Colonization and Religious Violence: Evidence from India

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Abstract

This paper looks at the long-run effect of British colonization on Hindu-Muslim violence in India by comparing incidence of communal violence over the period 1950-1989 across areas which were under direct British rule with areas that were indirect British rule i.e. under native kings. Using the Doctrine of Lapse as an instrument, I find that British annexation has a negative and significant effect on religious violence in independent India which goes against the popular narrative that British rule led to a worsening of Hindu-Muslim relations.

1 Introduction

> *Typically, imperial powers depend on the inability of oppressed local populations to muster a unified resistance, and the most successful occupiers are skilled at exploiting the differences among the occupied. Certainly that was the story of the British Empire's success, and its legacy of nurtured local hatreds can be seen wherever the Union Flag flew, from Muslim-Hindu hatred in Pakistan and India, to Catholic-Protestant hatred in Ireland, to, yes, Jew-Arab, hatred in modern Israel.* — James Carroll, Constantine's Sword (2001)

As the above quote suggests colonizers have often been blamed for creating rifts between different indigenous communities in the lands that they colonized

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so as to prevent any consolidation of indigenous forces against them. In the context of India, this is particularly true. British colonization has often been blamed for ushering in an era of Hindu-Muslim communal discord after centuries of communal harmony under the Mughals. This paper is an attempt at evaluating whether this assertion is true. I empirically test whether British annexation has any long-term effect on religious violence in post-Independent India controlling for selective annexation by the British.

Hindu-Muslim religious violence has been one of the most pressing issues in post-Independent India. According to the Varshney and Wilkinson (2006) dataset on Hindu-Muslim conflict in India there have been more than 1100 cases of Hindu-Muslim violence in India causing around 7000 deaths over the period 1950-1995. In addition, riots result in substantial property damage, loss of livelihood and residential segregation (Field et al. (2008), Baber (2004), Mitra and Ray (2014)).

I compare districts ruled directly by the British with districts ruled by the native Indian rulers and see if British colonization has any long run effects on post-Independence religious violence in India. To account for potential selective annexation by the British I use the instrumental variable strategy used in Iyer (2010). Iyer (2010) compares public good provision across directly ruled and indirectly ruled areas using the Doctrine of Lapse policy used by the British in annexing native states. According to the Doctrine of Lapse policy instituted by Lord Dalhousie in 1848, the British reserved the right to annex native states whose kings died without leaving a natural heir. Thus one can use the death of a native king without an heir in the period from 1848-1856 as an instrument for annexation by the British. Using this instrumental variable helps me to control for selective annexation and thus get rid of any endogenity in the variable indicating British annexation. Using the Doctrine of Lapse policy as an instrument, I find that contrary to the popularly held view, British ruled districts experienced lesser instances of religious violence compared to those ruled by native states. This result is robust to controlling for different geographic features, population and economic characteristics and political variables.

My research contributes to the literature analyzing the causes behind religious violence in India. The leading explanations for religious violence focus on

economic and political factors. Studies have shown that greater economic competition between Hindus and Muslims leads to more religious violence (Kumar (2005)) and religious violence is used as a tool to usurp resources belonging to members of the rival religion (Mitra and Ray (2014)). On the other hand political scientists have tended to focus on political reasons behind riots. Wilkinson (2006)) shows that even after controlling for a town's socio-economic attributes and its level of previous Hindu-Muslim violence, "electoral cycles and the level of electoral completion exert an independent effect on the likelihood of communal riots." By comparing directly ruled areas with native states, this paper adds to the above literature by looking at the effect of the identity of the historical ruler on Hindu-Muslim violence.

My research is part of the expanding literature on the role of historical institutions in explaining contemporary outcomes (Acemoglu, Johnson, and Robinson (2001), Engerman and Sokoloff (1997), and La Porta et al.). In the Indian context, Iyer and Banerjee (2005) analyze how different land tenure systems established by the British have affected long-term economic outcomes and Iyer (2010) compares public good provision across directly ruled and indirectly ruled areas. However research on the role of historical institutions in explaining ethnic violence is limited in the economics literature (Alesina, Easterly, and Matuszeski (2011)). Jha (2013) is one of those few papers which does so in the Indian context. The paper analyzes the role of medieval trade in explaining Hindu-Muslim riots during the period 1850-1950. It argues that religious violence is reduced if Hindus and Muslims could share the gains of trade in the medieval period and found that medieval trading ports were less likely to experience a religious riot between 1850-1950. My research complements the literature on the role of historical institutions on ethnic violence by focusing on the role of colonial rule in explaining the post independence Hindu-Muslim riots.

