Trade, institutions and religious tolerance: evidence from India

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Abstract

Can historical patterns of inter-ethnic trade have lasting effects on religious tolerance? Two centuries after the decline of Muslim overseas trade, this paper finds that medieval ports, despite being poorer and more ethnically diverse, were 25 percentage points less likely to experience a Hindu-Muslim riot, both throughout India (1850-1950), and in one state, Gujarat (2002). The paper uses natural variation in initial port location (sheltered inlets) and subsequent trading viability (monsoon silting) to show that neither selection nor modern trade explain these differences. Instead, the paper interprets these differences as reflecting the institutional legacy of medieval inter-ethnic trade.

1 Introduction

On February 27th, 2002, a carriage of the *Sabarmati Express* carrying Hindu activists caught fire at Godhra railway station in the western Indian state of Gujarat. At least 58 people were burnt alive. In the weeks that followed, towns throughout Gujarat succumbed to violence between Hindus and Muslims that claimed at least eight hundred lives and forced 98,000 people into refugee camps. Hindu-Muslim violence has resulted in more than forty thousand deaths or injuries since 1947, the overwhelming majority in urban areas (Varshney and Wilkinson 2004). The medieval precincts of India's towns, being both relatively poor and more ethnically mixed, are particularly regarded as natural repositories for religious tensions that routinely explode into violence (Brass 2003). However, the aggregate statistics of religious violence in India mask a great diversity in Hindu-Muslim relations. Understanding how communities that have all the ingredients for conflict still succeed in maintaining tolerance may provide insight into how other communities may do the same.

This paper analyses the different incentives that shaped Hindu and Muslim interaction in India's towns from the rise of Islam in the seventh century to the rise of European involvement in the seventeenth century, and argues that differences in the degree to which Hindus and Muslims could provide one another with complementary, non-replicable services in this period has led to a sustained legacy of contemporary religious tolerance. The paper finds that medieval trading ports–where Muslim advantages in accessing Indian Ocean trade routes provided such services–were five times less prone to riots and around twenty-five percentage points less likely than otherwise similar towns to experience a religious riot between 1850 and 1950, two centuries after Europeans disrupted Muslim advantages in overseas trade. Between 1850 and 1950, medieval port towns also lasted significantly longer without an outbreak of religious rioting. Though the differences in patterns of conflict between medieval ports and other towns appear to have diminished over time, Gujarati medieval trading ports continued to experience fewer riots and ex-

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hibited less widespread religious rioting in the aftermath of the burning of the *Sabarmati Express* in 2002.

The paper draws upon a rich new town-level dataset that combines data on medieval trade and political structures with colonial-era indicators of demography and development to provide evidence that these differences are not the result of factors often suggested to explain ethnic violence. Further, the results do not appear to be driven by the selection of medieval ports by Muslim traders based upon unobserved pre-existing factors that might have fostered a more tolerant local population. Because of the severity of Indian Ocean storms, sheltered harbours were historically prized as a location for medieval ports. Thus access to natural indentations on the historical coastline, or "natural harbours", provide an exogenous determinant of medieval trade. Those towns that became ports because of their location at medieval-era natural harbours exhibit similar patterns of reduced religious violence to other medieval ports.

The paper then evaluates the potential mechanisms through which a legacy of medieval trade might have a lasting effect on religious violence over two centuries later, including through continued modern trade, continued relative wealth or religious homogeneity. The paper confirms that the differences in religious violence in medieval trading ports and other towns arise specifically from trade in the medieval era, rather than stemming from continued modern trade. Due to heavy silting of inlets and river mouths during the monsoon rains, medieval ports have increasingly ceased to be accessible to shipping over time. Those medieval ports that subsequently became inactive or inaccessible to overseas shipping show a remarkably consistent legacy of reduced modern religious violence, while modern overseas ports do not. Further, the paper finds that medieval ports in India did not enjoy a legacy of continued wealth or relative religious homogeneity that might explain the reductions in religious violence. On average, medieval ports in 1901 were poorer but remained more ethnically-mixed than other towns, both factors that are often associated with more violence, rather than less. In fact, while the results confirm

the common finding that more ethnically-mixed Indian towns tend to experience more violence in general, medieval ports that retained sizeable Muslim minorities were in fact *less* prone to religious riots.

The paper suggests that these results are consistent with the persistence of institutional mechanisms that supported exchange between Hindus and Muslims in the medieval era and persisted even after increased European involvement in the Indian Ocean precipitated a decline of Muslim advantages in trade. The paper draws upon historical accounts of these towns to characterise these institutions over time. One set of institutions encouraged specialisation and the persistence of inter-ethnic complementarity; another set mitigated the incentives for ethnic violence by allowing the gains from inter-ethnic trade to be shared between groups.

Such institutions explain the empirical findings: with institutions that support inter-ethnic trust and exchange, mobile minority groups are more likely to stay, even in towns that are relatively poor on average. Thus medieval ports, despite being poorer, have more ethnically diverse populations. Further, with institutions that foster ethnic specialisation in complementary activities, ethnic minorities are less likely to compete with other groups, leading to less violence aimed at reducing competition. In fact, with ethnic specialisation, larger ethnic minorities are likely to compete more within themselves, dissipating oligopolistic rents and lowering incentives for violence against minorities to seize wealth. Thus, unlike in other towns where more mixed populations may lead to more inter-ethnic competition and violence, the presence of institutions that foster inter-ethnic complementarity may lower the incentives for violence in more ethnically-mixed populations. This is precisely what we observe in medieval ports.

This work follows in a rich intellectual tradition evaluating the long-term effects of historical institutions (Acemoglu, Johnson, and Robinson 2001, Banerjee and Iyer 2005). By stressing the central role of inter-ethnic complementarities in encouraging cooperation and discouraging conflict between ethnic groups, this paper introduces a new dimension

into studies that have sought to understand the role of ethnicity as a determinant of civil conflict and public goods provision (Horowitz 1985, DiPasquale and Glaeser 1998, Montalvo and Reynal-Querol 2005). The paper suggests that if the structure of economic incentives for exchange and violence between ethnic groups are not considered, factors may be omitted that can dramatically alter the impact of ethnic heterogeneity on modern indices of peace, public goods provision and growth.

In the Indian context, this paper builds upon important works by political scientists that have recognised the vital role of institutions in religious violence. Brass (2003) finds the existence of what he terms "institutionalised riot systems": concerted action by local elites to maintain fissures along religious lines, for local, sometimes electoral, gain. Wilkinson (2004) focuses upon the state-level incentives for fomenting and responding to religious violence. He finds that when elections are close, riots are used by politicians to reaffirm religious identities and thus to sway votes. Varshney's (2002) work provides a useful counterpoint to the work of Wilkinson and Brass. Varshney focuses on the importance of cross-religious social capital or "civic engagement" in defusing religious tension. "Peace committees" develop from existing cultural, political or business groups, that cross religious lines.

These three works provide valuable insights into the proximate causes of religious violence in contemporary India. This paper complements these studies by analysing the historical incentives that led to the contemporary institutional environment. This paper argues that contemporary inter-religious civic engagement, close religiously-delineated elections and religious violence are all in part the legacy of more than a thousand years of incentives for exchange between religious groups in India's towns.

Section 2 describes the structure of medieval incentives for exchange between Hindus and Muslims and provides a taxonomy of the institutions that emerged in medieval ports. Section 3 explains the empirical strategy. Section 4 describes the construction of the data. Section 5 presents results from religious conflict across India between 1850 and 1950, as

well as for the particular case of the Gujarat riots of 2002. Section 6 concludes.

2 Historic incentives for inter-ethnic exchange

The rise of Islam in the seventh century coincided with an expansion of Indian Ocean commerce (Rodinson 1972). Medieval Muslim traders in India's ports appear to have benefited from three conditions that laid the basis for peaceful co-existence over time. First, Muslim traders provided a complementary service: access to the markets of the Middle East. Pilgrimages, particularly to Mecca, coordinated the development of the world's largest textile market during the Hajj (Lombard 2000). The Hajj was supplemented by pilgrimages (*ziyaret*) to other sites in Egypt, Iraq and Hadramaut (Yemen), that all fostered regional trade. Muslims had strong preferential access to these pilgrimage routes, and the markets they induced.

