Social Participation

	Logit					
	Political Apathy		Volunteering on Local Committees		Making Suggestions to Local Committees	
	(1)	(2)	(3)	(4)	(5)	(6)
Mean of Dep. Var	3.540	3.546	0.0677	0.0666	0.121	0.121
Literary Inquisition	0.199** (0.0815)	0.134* (0.0746)	-0.753** (0.360)	-1.080*** (0.419)	-0.435* (0.248)	-0.693** (0.290)
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes
Contemporary Controls	No	Yes	No	Yes	No	Yes
Adjusted R^2 / Pseudo R^2	0.0507	0.0543	0.0397	0.0485	0.0495	0.0577
Observations	3320	3224	3280	3184	3335	3238

This table reports estimates of the relationship between literary inquisitions and modern political participation using a Logit model. All specifications include socioeconomic macroregion fixed effects. Columns 1-2 examine the relationship between literary inquisition and political apathy. “Do you think people like yourself can have an impact on government?” The answer is scaled between 1-5. Columns 3-4 explore if literary inquisition predicts whether individuals have volunteered to work on local committees. Columns 5-6 examine if literary inquisition predicts whether individuals make suggestions to local committees. The answers for these questions are binary (“Yes” or “No”). Individual controls include fixed effects for gender, age, and the level of education. Contemporary controls include log GDP per capita, log population in 2010, years of schooling, share of urban population and share of agricultural workforce. Robust standard errors are clustered at the prefecture level and are reported in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

answer to this question. Next, we consider political behavior. We focus on political participation in self-governed local committees. Our main findings are survey respondents from affected prefectures are less likely to volunteer on local committees or to make suggestions to local committees (columns 3-6).⁷⁴ These findings parallel conclusions drawn from studies in Eastern Europe, where exposure to Communist rule has left a legacy of non-participation and cynicism towards politics, resulting in an “impoverished public sphere”.⁷⁵ Such differences in political attitudes and behavior are not related to differences in the level of individualism or collectivism. As shown in Table A.32, literary inquisitions have no effect on collectivism.

Political apathy has implications for China’s current political trajectory. Many scholars anticipate China undergoing a democratic transition as it develops. For this transition to take place, however, there need to be a critical mass of supporters and individuals willing to advocate for democratization at their own expense. In the meantime, although China has partially democratized its institutions at the village level, research suggests that local elections function most effectively in villages with higher levels of social capital (Martinez-Bravo, Miquel, Qian, and Yao, 2014; Martinez-Bravo, Padro-i-Miquel, Qian, Xu, and Yao, 2017).

⁷⁴In all specifications, we control for human capital as literary inquisitions have affected education and human capital accumulation in the past, and there can certainly be a persistence in human capital.

⁷⁵See Bernhard (1996) and Mishler and Rose (1997), and Howard (2003). In particular, post-Communist societies are characterized by lower membership in civic organizations. Bernhard and Karakoç (2007) discuss the extent to which this is a general phenomenon characteristic of post-totalitarian societies.

Related concerns have been expressed by writers from Orwell (1948) and Arendt (1951) onwards who pointed to the danger that autocracies would produce populations incapable of self-governance and thus well suited for autocratic rule. Our findings suggest that literary inquisitions indeed left a legacy that lowers the ability to take collective action and worsens the quality of self governance, creating unfavorable conditions for democracy.

Next, we consider whether the Qing persecutions have affected attitudes towards autocracy. The question under which conditions will individuals acquiesce to authoritarian rule is of vital importance. Field experiments such as the Stanford Prison Experiment have attempted to address it, but the experiment had to be shut down only six days after it began. Individuals began to play their role as accomplices in the prison “autocracy”, but it remains a puzzle what caused them to change their behavior. Our approach exploits historical variation in the perception of autocratic rule.