This paper is most closely tied to the significant literature in history which analyzes the role of the British colonizers in fomenting Hindu-Muslim conflict. Indian nationalist historians have often claimed that the British followed a "divide and rule" strategy which created rifts between communities and laid the foundations for later day religious violence (Mehta and Patwardhan (1942), Kabir (1969), Das (1990)). This claim has been contested by other historians

who argue either that communal tensions had already been simmering before the British came (Bayly (1985)) or that factors independent of British rule like pan-Islamism and the rise of Hindu and Muslim revivalist movements (Hardy (1972)) led to a rise in communal discord in the colonial era. There might be other channels too through which British annexation might affect religious violence. The British laid the foundations for a modern law and order machinery which, due to institutional persistence, might affect present religious violence in India. Moreover directly ruled British areas have a longer experience of democratic systems of governance through a system of directly elected government councils. This too might affect religious violence in independent India. Olsson (2009) showed that there is a strong positive effect of colonial duration on democracy, particularly for former British colonies. This too might affect religious violence in independent India. Thus given arguments on both sides, whether British rule lead to a deterioration in Hindu-Muslim relations becomes an empirical question which has not been tested so far in a rigorous manner. This paper attempts to address this gap in literature.

As mentioned this paper complements the aforementioned literature in a number of ways. Firstly by looking at a historical institution namely colonization it brings in a new dimension to the empirical literature on Hindu-Muslim political violence which has largely focussed on economic or political causes. Secondly this paper adds to the growing literature on the effect of colonial institutions by looking at one of the relatively unexplored areas in economics which is the role of historical institutions in ethnic conflict. Most importantly this paper tries to resolve the question that has been debated among historians whether British colonization has led to increased Hindu-Muslim conflict. By controlling for selective annexation by the British it is able to address endogenity concerns.[1] The results challenge the popular narrative that British colonization led to increased Hindu-Muslim conflict.

The rest of the paper is organized as follows: Section 2 discusses the historical background. It describes in detail the "divide and rule" strategy that is alleged

1. Lange and Dawson (2009) in a sample of 160 countries find evidence that "inter-communal violence is a common legacy of colonialism." However his results might be subject to endogenity concerns common in cross-country studies. Most importantly he does not control for selective annexation by the British.

to have been followed by the British and also some alternative channels through which British rule might affect Hindu-Muslim communal tension in the long-run, Section 3 describes the data used in this paper, Section 4 discusses the empirical strategy, Section 5 discusses the results and Section 6 concludes.

2 British Colonization and Rise in Religious Violence

In this section I first discuss the various measures taken by the British which are attributed by historians to the strategy of divide and rule and have been suggested as playing a significant role in the rise of Hindu-Muslim communal discord. I then briefly discuss some alternative channels through which British annexation might have affected Hindu-Muslim religious violence in a different manner.

Various accounts suggest that the British followed a divide and rule strategy which incited religious violence and helped the British to maintain their hold over their Indian subjects. In the ensuing account I describe the narrative that blames the British for the worsening of Hindu-Muslim relations. The narrative essentially contends that that British policy essentially consisted of two phases- an initial period of Hindu appeasement and suppression of Muslim aspiration followed by a period of inciting Muslim communalism to serve as a counterweight to emerging Indian nationalism. In the ensuing account I describe the narrative that blames the British for the worsening of Hindu-Muslim relations.