Second, the source of inter-ethnic complementarity was difficult for Hindus to replicate or expropriate. Muslim pilgrimage networks enjoyed both remarkable scale and increasing returns to scale, which made it highly costly for even a substantial number of Hindus to replicate. These trans-oceanic trading networks are likely to have made Muslim complementarity more robust than complementarities based upon wealth or physical capital, which could be seized by members of the local group, or even human capital, which might have been replicated over long time horizons. Trans-oceanic networks also differed from land-based or riverine trade routes as most long distance land-based trade could be divided into relays of shorter distances, each of which could be replicated relatively easily by local groups. Thus, it was at towns with direct access to the Indian Ocean that Muslim advantages in Middle Eastern trade became most relevant and gains from exchange between Hindus and Muslims most pronounced.[1]

Third, Muslims had access to an inherent mechanism of redistribution of the surplus

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[1] The French trader, Jean de Thevenot (1633-1667) noted the presence of *bania* (Hindu) moneylenders in Isfahan, Basra and Hormuz (Mehta 1991). However, shipping was dominated by Muslims, and the great textile mart at Mecca remained exclusively Muslim (di Verthema 1503).

from trade to the local population: increased intra-Muslim competition due to the relatively low barriers to entry into Indian trade by any Muslim. Unlike most ethnic trading networks, based often upon kinship links that make it difficult for outsiders to enter, Muslim trading networks were relatively accessible to any Muslim. Even non-merchants like Ibn Battuta (1355) could simply followed the pilgrimage routes and gain access to trade. Pilgrimages provided a clear coordination device, so that even non-merchant and newly converted Muslims could enter trade; family or community ties were not necessary to follow established pilgrimage routes, and indeed many pilgrimages were financed through trade (Lombard 2000). Though trading "communities" did emerge, members of these communities often were in economic competition either within their own communities or with other Muslim trading communities (Penrad 2000, Subrahmanyam 2000). Incipient and actual entry by Muslim competitors could improve the terms of trade for the local population whenever relative prices for overseas goods became too high, and the temptation to expropriate the trading minority became strong.

By presenting an environment where Muslims could provide complementary, non-replicable services, and enjoying a natural mechanism of redistributing the gains from trade between groups, trading ports in the Indian Ocean were well-favoured to provide geographical loci for peaceful co-existence and trade between Hindus and Muslims. From the seventh century onwards, Muslims, both immigrants to India and indigenous converts, dominated the shipping trade in the Indian Ocean and Muslim trading networks expanded along both coasts (Dasgupta 2004). Muslim dominance of overseas trade continued for close to a thousand years. Though the Portuguese discovery of routes to the Indian Ocean in 1498 did not entirely disrupt the flow of trade, the Portuguese did destroy the commerce of a number of key trading ports, often via blockade (Barbosa 1519). The end of Islamic trade dominance was further expedited in face of increased competition by the Dutch and English, and the disintegration of the Mughal empire (Dasgupta 1998). Mughal ports, such as Masulipatam, Surat and Hughli, gave way to competition from

Madras, Calcutta and Bombay (Dasgupta 2004). Muslim trading networks continued to be important in trade with Southeast Asia and Zanzibar, but the expansion of colonial rule to these regions brought with it competition from non-Muslim traders operating under colonial protection (Bose 2006). By the end of the 17th century, the era of Muslim trade dominance in the Indian Ocean was long over, and many medieval trading ports ceased to be commercially important.

Thus, for over a thousand years, inter-group complementarities existed between Hindus and Muslims in medieval trading ports. Institutional mechanisms developed that appear to have bolstered the resultant inter-ethnic trade.[2] Table 1 draws upon the historical accounts available to summarise these mechanisms. Medieval-era institutions appear to have fulfilled two distinct, but complementary roles. One set of institutions encouraged group specialisation and raised the costs of replicating the services provided by another ethnic group. Specialisation in skilled activities was encouraged through a system of apprenticeships that were often exclusively limited to members of the same ethnic group (Haynes 1991). Own-group social sanctions also emerged that raised the costs of replicating another group's activities. A prominent example of this was the norm of *Kaala-paani* ("black water"): that Hindus that sailed offshore would be outcaste by their own community.

A second set of institutions appears to have reduced the incentives for violence, whether by coordinating responses to crises or by sharing the gains from exchange. In Gujarat and Malabar, merchant guilds and inter-religious organisations helped organise boycotts and joint petitions to political figures to seek redress when members of one religious group were under threat (al Malibari 1528, di Verthema 1503). Muslim traders around India provided commercial taxes and explicitly endowed local public goods, including water projects and even Hindu temples (Bayly 1989, Thapar 2004). The sharing of the gains from trade, whether through increased intra-group competition, explicit inter-

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[2]The role of complementary investments in generating path dependence is explored in Milgrom, Qian, and Roberts (1991). Greif and Laitin (2004) provide a general theory of institutional persistence.

group transfers or joint ventures between groups, are likely to have reduced incentives for inter-ethnic violence in times of crisis.

As Table 1 indicates, a number of these institutional mechanisms have persisted and evolved through the 19th and 20th centuries. A tradition of inter-religious participation in organisations continues to flourish in a number of towns that were once trading ports in the medieval period, including in business organisations, clubs and even political parties (More 1997, Varshney 2002). These organisations may have also facilitated the maintenance of complementarities between groups. In contemporary Surat, for example, Muslims and Hindus have continued to explicitly adopt complementary roles in production, long after the demise of Surat's trade. Diamond-cutting and silver-thread weaving are almost exclusively conducted by Muslim workers, while complementary roles in both production processes are handled by Hindus and Jains (Varshney 2002).

Though the institutions that emerged in medieval trading ports share an economic logic, relations between Hindus and Muslims do differ across ports. For example, Muslim traders in Calicut and Surat showed (and continue to show) evidence of social and residential integration.[3] These cities are also notable for the presence of contemporary mechanisms, such as inter-religious peace committees, for defusing conflict (Varshney 2002). On the other hand, Muslim traders in the Coromandel Coast lived in more segregated communities; instead they engaged in explicit transfers to the majority community by endowing Hindu temples and pursued joint trading ventures with local rulers (Bayly 1989).

In direct contrast to the robust complementarities visible at medieval trading ports were the incentives present in towns that were the centres of Muslim political authority, where Hindus and Muslims competed for the patronage that stemmed from political control of India's mainly agricultural wealth (Bayly 1983). These patronage systems were concentrated in towns, many of which were established by the *fiat* of the Muslim

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[3]As one respondent from the Bohra (traditional Muslim trading) community in Surat told the author in 2007: "When we went to our apartment complex in Nanpura [a predominantly non-Muslim neighbourhood], they asked us "are you 'H-Class' [Hindu] or 'M-Class' [Muslim]? When I said I am 'M-Class', they refused to rent to us. But then I said I was [a] Bohra, and they said 'in that case, you are welcome.'"

rulers themselves (Raychoudhari 1998). In areas of the country under long periods of Muslim rule, conversion provided a means to avoid implicit and explicit religious taxation and to join the political patronage system. In medieval Indian kingdoms, political and religious patronage played a very important role. Though not necessarily members of the royal household themselves, the majority of the city's population was often tied by client relations to people who were.[4] Once flourishing cities that lost their roles as political centres rapidly became ghost towns.

Following the Muslim conquest, it is likely that Muslim clients substituted for and competed with Hindu clients for patronage. Though the Hindu and Muslim artisans that constituted the majority of the populations of these cities lived side by side, there appears to be limited incentive for inter-religious exchange between these groups. Thus, despite the fact that, like medieval ports, medieval political centres provided historical incentives for conversion to Islam, enjoyed historical wealth and enjoyed long histories of Hindu-Muslim interaction, patronage centres were likely to be more the historical focus of inter-religious competition rather than inter-religious complementarity.