One fear is that individuals inured to autocratic rule may be used to being directed by the state and hence not believe local elections or democracy to be worthwhile. This is not what we find. The Chinese Political Compass (CPoC) contains questions on political ideology. Table 7 considers three different questions in the CPoC asking about individuals’ views over alternative political systems. We find that individuals in prefectures with a legacy of literary inquisitions are in fact *less* likely to agree with the following statements: “Western-style multi-party systems are not suitable for China” (columns 1-3), “Free speech is ‘western’ and will only cause social disorder” (columns 4-6), and “Modern China needs to be guided by wisdom of Confucius/Confucian thinking” (columns 7-9). In areas affected by literary inquisitions, individuals, if anything, are more likely to have warmer feelings towards liberalism. They are more likely to be skeptical about resorting to a traditional Confucian culture that has long complemented autocratic rule.⁷⁶ Whereas for other questions in the survey, such as when it comes to questions regarding social issues, there is no discernible difference between prefectures with a legacy of literary inquisitions and those with no such past. Our results are robust to controlling for access to the internet (columns 2, 5 and 7), and to adding the full set of controls used in our analysis of basic education (columns 3, 6 and 9).⁷⁷

This provides evidence that the impact the Qing persecutions have exerted on the autocratic resilience of China is not a simple political preference story. We find no evidence that literary inquisitions transformed regional culture to be more *pro-autocracy*. However, taking Tables 6 and 7 together, a meaningful pattern emerges: individuals in prefectures which had a legacy of literary inquisitions are more likely to be supportive of a more liberal political order, but due to a lack of interest in politics and public affairs, are unlikely to act on their thoughts and ideas. This means

⁷⁶As we discuss in Appendix 1.F, the Qing depended heavily on Confucianism in their propaganda. Despite the Communist revolution, the link between Confucianism and autocracy remains unbroken. The recent strengthening of autocratic power in China has been accompanied by a renewed emphasis on Confucianism (see Elliott, 2012; Kai, 2014).

⁷⁷We do not find that other more recent shocks such as the Cultural Revolution have an effect on political attitudes (coefficients are positive but insignificant). This is likely due to the Cultural Revolution persecutions being based around the principle of class struggle and not directed by the central government. Factors such as the preexisting levels of inequality and the intensity of the class struggle in a region as well as local quotas of class enemies imposed by the Communist Party were highly significant in account for the pattern of deaths observed (see Bai and Jia, 2016).

Table 7: Authoritarian Resilience? Evidence from Modern Political Attitudes (CPoC)

	Multi-Party Systems, Unsuitable [§]			Free Speech, Disorder [‡]			Confucianism, Essential [†]		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Mean of Dep. Var	0.417	0.417	0.417	0.587	0.587	0.587	0.238	0.238	0.238
Literary Inquisition	-0.147*** (0.0302)	-0.139*** (0.0292)	-0.159*** (0.0369)	-0.0962* (0.0545)	-0.0852+ (0.0593)	-0.107** (0.0441)	-0.149** (0.0676)	-0.114* (0.0619)	-0.123** (0.0623)
Individual Controls	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Survey FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Internet Access	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Contemporary Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical and Geographical Controls	No	No	Yes	No	No	Yes	No	No	Yes
Observations	52046	52046	51834	52062	52062	51850	52075	52075	51863
Pseudo R^2	0.0121	0.0123	0.0124	0.0163	0.0165	0.0167	0.0356	0.0357	0.0359

This table estimates the relationship between literary inquisitions and modern attitudes to politics. The dependent variables are responses to questions in the CPoC survey. They are coded as 0 (“disagree”, “strongly disagree”) or 1 (“agree”, “strongly agree”). All specifications include province fixed effects and socioeconomic macroregion fixed effects. Individuals are asked whether they agree with the following statements: Western-style multiparty systems are not suitable for China[§]; Free speech is “western” and will only cause social disorder[‡]; Modern China needs to be guided by wisdom of Confucius/confucian thinking[†]. Individual controls include year of birth, sex, income, and the level of education. contemporary controls are the same as in Table 6, including log GDP per capita, log population in 2010, years of schooling, share of urban population and share of agricultural workforce. Historical and geographical controls are the same as in Table 4. We also control for “day of the month” and “month of the year” in which individuals took the survey. Robust standard errors are clustered at the prefecture level. + $p < 0.15$, * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

compared to individuals in unaffected prefectures, they are less influential in national politics. In other words, autocratic rule has led to “adverse selection” in political participation, which helps to strengthen the resilience of autocratic rule. On the flip side, this suggests that there may be underexploited popular support for democracy.