The first phase of Hindu appeasement and suppression of Muslim aspiration is considered to have consisted mainly of three measures taken by the British: the Permanent Settlement Act of 1793, the Resumption Proceedings and the abolition of Persian and adoption of English as the official language in 1835. Under the Permanent Settlement Act of 1793, *zamindars* (landlords) of the Bengal province were granted proprietary and hereditary rights over the land and their revenue obligation to the British government were fixed in perpetuity. Some commentators like Kabir (1969) claim that this system was established via a massive land transfer from the Muslim landed gentry to the Hindu land-holding class. Others like Hardy (1972) claim that the Permanent Settlement

Act affected Muslims adversely by "virtual closing the door of landlordism to Muslims". Hardy (1972) states that Hindu cultivators suffered as much as that of the Muslims cultivators under the Permanent Settlement but the number of Muslim cultivators in Bengal at that time were greater. Moreover the moneylenders who were the lenders of the last resort for the individual cultivators to pay their rent to the landlords were mostly Hindu-this too led to communal antagonism. In fact some of the major Hindu-Muslim communal disturbances during the colonial era such as the rebellion of Titu Mir in 1830, the Faraizi movement in the 1830s and 1840s and the Malabar Rebellion in 1921 were essentially class struggles waged by Muslim cultivators against Hindu landlords and the British. The next measure that is considered to have affected Muslims adversely was the Resumption Regulation of 1820, under which the East India Company appropriated *lakhiraj*, revenue-free land granted mainly to Muslims. These land rights had been granted by both Hindu and Muslim rulers to support learning and education (Hardy (1972)). In order to maximize their tax collections from land revenue, the East India Company embarked on a policy which called for investigation and resumption of those holdings which did not possess proper title deeds. Some commentators contend that though some Hindus were also affected by the resumption proceedings, Muslims were the worst hit since Muslim grantees were much larger in number than Hindu grantees and also because as the erstwhile ruling elite they did not preserve their title deeds properly(Hardy (1972)). This gave a further blow to the Muslim middle and upper classes as it adversely affected their traditional educational system, which was based mostly on revenues from these grant lands and thus might have led to deepening of Muslim communal feelings (Kabir (1969)).

The third major step of the British which is said to have resulted in the impoverishment of the Muslims vis-à-vis Hindus in colonial India was the abolition of Persian and adoption of English as the official language in India by Lord Bentinck in 1835. This measure was also followed by the introduction of English in schools supported by the East India Company replacing Persian and Sanskrit. Both these steps benefitted Hindus and disadvantaged Muslims primarily because of two reasons-firstly because Hindus had already been learning English and there was already a significant section of the Hindu elite who were

well-versed in English and secondly because Muslims thought it to be against their religion to learn English (Khalidi (2006)). The replacement of Persian by English as the official language resulted in a huge loss for the Muslims and resulted in a significant loss of employment for Muslims in government service and also diminished the probability of Muslims finding government employment in the future.

The Indian Sepoy Mutiny of 1857 worsened British-Muslim relations. Although both Hindus and Muslims participated in the rebellion, a significant majority of British officials considered it to be Muslim-led in character (Kabir (1969)). The Mughal crown was abolished and the last Mughal emperor was sent to Rangoon on exile. Along with the annexation of Awadh from the Muslim nawab (king) a year earlier in 1856, the British suppression of the Sepoy Mutiny and the changes it brought thereafter completed the destruction and disintegration of the Muslim elite in much of North India, thus "further curtailing the prospects of soldiery, intelligentsia and artisans dependent on feudal patronage" (Khalidi (2006)). However these events also led to a change in Muslim attitudes. The surviving elite realized in order to prevent further economic loss they should shake off their hitherto insular attitude towards the British. The Muslims under the leadership of Sir Syed Ahmed Khan, founder of the Aligarh movement, embraced English education and co-operated more closely with the British (Hardy (1972)). On the other side the rising Hindu middle class, a class which had been established due to the favored treatment of the British, started expressing themselves politically against the British by demanding more political autonomy. This led to the formation of the Indian National Congress in 1885. With rising Hindu antipathy towards the British manifested in the actions of not only the Congress but also many militant organizations who were advocating violence against the British colonizers, the British started raising Muslim communalism as a counter-weight to the emerging Hindu nationalism (Sahoo (2008)). According to many historians this British policy manifested itself in three key measures—the partition of Bengal in 1905, the Minto-Morley Reform of 1909 and the Montagu-Chelmsford Reforms of 1919 (Mehta and Patwardhan (1942),Sahoo (2008)).