3 Empirical strategy

As described above, the "robust" complementarities between Hindus and Muslims in India's overseas ports were largely created by exogenous features, particularly the Hajj, that were inherent to Islamic doctrine. Such complementarities made medieval trading ports conducive to inter-ethnic exchange and favourable for further investment in institutional mechanisms that bolstered such exchange.

My empirical approach uses towns that became medieval trading ports as an indicator of the "treatment" of historic incentives for inter-ethnic trade.[5] The ideal comparison

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[4]Thus, when the Mughal Emperor Aurangzeb went South to campaign in the late 17th century, it was not unusual that four of five of Delhi's 400,000 residents left with him (Blake 1991).

[5]Insofar as non-medieval port towns-e.g. Banaras- also developed inter-religious institutions over time, the measured medieval port effect will under-estimate the effect of institutions in those ports on religious tolerance.

would measure the difference in Hindu-Muslim relations between a town that enjoyed such incentives and the same town that did not. In the absence of such a counterfactual, I will construct a series of control functions that mimic such a counterfactual town under two sets of assumptions.

First, I assume that the selection of locations for medieval trade was uncorrelated with subsequent religious interaction. This assumption will be violated if medieval ports had different initial conditions that might also have had an effect on religious violence, for example, through congenial geography that provided increased opportunities for subsequent wealth. Thus, I add a rich set of controls for initial conditions that might have impacted subsequent religious interactions, including polynomial controls for longitude and latitude, propensity for natural disasters, and proximities to navigable rivers and the coast. Conditional on these factors, I can estimate the average treatment effect of medieval trade on religious conflict in those towns that enjoyed medieval trade.[6]

Looking at effects over long periods of history raises a separate challenge that deviates from a canonical experiment: even controlling for initial conditions, towns under study were subject to different external political influences both during and after the treatment that might also influence subsequent religious relations. Some component of these political influences– e.g. the expansion of Muslim or European political rule– might have been in part a result of a desire to occupy regions with active medieval trade. To account for these political channels, I compare the effect of a medieval trading legacy both with and without a rich set of controls for these political factors. As we shall see, these controls do not alter the measured treatment effects.

A second potential concern with the above approach is that Muslim traders may have chosen to trade at geographically similar ports for unobservable reasons, such as having a peaceful local population, and this historically peaceful population might continue to

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[6]A related approach would be to construct a propensity score for medieval trade based upon the observables, and compare medieval ports to towns that had similar propensities to become such ports. This approach leads to similar results to those that follow in some specifications, but is not robust to the choice of variables that determine the propensity score.

be inclined towards peace in modern times. To assess whether this might be the case, an alternative approach relaxes the assumption that the selection of medieval ports was uncorrelated with subsequent religious violence, and instead uses the presence of natural harbours on the historical coastline as an instrument for medieval port location.

Given the severity of the monsoon winds, medieval ports– more so than their modern counterparts– needed to be located in naturally-protected inlets. These harbourages were typically located at inlets either formed by indentations in the coastline or at the mouths of rivers (Arasaratnam 1994, Dasgupta 2004). The instrumental variables estimates compare modern religious relations between those towns that became medieval ports because of their historical natural harbours to geographically similar towns that lacked such harbours. Assuming, as seems plausible, that towns with an indentation in their medieval coastline were not any more likely than otherwise geographically similar towns to have attracted a more peaceful pre-existing population, this comparison allows us to assess the degree to which medieval traders' selection of locations in which to trade may have biased the results.

Another natural process allows a further robustness check: the coast itself has moved over time, allowing a comparison of the effects of medieval and modern trade. The massive flow of water from the hills during India's monsoon rains regularly pushes large amounts of silt to the mouths of rivers and inlets. Over time, silting has meant that towns that were at harbours in the medieval period have become increasingly inaccessible to shipping (Arasaratnam 1994).[7] By providing natural variation in the viability of trade in towns over time, the silting process allows a "placebo" comparison of the effect of trade in the medieval period, when incentives for inter-ethnic exchange between Hindus and Muslims were strong, and the modern period, when increased European involvement weakened such incentives and were unlikely to develop institutions to support Hindu-

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[7]Even contemporary dredging techniques (which of course were unavailable during the period of Muslim trading dominance) are unable to contend with the volumes of silt generated. Even the modern port of Calcutta is no longer accessible to most shipping, which has been diverted to the downriver town of Haldia.

Muslim exchange.

4 Data

The dataset on pre-Independence Hindu-Muslim violence, drawn from newspaper reports and official sources, is largely based upon that compiled by Wilkinson (2005b). In this dataset, a religious riot was defined as a violent confrontation by two communally-identified groups. Data on historical trade in India's ports came from a number of sources. The *Periplus Maris Erythraei* (Casson 1989) provided the locations of a number of pre-Muslim and early Muslim ports. The records of contemporary Muslim, Christian and Chinese observers, including Chau Jua-kua (1225), Ibn Battuta (1355), Ludovico di Verthema (1503), Duarte Barbosa (1519) and Zayn al-Din al Malibari (1528) provided supplementary evidence. These contemporary accounts were augmented by secondary sources (Yule 1866, Subrahmanyam 1990, Chaudhuri 1995, Chakravarti 2000). Finally, every town listed in the Imperial gazetteers of India from 1907 was examined for evidence of contemporary and medieval trade.

I identified a town as a medieval trading port if it exhibited substantive evidence of direct overseas trade, prior to the 18th century and independent of European involvement. This definition eliminates most river ports and those ports either founded by Europeans (including the Presidency towns of Bombay, Calcutta and Madras) or those that became overseas trading ports as a result of European establishments (e.g. Hughli, Tranquebar). I found a total of 68 confirmed medieval trading ports in undivided India, of which 42 continued to have populations greater than 5,000 in 1901 and 48 appeared as distinct towns in the 1991 India census.

These medieval ports were linked to their geographical location using ArcGIS. To categorize medieval era "natural harbours," I used the US Geological Survey Digital Atlas of South Asia (2001) to identify water bodies that were within 10km of the modern Indian coastline, including non-perennial ponds and streams and those without an outlet

to the sea. If these water bodies intersected the coast in the medieval period, they would have produced minor inlets, or sheltered harbours. I define towns within 10km of those water bodies as having had access to a "natural harbour." This approach identifies major irregularities and inlets that are likely to have existed in the medieval period.

I constructed a GIS of the districts in colonial India by tracing and then georeferencing pre-Independence district maps.[8] This GIS was used to link towns across district and state changes throughout history and across periods of British and Muslim rule. I was able to match all towns to their British district and Native state and derive controls both for the contemporary colonial ruler and the length of British rule, if any.

In addition, I collected data from the Imperial gazetteers on a number of different natural disasters from 1850 to 1900, including droughts, earthquakes, locust infestations, floods and cyclones. The cross-district patterns in propensity to face these natural risks are likely to have persisted up until India's dramatic population gains beginning in the twentieth century. The Imperial gazetteers provided information on the revenue, religious composition and political histories of each district and many of India's towns. The decennial censuses (beginning in 1872) and Imperial gazetteers yielded data, mainly at the district level, but also for larger towns, on religious demography, land and total revenues, municipal income, land tenure, as well as political histories. Ten-year averages of land revenue, based largely upon agricultural productivity, provide a gauge of the wealth in the district that is arguably exogenous to religious relations in the town. Municipal income per capita provides a town-specific measure of the average wealth of the town–it was based mainly upon a tax on internal commerce (octroi) and a poll tax with minimum wealth requirements.

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[8]To my knowledge this is the first GIS of colonial India's district boundaries.

5   Results

Table 2 presents summary statistics comparing medieval ports to other towns with populations above 5,000 in 1901. Medieval ports exhibit strikingly lower incidences of religious violence compared to other towns. Medieval ports experienced around five times fewer riots on average. The proportion of medieval ports experiencing at least one outbreak of religious violence between 1850 and 1950 was less than one in six; close to a half of other towns faced a riot. The intensity of the riots also seems to be less: on average, five medieval ports together experienced a single death due to religious violence, but in other towns, religious violence claimed an average of nearly 23 lives *per town*. However, medieval ports are on average poorer and have a greater proportion of Muslims relative to the rest of their districts than other towns (see also Figure 1). These indicators are commonly associated with *higher* rather than lower incidences of ethnic violence.