These findings have broader implications for how we think about political reform in long-standing autocracies. Inglehart and Welzel (2005) argue that the emergence of democratic values is an important precondition for the success of democratization. Furthermore, their reasoning suggests that it is crucial that those with democratic values participate in the political process. Reforming or overthrowing autocratic regimes requires both coordination and individuals who are willing to engage in political protests at a high personal cost and little personal benefit. Recent research on the democratic protest movements in Hong Kong by Cantoni, Yang, Yuchtman, and Zhang (2016, 2017) seeks to understand the conditions under which anti-authoritarianism movements will fail and under what circumstances they are likely to succeed. Cantoni, Yang, Yuchtman, and Zhang (2016) find that those individuals who are most likely to coordinate opposition to authoritarian regimes are individuals who are particularly risk tolerant and willing to incur personal costs for social benefits.

We show that in prefectures with a legacy of political repression, individuals do not necessarily have less democratic values. But rather, they are less interested in participating in politics. Our analysis suggests that a legacy of political repression suppresses the participation of individuals who are otherwise the most likely to protest against autocratic rule based on their political views. Autocratic rule results in political quietism that may make the task of building democracy more difficult.

VII CONCLUSIONS

This paper traces out the impact of political repression on social capital. The literary inquisitions (1661-1788) undertaken by Qing China marked a period of sustained repression. We first show that this repression had a noticeable impact on the number of individuals becoming well known. Our main finding from the historical panel is that literary inquisitions reduced the number of local charities. This effect is long-lasting: the resulting gap in the number of local charities between affected and unaffected prefectures did not close thereafter.

The Qing persecutions lasted for over a hundred years so there was time for cultural beliefs about the dangers associated with political participation and social activism to be developed and inculcated in the local population. Over decades, such beliefs were reinforced. Parents had an incentive to instill in their children the types of attitudes that would ensure their safety in an autocratic political system, and those beliefs were likely perpetuated via intergenerational transmission (as in Bisin and Verdier, 2001).

Evidence from post-Qing China strongly supports our hypothesis that political repression permanently reduced social capital. The negative effects of literary inquisitions survived even after China’s political and economic institutions were transformed. Individuals in affected prefectures

have a lower level of trust today. Throughout the 20th century, affected prefectures saw worse provision of basic education, and this was especially true when and where institutions were decentralized and the provision was informal. We observe pervasive political apathy and depressed political participation in prefectures with a legacy of literary inquisitions. We discuss how this might have contributed to a vicious cycle whereby autocracy becomes solidified in part by generating a society lacking the capacity to resist it.

“The nature and extent of social capital in society is critically related to the behavior and policies of the state” (Acemoglu and Robinson, 2016, p. 39). Authoritarian resilience cannot be understood without recognizing how autocratic rule has affected the development of civil society. A developed civil society can play a crucial role in constraining the development of an autocratic state. But an strong autocratic state itself impedes the development of such a vibrant civil society.

This insight is consistent with the observation that the stability of imperial autocracy in China is attributable to the fact that “the Chinese emperors were able to inhibit the formation of autonomous social groups outside the control of the state” (Fu, 1994, p. 141). This was largely accomplished by recruiting elites into a centralized bureaucracy. But for a long time, new social groups were able to form and innovation and new ideas were tolerated. Despite the restrictions that individuals faced, China did develop a nascent civil society characterized by intellectual participation in society during the late Ming (Rowe, 1993). However, the status of civil society organizations was always fragile (Simon, 2013, p. xxvii). When the Qing regime faced political challenges that previous regimes did not have to face, it strove to establish an orthodoxy. The outcome was that the state came to dominate civil society completely: the system in which the state had the absolute power eventually worked to eradicate dissent and disagreement, silencing civil society.