The British had set up base first in Bengal. In fact colonial rule in India

is generally considered to have started with the victory of the British over the *Nawab* (king) of Bengal in the Battle of Plassey in 1757. Under British patronage Bengal soon became one of the leading provinces in India. Bengali Hindus particularly took to English education and soon established themselves in the colonial bureaucracy. However the Bengali Muslims lagged behind their Hindu counterparts. For example in 1901, only 22 out of every 10,000 Muslims knew English while the corresponding number for the Hindus was a much higher at 114 (Ray (1977)). The cultural, economic and political capital of Bengal was in Calcutta. The British proposal to carve out a Muslim majority province of East Bengal from the Bengal province thus received support from Muslims as they saw a chance to improve their fortunes through this proposal (McLane (1965)). On the other hand the upper caste Hindu Bengali elite, with most of their roots in the western part of Bengal, saw a British conspiracy to undermine their ascendancy and staunchly opposed this move. Thus the partition led to a further deterioration in Hindu-Muslim relations in Bengal (McLane (1965)).

The Minto-Morley Reform of 1909 is considered to have further deepened communal discord between the two communities. The reforms were undertaken with a view to tame the nationalist fervor, especially militant activity in Bengal, following the partition of Bengal. The Reforms sought to give native Indians a greater role in governance. However one of the proposals in these reforms was the provision of separate electorates for Muslims. The provision of separate electorates meant that candidates of either religion could pander to the narrow interests of their own community and not have to serve members of the other community in order to win votes. This move of separate electorates has also been held responsible in encouraging Muslim communalism in India (Hasan (1980)).

The Montagu-Chelmsford reforms of 1919 were aimed to introduce autonomous institutions of self-governance gradually to India. A system of dyarchy was established under which law and order subjects and subjects responsible for maintaining the supremacy of British Empire like the railways were kept under the control of the British appointed bureaucracy who reported to the Governor of the province while subjects like education, public health, agriculture were transferred to the provincial governments which were run by Indians. Both the

Central and provincial legislative assemblies were enlarged and franchise was extended to new groups of citizens. However with these measures the provision of separate electorates were not only maintained but the principle of Muslim over-representation i.e. representation more than their share in population were introduced in the newly enlarged central and provincial legislative assemblies. Moreover the nature of the reforms gave power to the newly appointed Muslim legislators to distribute patronage to members of their own brethren at the cost of Hindus (Hardy (1972)). The reforms of 1919 instead of ushering in an era of Hindu-Muslim cooperation in self-governance is said to have increased communal antagonism (Hasan (1980)).

From the above analysis we see that there exists a narrative in which the British are held responsible for sowing the seeds of communal discord between Hindus and Muslims. However this is not an unchallenged interpretation of history. Historians like Peter Hardy, emphasize the gradual rise of more aggressive, revivalist streams of Hinduism and Islam, which although originated in the late eighteenth or early nineteenth centuries but received a fillip by the spread of modern transport and communications after 1860. Hardy (1972) also argues that the British followed a strategy of "balance and rule" rather than a strategy of "divide and rule". Others have argued the rise of new arenas of local power (Robinson (2007)) and the spread of pan-Islamism in the late nineteenth century led to deepening of the communal fissures in Indian society. Still others like Bayly (1985) and Van der Veer (1994) have argued that there is a "pre-history of communalism" and communalism is not just a product of the colonial era. They argue that it was "community-based state policies" practiced by the various Hindu and Muslim rulers who succeeded the Mughlas and "increasing competition between a declining Muslim service gentry and rising Hindu merchant classes" which created communal conflict in India in the pre-colonial period (Talbot (2007)). Hence it is a matter of debate whether there was any policy of "divide and rule" actively followed by the British and whether this policy had any long-term impact on religious violence in India.

Apart from the channels mentioned above there might be alternative channels through which British rule might have a very different long run impact on Hindu-Muslim religious violence in India. The British instituted a system

of modern law and order in the provinces that they controlled. This system not only consisted of an efficient police force which was required to keep the native population in line but also a network of judicial courts. Various accounts suggest that the British police force was more efficient in curbing law and order problems than their counterparts in the native states (Freitag (1991)). Lange (2004) in his sample of 33 British colonies shows that indirect rule had a negative effect on the institutional measure "Rule of Law" in the post-colonial period. Hence due to institutional persistence areas those were under direct British rule might have a more able police force, better equipped to deal with communal disturbances than areas that were under the native princes.