The regression results confirm the bivariate patterns in the summary statistics. The section proceeds first by presenting results on the incidence of violence across India, between 1850 and 1950, then providing a survival analysis of the first outbreak of violence during this period. Finally, the section confirms that consistent effects can be found in the case of a single state, Gujarat, during the rioting that followed the burning of the *Sabarmati Express* between February and April, 2002.

5.1   Religious riots in India, 1850-1950

Columns 1-4 of Table 3a measures the average effect of medieval trade on the number of Hindu-Muslim riots faced by Indian towns between 1850 and 1950.[9] Columns 1-3 present incidence ratios from negative binomial regressions appropriate for count data. Towns with medieval trade legacies experienced four to five times fewer religious riots

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[9]This table uses the sub-sample of 242 towns for which complete data exist. Using the full sample for each set of covariates yields similar results, but suffers from the problem of under-reporting of rioting in non-descript towns, including many medieval ports. Towns that are well-documented by official sources also tend to be those where the religious rioting is well-documented.

than similar towns between 1850-1950. This result is robust and remarkably consistent even after controlling for initial conditions that might shape port selection (Column 1), other historical factors influencing Hindu-Muslim relations (Column 2) and colonial era factors that might affect wealth, politics and Hindu-Muslim ties (Column 3).

It is possible that the medieval port coefficient may simply capture the effect of being on the coast, and coastal towns may be inherently more cosmopolitan. However, as Column 1 of Table 3 reveals, the effect of medieval ports is robust to matching towns by coastal location, distance from the coast and navigable rivers, as well as controlling flexibly for longitude and latitude. It may also be that the effect of medieval port is not due to the effect of a coastal location *per se*, but rather is due to belonging to the broader class of towns that face natural shocks more often and are thus more likely to develop better institutions of cooperation to deal with them (Wade 1988). I find that towns in districts that face more natural disasters are, if anything slightly *more* likely to experience religious riots.

Column 2 matches the histories of Muslim political involvement in towns between the 7th century and 18th century. It may be the case that the effect of medieval ports occurs because they are relatively more numerous in the South and East and thus experienced less time under Muslim political rule on average. The medieval port effect, however, is relatively unchanged after controlling for the duration of Muslim rule.

It may be that medieval ports that are still towns in 1901 are drawn from successful "survivors" that experienced less religious violence. If that is the case, then controlling for the length of Muslim rule, we might expect a reduction in violence in other surviving medieval towns with similar lengths of Hindu-Muslim interaction, such as medieval Muslim capitals or settlements. Instead, a history of medieval Muslim settlement appears to nearly double the number of riots in a town. As discussed above, these towns were likely to be historical centres of inter-ethnic competition rather than complementarity, and thus unlikely to develop institutions to support inter-ethnic exchange.

Another possibility is that medieval ports are located in regions with different caste structures that favour inter-religious peace independently of the effects of medieval incentives for trade. Due to Hindu sacred geography, an important historic determinant of the proportion of upper castes in a community was its proximity to the Ganges. However, the effect of medieval port appears unaffected by the inclusion of this variable (results not shown). Beyond the location of the Ganges, India's sacred geography may bias the results for other reasons. It may be that sites of pilgrimage are particularly prone to violence, as they are the focus of religiosity and rival processions. Indeed, the pilgrimage sites of Ayodhya, the site of Ram's birth, and Mathura, the site of Krishna's birth, are considered to be particularly prone to religious violence.[10] It may be that because relatively few pilgrimage sites are medieval trading ports, the results are biased. There is some (non-robust) evidence that towns with Muslim pilgrimage centres have an increased probability of religious violence, but controlling for pilgrimages does not affect the medieval port results substantively (results not shown).

It has also been argued by Bayly (1985) and Prior (1993) that pre-Independence religious violence tended to occur when major (Shia) Muslim festival processions–*Urs* and *Muharram*–tended to coincide with Hindu festivals. Since both religions follow the lunar calendar, these processions used to coincide roughly once every 30 years. According to Bayly (1985), such religious festivals were used as a display of wealth and power by an emergent Hindu middle class in the wake of the decline of Muslim political power. If it is the case that the coincidence of timing of processions played an important role in pre-Independence riots, then it is likely that riots should occur more often in areas with long-term Shiite traditions. Column 2 of Table 3 also examines whether riots are more likely in regions that experienced long periods of Shiite rule prior to 1857 and in which there was a greater tendency for Shiite conversion and immigration. There is no

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[10]Though, Banaras, Hinduism's holiest city, has a well-established reputation for tolerance. This arguably stems from complementarities between the resident Muslims, who have specialised as weavers, and their Hindu suppliers and marketers.

significant effect of Shia rule on religious violence.[11]

While other factors influencing Hindu and Muslim relations in the medieval period seem not to explain the medieval trade legacy on religious violence, differences in colonial era wealth and administration may be important. Column 3 matches the years of British rule, the distance to the newly created borders of Pakistan, the agricultural revenues being derived from the district around the town, as well as special administrative arrangements in the major "Presidency" towns of Bombay, Madras and Calcutta. Towns that experienced longer periods of British rule appear more prone to religious rioting.[12]

An important control also included in Column 3 is whether a town engaged in "modern" foreign trade during the colonial period– it could be that the medieval port effect is actually the effect of wealth being derived from modern trade. Unlike medieval trade, the presence of modern overseas trade seems to have no effect on how prone a town is to religious violence.

I next use the historical natural harbour instrument to test for the exogeneity of medieval port selection (Smith and Blundell 1986). As the first stage t-statistics in the bottom panel of Table 3 suggest, historical natural harbours are a strong predictor of medieval port location. However, I fail to reject the null hypothesis of exogeneity with close to 90% confidence, irrespective of specification. In other words, medieval ports that were chosen for trade due to their natural harbour locations do not appear significantly different from other medieval ports in unobserved ways that might be relevant for modern

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[11] A further potential concern is raised by Pandey (1990): most riots involve both religious motifs–e.g. invocations of God and religious symbols–and large mobile groups of people, as do religious "processions". In second hand accounts, these can easily be confused. Pandey reveals how colonial accounts of a riot in Banaras in 1805 were gradually distorted over time, reinterpreting a rare incident involving a mosque-temple land dispute that led to a riot into an example of a pattern of clashes between rival "religious processions".

[12] Successive invasion by Muslim groups through the Khyber pass meant that regions closer to this line of advance were likely to be occupied first and held longest by Muslim rulers. Similarly, British expansion largely occurred from their Presidency ports (Bombay, Calcutta and Madras) inwards. A major thrust of Muslim and British expansion was to select targets based upon agricultural wealth and thus higher population densities (Iyer 2003). Insofar as higher agricultural wealth reduces incentives for conflict, this may mean result in a downward bias on any increased prediction of conflict due to Muslim and British rule.

religious conflict. Thus it seems reasonable to interpret the coefficient of medieval port as the average treatment effect of medieval trade on religious violence in those towns that enjoyed medieval trade.

Even though the exogeneity tests suggest that we can ignore the selection of medieval ports, for completeness I provide instrumental variables estimates in Columns 5-6. Columns 5 and 6 of Table 3 estimate the local average treatment effect on towns that became medieval trading ports due to their proximity to natural harbours on the historical coastline. The IV specifications suggest that towns that enjoyed medieval trade because of their proximity to historic natural harbours experienced around three fewer riots than towns that would have been medieval ports had they possessed a natural harbour. Column 7 uses the more efficient IV estimator suggested by Wooldridge (2002)[p.623], assuming that the effect is linear (potentially a reasonable approximation). These estimates are even more significant and remain consistent in magnitude.

One potential concern with the count data regressions is that these results may be affected by riot-prone outliers. This can be avoided by examining the effect of medieval trade on the probability that a town experienced any Hindu-Muslim riot between 1850 and 1950, as in Table 3(b). Medieval ports were around 25 percentage points less likely to experience any religious riot. In contrast, modern ports do not seem any less likely to experience religious riots. These results are consistent with a legacy of inter-ethnic complementarities between Hindus and Muslims that were specific to medieval and not colonial Indian Ocean trade.