Literary inquisitions were not characterized by mass violence as occurred, for instance, during the Ming-Qing transition. However, the impact of a prolonged period of terror, accompanied by occasional high profile cases was dramatic. Society adapted culturally in response to this climate of fear. Scholars such as Xie (1990) and Liu (2000); and Liu, Wang, and Wang (2005) speculate that the style of government that developed under the Qing prompted individuals to keep to the private sphere and not to engage in public affairs. This is the first paper to provide systematic evidence that this was the case.

Certainly, after 1840 local charities went through a phase of growth across China. This was in part due to local regions gaining more autonomy and to the influence of the West. An interesting question here is: how would civil society have developed in the China in the absence of literary inquisitions. This counterfactual is impossible to assess but our findings suggest that local charities in affected prefectures would have followed a very different path and that the number of local charities would have been much higher for those prefectures after 1840. Given that those prefectures were quite advanced regions that were high literary and economically developed, a stunted civil society and a discouraged intellectual class led to a much smaller role for them in national politics, despite their superior economic position.⁷⁸

⁷⁸But we cannot assess the impact of the Qing persecutions on the economically and political most advanced part

Setting our findings in the context of the Great Divergence debate, we see political repression during the Qing regime as exerting an important impact on the path of imperial China after 1700. It is clear that an environment in which intellectuals feared standing out or being different, was not best suited for innovation and the exchange of ideas. The vibrant intellectual culture present in the late Ming did not have an opportunity to keep growing into the Qing period. Parker observes, the Qing period saw “intellectual innovation and much ‘useful knowledge’ as a potential threat, not a potential asset . . . China’s new masters refused to allow their leading scholars either freedom of expression or freedom to exchange ideas” (Parker, 2013, p. 667). Thus, during the period that Habermas (1962 [1989]) and Mokyr (2016) detect the origins of a public sphere in western Europe, by spreading distrust and encouraging isolation among intellectuals, literary inquisitions helped to create an inhospitable environment for intellectual discourse.

It is important to keep in mind that there was several factors specific to our historical setting. The response of intellectuals in China to political repression were shaped by the Confucian ideal of self-preservation.⁷⁹ The prominent place given to the teaching of horrific historical episodes by the older generations, such as “burning the books and burying the intellectuals” probably also amplified intellectuals’ reactions when they witnessed a literary inquisition case implicate their peers. Additionally, the ability to write and voice opinions were a core part of the gentry’s identity.

Nonetheless, our study is highly relevant for other arts of the world beyond China. Social capital plays a prominent role in many explanations of political development (Tocqueville, 1835/1840 (2000); Putnam, 1994; Martinez-Bravo, Padro-i-Miquel, Qian, Xu, and Yao, 2017). Our findings have implications for both authoritarian regimes and established democracies. A legacy of autocracy can help shed light on the resilience of authoritarian rule in countries such as Russia or Turkey whereas in democracies like America, scholars such as Putnam (1994) and Skocpol (2003) have voiced concern about what implications declining social capital has for the long-run prospects of liberal democracy. We provide new quantitative evidence that political repression reduces social capital in both the short and the long run. By studying how authoritarianism and low social capital are intertwined, our study provides novel evidence for how culture and political development affect one another.

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of China, the Yangtze Delta region, as this is the hardest region to build a counterfactual for due to the absence of a suitable comparison group. The region was unrivaled by any other region with regards to its economic prosperity and population density.

⁷⁹According to De Bary and De Bary (2009), “For Confucius, self-sacrifice was nothing to be sought after; endurance and survival were preferable to martyrdom (Analects 15:7)”.

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