British rule might have a long run effect on religious violence is through the functioning of democratic institutions. Areas under direct British rule have a longer experience of democratic institutions since the Minto-Morley reforms of 1909. While the Minto-Morley reforms brought in limited self-government in British India, the subsequent Montagu-Chelmsford reforms of 1919 and Government of India Act, 1935 led to regular elections in the provinces. Moreover the fight for independence against British rule exhibited a large degree of Hindu-Muslim cooperation. If greater experience with democratic institutions and a history of Hindu-Muslim cooperation lead to better functioning of local administration or development of higher social capital, British ruled areas might see lower incidence of religious violence compared to princely states in independent India.

3 Data

I construct a district-level panel dataset ranging from 1950-1989. The data for this district-level dataset comes primarily from three sources-the Varshney and Wilkinson (2006) dataset on religious violence in India, the replication dataset for the paper, Iyer (2010) and the India District Database which has data from the Indian Census. The Varshney- Wilkinson dataset contains information on occurrence of religious riots over the period 1950-1995. I concentrate on the period 1950-1989 since from 1990 onwards there was massive Hindu political mobilization which heralded in a new era of Hindu-Muslim antagonism.

The Varshney-Wilkinson dataset collects information about Hindu-Muslim religious violence from reports appearing in The Times of India newspaper on Hindu-Muslim conflicts in India over the period 1950-1995. The dataset also records for each incident of communal violence the name of the city/town/village, the district and state, its duration, the number of people killed, injured and arrested and the reported proximate cause of the riot. Although there might be some under-reporting on the incidence of riots in small towns the authors take great care to cross check the validity of the dataset with other sources. The replication dataset for Iyer (2010) available on the The Review of Economics and Statistics data archive contains all the data used in Iyer (2010). The dataset contains district level information on the ruler status of each district (colonial vs. native ruled), date of annexation by the British, mode of annexation, deaths of native rulers, heirs left by the native rulers, length of British rule and colonial era land revenue information.

District level demographic and economic data come from the 1951-1991 Indian Censuses which is available on the Indian District Database.. The Indian Census is a decennial Census. I use district level data on total population, proportion of rural population, population of Muslims, proportion of literates, proportion of employed and proportion of SC/ST population. Since the Census data is decennial, I fill the data in the inter Census years through linear interpolation.

I also collected district level geographical information from the India Agriculture and Climate data set assembled by the World Bank. This dataset has district level information on altitude, latitude, mean annual rainfall, soil type and a coastal dummy. To control for state level political representation, I collected data on state-level political variables which include the number of effective parties in a state legislature and proportion of seats occupied by different political groupings.[2] The political variables were taken from the EOPP Indian States database which is maintained by Timothy Besley and Robin Burgess.

2. Effective parties is a widely used measure of party competition which weighs parties with a higher vote/seat share more heavily than parties with lower vote/seat share. The formula used is $1/\sum v_i^2$ where v_i is the vote/seat share of the ith party.

4 Empirical Strategy

I compare incidence of religious violence between directly ruled British district and districts belonging to native states by running regressions of the following form:

$$Y_{dst} = \alpha_s + \tau_t + \beta Brit_d + \lambda X_{dst} + u_{dst} \quad (1)$$

where d indexes districts and t time periods. Y_{dst} is our dependent variable which is either a dummy variable taking a value of 1 if a district experiences a riot in a given year and 0 if not or it is a count variable which takes the value of the number of riots or casualties in a given district i in year t. $Brit_d$ is a dummy variable which takes the value of 1 if the district was part of the British empire and zero otherwise. α_s and τ_t are state and time fixed effects and X_{dst} are district level controls. There are both time-varying and time-invariant (mainly geographical characteristics) variables in the set of controls X_{dst}.