It still might be the case that medieval ports enjoy unobserved differences in wealth stemming from their location at harbours that are not captured by colonial port records, such as profits from smuggling. Panel (c) compares the sample of medieval ports that subsequently silted up and became inaccessible to overseas shipping. Though there are only 13 silted medieval ports, the effect of silted ports on the effect on probability of religious violence is remarkably consistent in magnitude with that of all medieval ports.

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Thus, the transmission mechanism that links a medieval trading legacy to contemporary religious relations does not appear to be through unobserved modern trade.

An alternative transmission mechanism linking medieval trade to contemporary religious relations may be that medieval ports, which were historically wealthy, continue to be wealthy, and it is a persistence of wealth that explains the connection between a medieval port legacy and a reduced modern incidence of religious conflict. Conversely, it could be that following their decay, medieval trading ports lost their Muslim population in the colonial period, and thus had less potential for Hindu-Muslim conflict. Indeed, an argument with a venerable tradition in the popular press and among academics is that Hindu-Muslim violence is more likely in areas with more mixed religious populations. According to this argument, the more likely a member of one group is to interact or compete with another, the more likely there is to be conflict.[13]

Table 4 uses the same specifications as in Table 3 to estimate the effect of a medieval trading legacy on indices of income and religious demography.[14] As Panel (a) demonstrates, a medieval trade legacy has a negative effect on the log. municipal income per capita. However, medieval trading ports continue to have a greater proportion of Muslims than the towns and villages in their surrounding district. Thus medieval ports are poorer, with more mixed populations.

Though the effect of medieval trade on contemporary religious violence may operate partially through wealth and religious demography, it may be of interest to make these results more comparable to existing studies and assess the residual effect of medieval trade on violence, controlling for these outcomes. As Panel (b) reveals, the marginal effect of medieval trade on the probability of any religious rioting occurring is in fact strengthened by inclusion of controls for wealth and religious demographics. Further, while the linear and quadratic terms on the proportion Muslim suggest that more reli-

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[13]See Wilkinson (2005a) for an overview.

[14]This sample is confined to those towns that possessed municipal corporations and thus enjoyed municipal income. These were mainly in areas of British administration.

giously mixed towns tend to be more prone to religious riots in general, the interactions of the linear and quadratic terms with a medieval legacy have exactly the opposite sign: more religiously- mixed medieval ports actually are less prone to religious violence. These results are consistent with the persistence of inter-ethnic complementarity in medieval ports: when a minority population specialises in a complementary service, increases in its population tend to increase intra-minority competition and improve the terms of trade for the members of the majority, reducing incentives for expropriative violence.

5.2 The failure of religious tolerance in towns, 1850-1995

The previous section considered the cross-section of India's towns and found that erstwhile medieval trading ports were less likely to experience an outbreak of religious violence and experienced fewer riots than similar towns up until 1950. Figure 2 compares the timing of the first failure of inter-religious peace among the same sample of towns, using data on religious violence through 1995 from Varshney and Wilkinson (2004).

Notice first that most towns in the sample analysed above experienced at least one riot over the 145 year period, including a majority of medieval trading ports. This suggests that medieval ports at least had the potential for religious conflict. However, at all times medieval ports have enjoyed a better survival probability than non-ports. The difference is most remarkable in such periods as the emergence of mass religious politics in the wake of the *Khilafat* agitations on the 1920s, and the turmoil of Partition in 1947, that steadily resulted in the failure of religious tolerance in other towns.[15]

Other factors may be driving the unconditional differences in Figure 2. Table 5 provides the results of Cox proportional hazards regressions on survival of religious tolerance for the same sample used in Table 3, between 1850 and 1950. Notice that a medieval

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[15]Indeed, the differential effect of Partition on medieval ports and other towns is consistent with the persistence of inter-ethnic complementarity in medieval ports: where Hindus and Muslims were competitors, Partition should exacerbate violence, as it was now easier for members of the majority group to push out minority competitors. Where minority and majority maintained complementarity on the other hand, the incentives for violence would in fact be diminished by Partition, as minority residents enjoy a more credible threat to leave if attacked.

trading legacy reduces the risk of the first outbreak of religious rioting in each year by between 80% and 95%. The coefficient strengthens with the addition of controls. In contrast, tolerance was likely to fail significantly more rapidly in towns that were medieval Muslim patronage settlements or experienced longer periods of British rule.

While it appears that a medieval trading legacy slowed the failure of religious tolerance in towns, as Figure 2 suggests, the effect of institutions– even those forged over a millennium– can erode over time. The relative benefits from medieval trade institutions appear to have been challenged in recent history, particularly in the 1980s and 1990s. Understanding the time series variation in religious relations in India's towns in this period cannot be addressed with the current data, but remains a topic for future research. It is possible, however, to obtain a snapshot of the role medieval trade institutions play in current religious relations. I turn to this in the next section.

5.3   Results from the Gujarat riots, February-April 2002

While the country-wide analysis allows me to evaluate the generalisability of the analysis across the subcontinent, it leaves open the possibility that controls for unobserved geographical and historical variation are inadequate.[16] Further, it is also possible that the effect of medieval trading institutions has weakened over time. I therefore supplement the country-wide analysis using data from the two months of religious violence in the towns of one particular state of India, Gujarat, following the burning of the *Sabarmati Express* in Godhra in 2002.

To construct this dataset, I went through news reports on Gujarat from the day of the burning of the Sabarmati Express, February 27th until April 15th.[17] Following Varshney and Wilkinson (2004), I coded a riot as occurring in a town if there was evidence of

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[16]The cross-India results above are also largely robust to inclusion of fixed effects for each native state and British province (results not shown).

[17]News sources include *rediff.com* and the *Times of India*. These were supplemented from an *amicus curiae* brief by the Concerned Citizens Tribunal, which provided information about less-widely publicised violence in smaller towns and villages.

violence by communally-identifiable "mobs" or other large groups in that town. I also coded a day of "violence" as having occurred in a town if there was an isolated incident, such as a stabbing, without any evidence of broader groups being involved. I supplement these variables with the GIS of geographic and historical data described above, as well as 1991 Census data.

Table 6 shows the effects of medieval trading legacy on the probability of religious rioting experienced by Gujarati towns following the burning of the Sabarmati Express at Godhra. All specifications include district fixed effects and controls for town size and distance to Godhra. Once again, towns with a medieval trading legacy were around 20-30 percentage points less likely to experience a riot. The magnitude of this effect is remarkably consistent with the colonial sample across India, and strengthens with the addition of historical and religious demographic controls.

Table 6 also presents the medieval port effect on other outcomes: the duration of rioting and whether the town experienced any violence (both riots and isolated incidents). As Row 2 suggests, a medieval trade legacy reduced the duration that a town experienced religious rioting by around two to three days. In contrast, medieval trading ports appear to have little effect on whether violent incidents occurred at all. Rather the major effect of a medieval trade legacy appears to be to reduce the escalation of religious violence into broader confrontation. This is consistent with the presence of community-level incentives provided by institutions that act to mitigate shocks to inter-ethnic peace, rather than the presence of inherently peaceful individuals in medieval ports.

6 Conclusion

This paper has sought to establish that inter-ethnic medieval trade has left a lasting legacy on the patterns of religious violence. In the ports of the medieval Indian Ocean, Islam, by making trade accessible to all Muslims, satisfied three conditions that support peaceful co-existence over time: the provision of a complementary service, a high cost for

the majority to expropriate or replicate the source of complementarity, and a means to redistribute the surplus from trade. These conditions appear to have laid the basis for an enduring legacy of religious tolerance.[18]

The paper finds evidence that medieval trading ports were 20 to 30 percent less likely to experience religious rioting prior to Independence, and a medieval commercial legacy reduced religious violence more in more ethnically-mixed towns. Between 1850-1950, a medieval trade legacy reduced the relative risk of a town experiencing its first episode of religious violence in any given year by around 80 percent. The institutional legacy of medieval trading ports appears to have persisted throughout the twentieth century, continuing to reduce violence by around 20 to 30 percent following the Godhra riots in Gujarat in 2002.