β is the main coefficient of interest-it measures the differential effect of British annexation on religious violence in post-Independent India compared to the effect of being ruled by a native king/queen. However β might not represent the causal effect of British annexation if the variable Brit is potentially endogenous. For example the British might have been more successful in conquering areas which exhibited high levels of initial Hindu-Muslim conflict by exploiting Hindu-Muslim disunity. In that case β would not represent the true effect of British annexation and would be biased upward. To overcome this problem of endogenity I use the instrumental variables used in Iyer (2010). Specifically I exploit the fact that between 1848-1856, under the command of Governor-General Lord Dalhousie, the British instituted a policy known as the Doctrine of Lapse under which native states whose rulers died without a male heir were to be taken over by the British. The policy was withdrawn when the British Crown took over the reins of government after the Indian Sepoy Mutiny of 1857. The event of death of a native state ruler without leaving a natural heir is exogenous to our dependent variable, religious violence in post-Independent India. Hence using the Doctrine of Lapse as an instrument for British annexation will help me in recovering the causal impact of British annexation on

post-Independent religious violence in India.[3] Similar to Iyer (2010) I construct the instrument Lapse as follows: Lapse equals 1 if the native state was not annexed before 1848 and the ruler died without a male heir in the period 1848-1856; Lapse equals zero if the native state was not annexed before 1848 and there was no such death in the period 1848-1856. Since I cannot assign Lapse to districts that were annexed before 1848, my IV sample essentially restricts the sample to only those districts that were not annexed before 1848. The instrument Lapse would help us recover the causal effect of British annexation on post-Independent religious violence in India as long as Lapse does not have a direct effect on post-Independent religious violence in India even if the British were selective in their use of the Doctrine of Lapse policy.

5 Results

I start my empirical analysis with investigating the descriptive statistics of my key independent variables. Table 1a presents the mean of my dependent variables. Table 1b-1d present the means of my independent variables for British ruled and native districts separately and the differences in the means. Table 1b presents the means and the difference in means for geographical controls.British ruled areas have higher rainfall and more red soil. The means and the difference in means for population controls are summarized in Table 1c. There is no significant difference in means except for log of population. Table 1d shows the summary statistics for political controls. The means of none of the political controls are significantly different across British ruled and native ruled districts.

I now move on to OLS estimates of the effect of British annexation on the measures of the intensity of riots in districts. Tables 2-4 present the results. Table 2 shows the effect of British dummy on the probability of occurrence of any riot in a district d in time t. I introduce different controls sequentially. Column 1 presents the results from estimating equation (1) without any controls. Only state and time dummies are included. In column 2, I introduce geographical controls latitude and altitude, soil dummies, mean annual rainfall and a coastal dummy. The coefficient is positive and significant in both these columns

3. There are 17 districts out of a total of 160 districts in my IV sample where such death of ruler without a natural heir occurred.

which seem to support the traditional divide and rule theory. However once I enter population controls in column 3 the positive effect goes away-the effect is now negative although insignificant. In my regressions population controls include log of population, proportion of urban, proportion of Muslim and squared proportion of Muslim, proportion of literate and proportion of SC/ST. Since post-Independent religious violence might differ across native ruled districts according to the religion of the ruler I include in the last column a Muslim ruler dummy and a Sikh ruler dummy (Hindu ruler being the omitted category). To account for the fact that most religious riots are motivated by political concerns in India, I also include the number of effective parties and proportion of seats won by various political groupings in the state Legislative Assemblies in India. The coefficient on the British dummy continues to be negative and insignificant after including these set of additional controls.

Table 3 shows the OLS estimates of the British dummy on the total number of riots in a district d at time t. Again controls are introduced sequentially. Similar to Table 2, the coefficients are positive in the first two columns (corresponding to including no controls and only geographical controls) but turns negative with the introduction of population (column 3) and religion of ruler and political controls (Column 4). However, none of the coefficients are statistically significant.Table 4 shows the OLS estimates of the British rule on the total number of riot casualties in a district d at time t. Again none of the coefficients are significant.

Table 5 presents the estimates for the first stage of my instrumental variable estimation. As can be seen, the instrument (the Lapse dummy) is positive and significant for all specifications including the one with the full set of controls given in column 4. Thus, as expected, the instrument or the Lapse dummy is a statistically significant predictor of the dummy indicating British Rule.