The key intuition of the paper is that by encouraging members of different ethnicities and religions to be competitive among themselves but to assume complementary roles between groups, it is possible to provide incentives to encourage further investments in institutions that support inter-religious tolerance and economic integration. The institutions themselves may also provide insights for policy. Though there is heterogeneity in institutional responses, they share an economic logic. To encourage tolerance, methods that have been employed in medieval ports include the encouragement of complementary specialisations between groups and the creation of organisations that allow an equitable sharing of the gains from trade.

All of these approaches may yield dividends for ethnic tolerance today. Educational systems that allow minority individuals the choice of leveraging the advantages of their group to engage in broader exchange, rather than promoting homogenisation of a town's

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[18]In a different sea, Ottoman Salonica, once known as the "Mother of Israel", long provided a haven for Jews in Europe. Salonica appears to fit this theory closely. Salonica, then under the Ottoman Empire, became home to Sephardic Jews expelled from Spain in the late 15th century. Maintaining their trading ties with Spain and the Atlantic economy, but with their immigration encouraged by local Ottoman authorities, Salonica was inundated by Jewish refugees, both rich and poor. For the next four centuries, Salonica maintained a remarkable degree of cultural tolerance and prosperity, with Jews specialised in overseas trade. On the eve of the Great War, in 1913, the population of Salonica was home to 61,439 Jews, the greatest number in Europe (Mazower 2005)[p.284].

human capital, may result in both better retainment in schools and more opportunities for exchange. An explicit and well-publicised system of transfers or joint shareholding between communities may be effective in improving between-group relations, thereby opening up further opportunities for exchange (Jha 2007).[19] Organisations that match members of different communities with complementary skills in the creation of joint business ventures may also be effective for improving ethnic relations.[20]

Trading networks may have afforded minority groups an important source of comparative advantage that rendered them valuable neighbours. Long after the decline of Indian Ocean trade, it may be that we can apply some of their institutional learning to the pressing problems of inter-ethnic peace today.

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[19]Chua (2003) suggests a similar intervention. Indeed, the approach of providing shares appears to have met some success in reducing ethnic violence in contemporary Malaysia.

[20]Such an organisation has indeed been established by the Ismaili community in East Africa.

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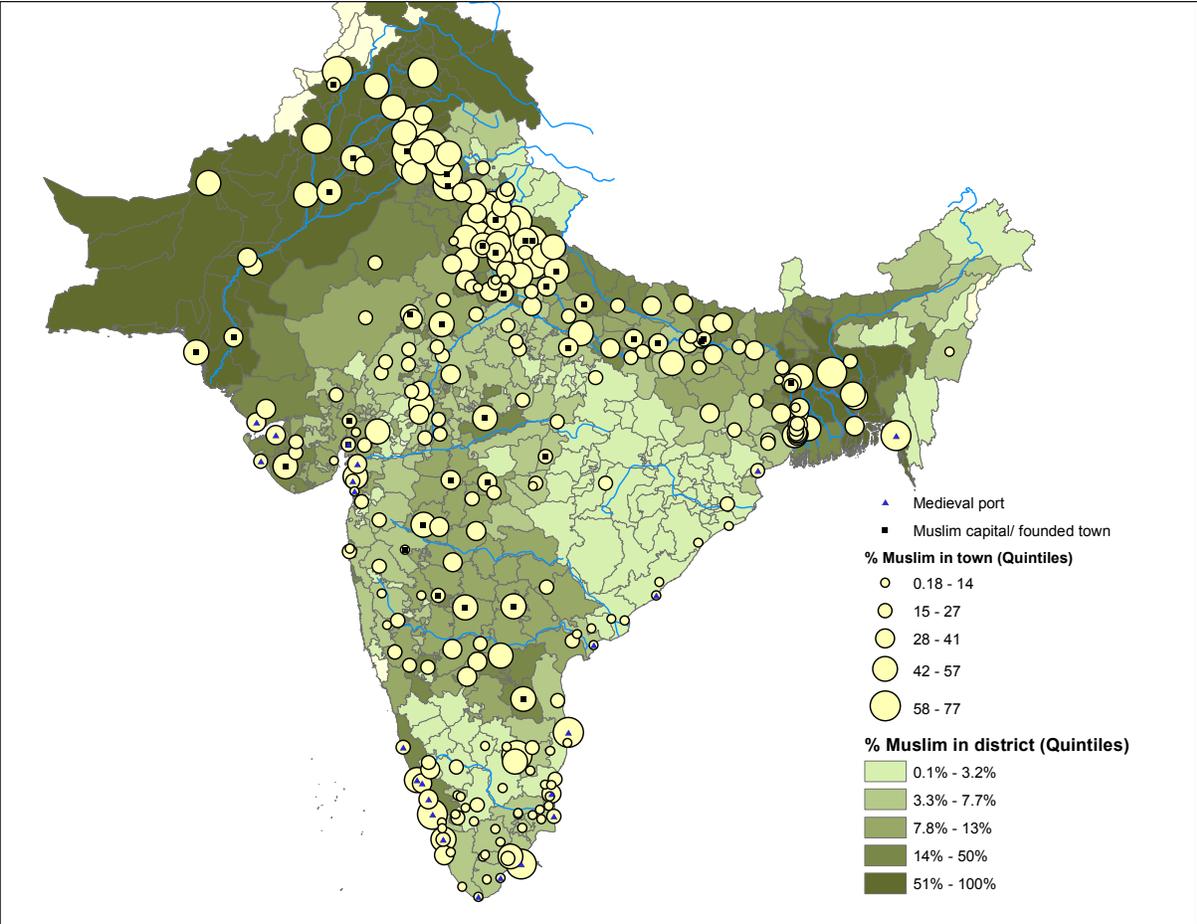
Figure 1: **Religious composition in towns and districts, 1901:** Medieval ports and towns that were medieval Muslim capitals or settlements continued to have greater Muslim populations than nearby areas in 1901.
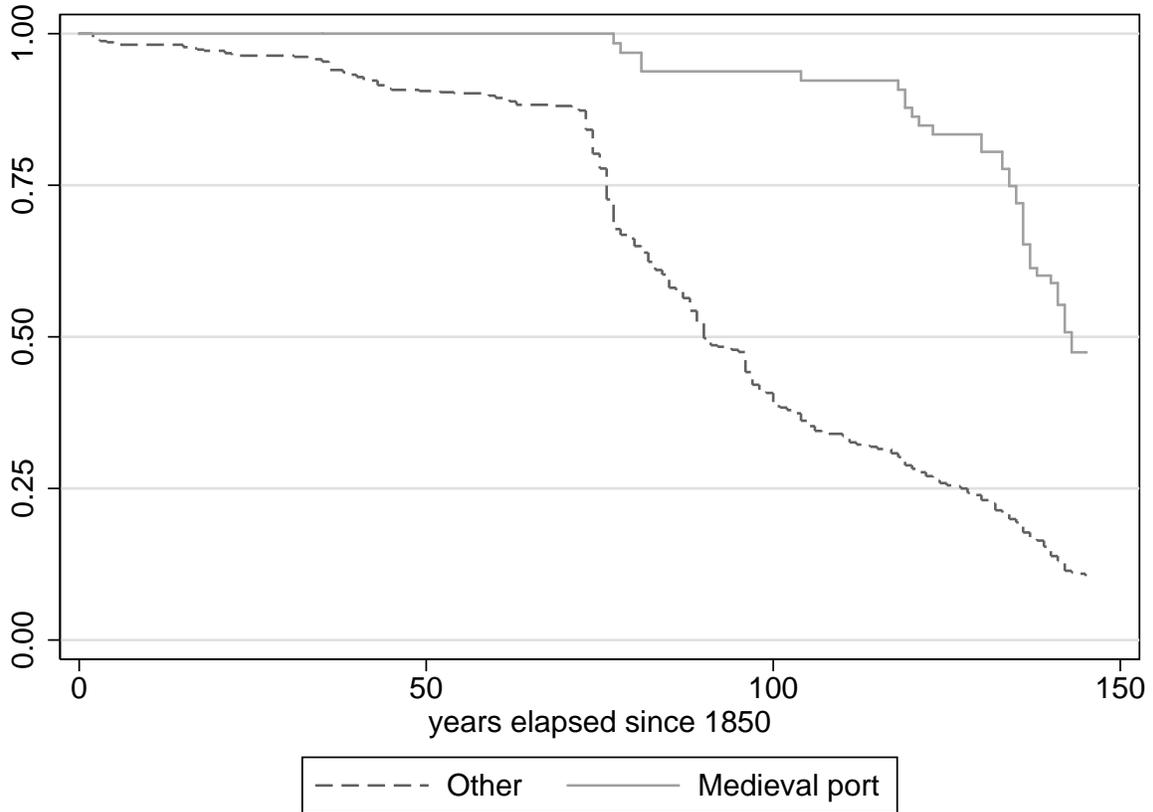
Figure 2: **Timing of the first failure of religious tolerance, 1850-1995:** This Kaplan-Meier curve compares the survival rate of towns without violence. Notice that most towns in the sample experienced at least one riot over the 145 year period, including most medieval ports. However, medieval ports have consistently survived for longer without religious violence.

Table 1: **Taxonomy of institutions in Indian medieval ports**

| Coast	Major medieval ports	Muslim trading groups	Strong community organisation	Medieval complementary services	Medieval institutions			19th century/ contemporary complementary services	19th century/ contemporary institutions			Contemporary residential integration
					Additional barriers to replication	Inter-religious organisations	Transfer mechanisms		Additional barriers to replication	Inter-religious organisations	Transfer mechanisms	
Gujarat	Broach, Cambay, Dwarka, Porbandar, Surat, Somnath-Veraval	Arabs, Daudi Bohras, Memons, Nizari Ismailis	Yes[7]	Trans-oceanic shipping	Apprenticeship restrictions[5]	Merchant Guilds, Political delegations[2]	Commercial taxation[3], Joint ventures[2]	Agate, Carnelians[1], Silver thread weaving[5], Yarn cutting, Diamond cutting, (Gulf / SE Asia networks)[4]	Apprenticeship restrictions[5], Administrative sanctions, Social sanctions (Kaala-paani)[1]	Peace committees, Business associations[4], National political party ``minority wings''[7]	Political donations, Joint ventures[6], Local public goods, Disaster relief[7]	Yes[4,7]
Malabar/ Central West	Bhatkal, Calicut, Cranganore, Cochin, Mangalore, Quilon	Arabs, Bearys, Koyas, Mappilas, Nawaiyats	None evident	Trans-oceanic shipping	Social sanctions (Kaala-paani)[8]	Political delegations[8]	Commercial taxation, Joint ventures, Ease of conversion, Local public goods[8]	(Gulf networks), Commodities trading[4,9]	Social sanctions (Kaala-paani)[2]	Peace committees, Chambers of commerce, Clubs[4,9]	Local public goods[9]	Yes[4,9]
Coromandel (East)	Kilakkarai, Masulipatnam, Negapatnam, Pulicat, Tuticorin, Vizagapatnam	Marraikayars, Persians, Labbais	Yes[10,11]	Trans-oceanic shipping	None evident	None evident	Commercial taxation, Joint ventures[10], Voluntary donations to Hindu-specific public goods[11]	pearl diving, coastal shipping, (Gulf/ SE Asia networks)[10]	None evident	Regional political parties[10]		No[10,11]

Sources: 1: Mehta (1991), 2: Dasgupta (2000) 3: Thapar (2004), 4: Varshney (2002), 5: Gazetteer of the Bombay Presidency (1899), Haynes (1991), 6: Concerned Citizens Tribunal (2002), 7: personal interviews, Blank (2001), 8: al Malibari (1528), di Verthema (1503), Bouchon (2000), 9: Osella (2003), 10: More (1997), 11: S. Bayly (1989)

Table 2: **Summary statistics, 1850-1950 data, by medieval port:**
Sample of towns above 5000 in 1901.

	Medieval ports			Other towns		
	Obs	Mean	SD	Obs	Mean	SD
Riot outcomes						
Riot in town (1850-1950)	47	0.13	0.34	425	0.44	0.50
Number of riots (1850-1950)	47	0.17	0.52	425	1.22	3.60
Number killed in riots	47	0.17	0.64	425	23.85	252.84
Initial conditions:						
Town at natural harbour in med. period	47	0.79	0.41	425	0.12	0.32
Log. distance from navigable river	47	13.59	0.98	424	12.74	1.68
Town with 10km of the modern coast	47	0.91	0.28	425	0.09	0.29
Log. distance from the modern coast	47	7.44	1.44	424	12.12	1.89
Natural disasters, 1850-1900	47	1.89	3.54	424	1.55	2.50
Latitude (degrees)	47	16.01	5.22	419	22.64	6.29
Longitude (degrees)	47	75.59	4.77	419	77.90	6.32
Factors influencing medieval religious relations in town:						
Log (Distance to River Ganga)	47	13.52	0.64	424	11.75	2.01
Centuries Muslim Rule	47	1.86	1.99	425	4.09	2.26
Town Muslim- founded or Muslim capital	47	0.04	0.20	425	0.13	0.34
Muslim pilgrimage site	47	0.02	0.15	425	0.03	0.16
Hindu pilgrimage site	47	0.04	0.20	425	0.06	0.24
Major Shi'a state before 1857	47	0.15	0.36	425	0.20	0.40
Factors influencing politics and administration in colonial period:						
Town under British rule	47	0.72	0.45	425	0.76	0.43
Decades British rule	47	11.10	8.02	425	10.61	6.75
Log. Distance to (future) Pakistan border	47	13.48	0.89	424	12.88	1.17
Presidency town or suburb	47	0.00	0.00	425	0.03	0.16
Land revenue in district Rs. lakhs	45	22.34	16.17	395	18.08	14.74
Contemporaneous factors and outcomes:						
Log. town population, 1901	47	9.72	0.75	425	9.93	0.93
Port with foreign trade, 1907	47	0.40	0.50	425	0.03	0.17
Municipal income per capita, 1901	47	0.86	1.14	425	1.28	2.75
Log (Value of trade per capita), 1907	46	0.59	0.86	424	0.10	0.65
Proportion Muslim in district (1901)	44	0.15	0.16	399	0.19	0.21
Proportion Muslim in district (1942)	46	0.15	0.16	424	0.19	0.21
Proportion Muslim in town, 1901	23	0.32	0.22	245	0.30	0.18
Δ Town prop. Muslim & rest of district (1901)	22	0.17	0.20	227	0.12	0.20

Table 3: **Medieval ports and religious riots in towns of India, 1850-1950** populations > 5000 in 1901.

(a) Regression: number of incidents of religious rioting (1850-1950)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	initial	+ historic	+ colonial	+ colonial	+ historic	+ colonial	+ colonial
Obs (242)	Neg Bin IR	Neg Bin IR	Neg Bin IR	OLS	IV	IV	IV (eff)
Medieval trading port	0.200***	0.236**	0.247**	-0.924	-3.712*	-3.026*	-2.831**
	[0.125]	[0.146]	[0.150]	[0.699]	[2.235]	[1.744]	[1.214]
Natural disasters	1.087	1.064	1.066	0.034	0.071	0.062	0.06
	[0.066]	[0.057]	[0.058]	[0.068]	[0.085]	[0.081]	[0.077]
Centuries Muslim rule		1.133	1.106	0.067	0.074	0.023	0.027
		[0.120]	[0.114]	[0.123]	[0.137]	[0.131]	[0.128]
Muslim-founded or capital		2.045**	1.866**	1.667*	1.625*	1.595*	1.601*
		[0.601]	[0.542]	[0.943]	[0.897]	[0.929]	[0.940]
Major Shi'a state		1.517	1.877	1.157	1.112	1.220	1.214
		[0.628]	[0.784]	[1.186]	[1.192]	[1.196]	[1.190]
Decades British rule			1.068**	0.052*		0.065**	0.064**
			[0.027]	[0.031]		[0.030]	[0.031]
Port with foreign trade, 1907			0.464	-0.542		-0.827	-0.801
			[0.321]	[0.546]		[0.578]	[0.564]
R-squared				0.23	0.19	0.22	0.22