Tables 6-8 present my IV estimates. In all the regressions I exclude districts which were annexed before 1848 since there was no Doctrine of Lapse policy in force then. Table 6 presents the IV estimates where the dependent variable is the probability of occurrence of any riot. Columns 1 and 2 include only state and year fixed effects, columns 3 and 4 include only geographical controls, columns 5 and 6 include geographical and political controls and columns 7 and 8 include

the full set of controls including political controls and dummies for the religion of the native ruler. Columns 1, 3, 5 and 7 show the OLS estimates using this reduced sample. The OLS estimates are all insignificant in this reduced sample. However in column 2 when I use my instrumental variable Lapse, the British dummy becomes negative and significant. This result is the main result of this research. This result signifies, at least for the restricted sample considered here, that contrary to the popularly held idea that British rule led to deterioration in Hindu-Muslim relations, British rule actually has a negative effect on the probability of occurrence of riots in post-Independent India. The effect is robust with the inclusion of additional controls as shown in columns 4 (only geographical controls), 6 (geographical controls and population controls) and 8 (full set of controls). Thus IV estimates show that British rule reduces probability the occurrence of riots by about 5 percentage points.

In tables 7 and 8, I estimate the effect of British annexation on total number of riots and total casualties. The controls are again included sequentially. Columns 1 and 2 do not include any controls, columns 3 and 4 include only geographical controls, columns 5 and 6 include geographical and population controls and columns 7 and 8 includes all controls. The OLS estimates are presented in columns 1, 3, 5 and 7 and are all insignificant for both the total number of riots (Table 7) and total casualties (Table 8). Columns 2, 4, 6 and 8 show the IV estimates. It can be seen from table 7 that again British dummy significantly reduces the total number of riots and the effect is robust across all specifications. Columns 2, 4, 6 and 8 of Table 8 shows again that British rule reduces the total riots casualties. The coefficient of the British dummy is significant in the columns 2 (no controls) and column 4 (only geographical controls) of Table 8. However it loses its significance with the introduction of population controls (column 3 of Table 8) and religion of ruler and political controls (column 4 of Table 8).

Finally, I have done a falsification exercise in order to test the validity of my instrument, the Lapse dummy. It can be argued that the Lapse dummy is not a valid instrument if the death of a ruler without natural heir is somehow directly correlated with the occurrence of riots and the IV estimates obtained in this paper are capturing that effect. In order to test if this is indeed true I

checked whether the death of a ruler without a natural heir in years when the Doctrine of Lapse was not in place has any impact on the occurrence of riots (Iyer (2010)). Thus I regress the riots variables on a dummy that equals 1 if the ruler died without a natural heir in the period 1858 to 1884 during which such a death would not result in British annexation.[4] The estimates are presented in Table 9. It can be seen that the results are all statistically insignificant and small compared to the IV estimates.

6 Conclusion

In this paper I exploit the exogenous nature of the Doctrine of Lapse policy to estimate the causal effect of British annexation. Using instrumental variable strategy I show that British annexation does not lead to greater Hindu-Muslim violence in post-Independent India. Since the British have often been blamed for increased tensions between Hindus and Muslims, this result assumes significance as it challenges the established popular narrative that British colonization led to increased Hindu-Muslim conflict. Future work would be directed at trying to shed light on the precise channels through which British annexation might affect post-Independence religious conflict. One possible area of future research would be to look at the role of land relations in religious violence. Many instances of communal violence in the colonial period such as the Malabar rebellion in 1921 and the rebellion by TituMir in the late 1820s were primarily class based in nature. Since the British brought in many innovations in land relations (Iyer and Banerjee (2005)), it would be interesting to see the role of these changes in religious violence.

4. The Doctrine of Lapse policy was withdrawn when the British Crown took direct control of administration of British India in 1858 following the First War of Independence/Sepoy Mutiny in 1857.