(b) Regression: probability of town experiencing any religious riot (1850-1950)

	Probit	Probit	Probit				
Obs (242)	dF/dX	dF/dX	dF/dX	OLS	IV	IV	IV (eff)
Medieval trading port	-0.242**	-0.225**	-0.259**	-0.241*	-0.170	-0.166	-0.419**
	[0.101]	[0.097]	[0.104]	[0.132]	[0.459]	[0.444]	[0.173]
Port with foreign trade, 1907			0.042	-0.005		0.005	-0.029
			[0.163]	[0.113]		[0.126]	[0.121]
R-squared				0.28	0.24	0.28	0.27
exogeneity:χ^2	0.019	0.006	0.000	excluded	4.13***	5.04***	11.28***
(p-value)	(0.891)	(0.939)	(0.988)	instrum: t			

(c) Regression: probability of town experiencing any religious riot (1850-1950)

	Probit	Probit	Probit				
Obs (242)	dF/dX	dF/dX	dF/dX				
Medieval port silted by 1901	-0.232**	-0.236**	-0.241**				
	[0.118]	[0.100]	[0.114]				
Historic controls	no	yes	yes	yes	yes	yes	yes
Colonial controls	no	no	yes	yes	no	yes	yes

Notes: All regressions include linear and quadratic controls for longitude and latitude and log. distances from coast, navigable rivers and the Ganges, coastal town, natural disasters. Historical controls include: Centuries Muslim rule, Hindu and Muslim pilgrimage sites, major Shia state, Muslim-founded or capital. Contemporaneous (colonial) controls include: Land revenue, log. distance to Pakistan border, modern port with foreign trade, Presidency town, Decades British rule. Robust standard errors in brackets (clustered at 1901 district/ native state/ pranth): * significant at 10%; ** significant at 5%; *** significant at 1%

Table 4: **Effect of medieval trade on wealth and religious demography in 1901** (municipalities)

(a) Effects of medieval trade on religious demographics and income							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	initial	+ historic	+ colonial	initial	+ historic	+ colonial	+ colonial
Dependent variable	OLS	OLS	OLS	IV	IV	IV	IV (eff)
Log income per capita	-0.385*	-0.366*	-0.416**	-0.655	-0.608	-1.185*	-0.533*
Obs (194)	[0.206]	[0.194]	[0.204]	[1.099]	[1.084]	[0.651]	[0.284]
%Muslim |town- dist|	0.147*	0.141*	0.164**	0.399	0.445	0.261	0.352***
Obs (232)	[0.075]	[0.075]	[0.074]	[0.329]	[0.341]	[0.200]	[0.112]
Historic controls	no	yes	yes	no	yes	yes	yes
Colonial era controls	no	no	yes	no	no	yes	yes

(b) Effects of correlates and interactions on religious violence (1901 municipalities)						
Dependent variable:	Any religious riot			Number of religious riots		
	Probit	Probit				
Obs (194)	dF/dX	dF/dX	OLS	Neg Bin IR	Neg Bin IR	OLS
Medieval trading port	-0.349**	-0.450***	-0.195	0.241	0.210***	-0.393
	[0.173]	[0.092]	[0.147]	[0.229]	[0.091]	[0.629]
%Muslim in town	0.021	0.022*	0.010	1.105***	1.106***	0.136***
	[0.013]	[0.013]	[0.009]	[0.032]	[0.033]	[0.050]
%Muslim in town²	0.000	0.000	0.000	0.999***	0.999***	-0.002**
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.001]
MTP x %Muslim		-0.059	-0.036		0.884	-0.113
		[0.043]	[0.026]		[0.075]	[0.097]
MTP x %Muslim²		0.002**	0.001**		1.003**	0.001
		[0.001]	[0.000]		[0.001]	[0.001]
R-squared			0.40			0.51
Joint test: MTP x {Muslim,Muslim²}=0		9.02**	5.18***		10.62***	0.99
Historic controls	yes	yes	yes	yes	yes	yes
Colonial era controls	yes	yes	yes	yes	yes	yes
Log.income/pop control	yes	yes	yes	yes	yes	yes
Log. population control	yes	yes	yes	yes	yes	yes

Notes: In (a), each cell represents a regression; in (b) each column represents a regression. All regressions include linear and quadratic controls for longitude and latitude and log. distances from coast, navigable rivers and the Ganges, coastal town, natural disasters. Historical controls include: Centuries Muslim rule, Hindu and Muslim pilgrimage sites, major Shia state, Muslim-founded or capital. Contemporaneous (colonial) controls include: Land revenue, log. distance to Pakistan border, modern port with foreign trade, Presidency town, Decades British rule. Interactions are demeaned. Robust standard errors in brackets (clustered at 1901 district/ native state/ pranth): * significant at 10%; ** significant at 5%; *** significant at 1%

Table 5: **Survival of religious tolerance in towns of India, 1850-1950:** Cox proportional hazards regression providing hazard ratios of the time till first incidence of Hindu-Muslim rioting in a sample of towns over 5000 in population in 1901.

Obs (402)	(1)	(2)	(3)	(4)
Medieval trading port	0.168**	0.170**	0.062*	0.068*
	[0.123]	[0.131]	[0.088]	[0.110]
Town Muslim-founded		1.682**	1.610*	0.701*
or capital		[0.416]	[0.424]	[0.143]
Decades British rule			1.054*	1.074***
			[0.032]	[0.020]
Port with foreign trade,			0.213	0.207
1907			[0.230]	[0.275]
% Muslim in town				1.058**
				[0.030]
% Muslim in town²				0.999
				[0.000]
Municipal income per				1.022
capita				[0.021]
Ln L	-1096.45	-1061.25	-1051.37	-980.2
Historic controls	no	yes	yes	yes
Colonial era controls	no	no	yes	yes
Log. population control	no	no	no	yes

Notes: All regressions include linear and quadratic controls for longitude and latitude and log. distances from coast, navigable rivers and the Ganges, coastal town, natural disasters. Historical controls include: Centuries Muslim rule, Hindu and Muslim pilgrimage sites, major Shia state, Muslim-founded or capital. Contemporaneous (colonial) controls include: Land revenue, log. distance to Pakistan border, modern port with foreign trade, Presidency town, Decades British rule. Robust standard errors in brackets (clustered at 1901 district/ native state/ pranth): * significant at 10%; ** significant at 5%; *** significant at 1%

Table 6: **Effects on religious violence:, February-April 2002:** Effects of medieval port legacy on medieval ports on days of rioting and probability of violence (including isolated incidents), in towns of Gujarat.

Dependent variable	(1)	(2)	(3)	(4)
	OLS	OLS	OLS	OLS
Religious riot	-0.229***	-0.302***	-0.293***	-0.329**
occurred?	[0.049]	[0.077]	[0.099]	[0.114]
R-squared	0.46	0.56	0.58	0.61
Days of rioting	-1.754*	-2.805**	-2.733*	-2.903*
	[0.858]	[1.316]	[1.418]	[1.447]
R-squared	0.51	0.63	0.65	0.67
Any religious violence?	-0.104	-0.129	-0.141	-0.18**
	[0.113]	[0.139]	[0.093]	[0.082]
R-squared	0.61	0.62	0.65	0.67
Observations	199	153	148	137
Historic controls	no	yes	yes	yes
Contemporary controls	no	no	yes	yes
% Muslim(^{2}) controls	no	no	no	yes

Notes: All regressions include linear and quadratic controls for longitude and latitude and log. distances from coast, navigable rivers, coastal town, natural disasters, log. population (1991), Class of town (I,II,III), distance to Godhra (100,200,300km), district fixed effects. Historical controls include: Centuries Muslim rule, Muslim-founded or capital, Town in British India, Land revenue 1901. Contemporaneous controls include: Proportion SC/ST, Municipal income and expenditures per capita, Modern port. Robust standard errors in brackets (clustered at 1991 district): * significant at 10%; ** significant at 5%; *** significant at 1%