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Table 1a: Summary Statistics: Dependent Variables

Variable	Mean	Std. Dev.	N
Probability of Riot	0.0454	0.2082	12240
Total Cases	0.0712	0.4859	12240
Total casualties	1.656	22.46	12240

Notes: The table reports the mean and standard deviations of the dependent variables used in this analysis. Probability of Riot is a dummy variable equal to 1 if a district experiences a riot in a given year. Total cases and total casualties indicate the number of riots and the total number of riot casualties in a district in a given year. The data comes from the Varshney and Wilkinson (2006) dataset on religious violence in India

Table 1b: Differences in Geographical Controls

	British State	Native state	Difference
Altitude	393.0	407.0	-13.97
			(45.26)
Latitude	22.84	22.92	-0.083
			(1.602)
Black soil	0.184	0.296	-0.112
			(0.098)
Red soil	0.195	0.096	0.100*
			(0.060)
Alluvial soil	0.534	0.478	0.056
			(0.108)
Coastal dummy	0.139	0.086	0.053
			(0.070)
Mean Annual Rainfall	1419.3	1075.4	343.9**
			(135.5)

Notes: The table reports the summary statistics of geographical controls used in this paper. Column 1 reports the mean of the variables for districts under British rule and the column 2 reports the means for the districts under native rule. Column 3 presents the differences in the means. The geographical data comes from the India Agriculture and Climate data set assembled by the World Bank. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 1c: Differences in Population Controls

	British State	Native state	Difference
Log Population	14.42	13.77	0.659***
			(0.117)
Proportion Urban	0.190	0.174	0.016
			(0.019)
Proportion Muslim	0.113	0.111	0.002
			(0.036)
Proportion workers	0.368	0.375	-0.007
			(0.016)
Proportion literate	0.304	0.260	0.045
			(0.029)
Proportion SC/ST	0.239	0.253	-0.014
			(0.026)

Notes: The table reports the summary statistics of population controls used in this paper. Column 1 reports the mean of the variables for districts under British rule and the column 2 reports the means for the districts under native rule. Column 3 presents the differences in the means. The data population controls come from the 1951-1991 Indian Censuses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 1d: Differences in Political Controls

	British State	Native state	Difference
Proportion Congress	0.518	0.561	-0.043
			(0.028)
Proportion Hard-Left	0.078	0.040	0.038
			(0.034)
Proportion Soft-Left	0.039	0.028	0.011
			(0.008)
Proportion Janata	0.127	0.115	0.012
			(0.029)
Proportion Hindu	0.022	0.022	-0.0003
			(0.006)

Notes: The table reports the summary statistics of political controls used in this paper. Column 1 reports the mean of the variables for districts under British rule and the column 2 reports the means for the districts under native rule. Column 3 presents the differences in the means. The political variables are taken from the EOPP Indian States database. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 2: OLS: Probability of Riot

	(1)	(2)	(3)	(4)
		Geographical	Population	Ruler Religion and
	No Controls	Controls	Controls	Political Controls
British dummy	0.0158*	0.0215*	-0.00326	-0.00195
	(0.00901)	(0.0120)	(0.00799)	(0.00938)
Geography Controls	NO	Yes	Yes	Yes
Population Controls	NO	NO	Yes	Yes
Ruler Religion and Political Controls	NO	NO	NO	Yes
Year Dummies	Yes	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes	Yes
Observations	12240	11080	11080	8858

Notes: All regressions include state fixed effect and time fixed effects. Column 1 shows the baseline results which includes only state and year fixed effects. In column 2, I have included geographical controls (altitude, latitude, dummies for soil type, coastal dummy and mean annual rainfall of district). Column 3 includes population controls (log population, proportion of urban population, proportion of Muslim population, proportion of workers, proportion of literates and proportion of SC/ST in district) in addition to geographical controls. In Column 4, I have included controls for the religion of the ruler and state level political representation variables (number of effective parties in a state legislature and proportion of seats occupied by Congress, hard Left, soft Left, Janata and Hindu). Standard errors are clustered at native state level and displayed in parentheses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 3: OLS: Total Cases

	(1)	(2)	(3)	(4)
		Geographical	Population	Ruler Religion and
	No Controls	Controls	Controls	Political Controls
British dummy	0.0323	0.0337	-0.0217	-0.0124
	(0.0211)	(0.0226)	(0.0207)	(0.0324)
Geography Controls	NO	Yes	Yes	Yes
Population Controls	NO	NO	Yes	Yes
Ruler Religion and Political Controls	NO	NO	NO	Yes
Year Dummies	Yes	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes	Yes
Observations	12240	11080	11080	8858

Notes: All regressions include state fixed effect and time fixed effects. Column 1 shows the baseline results which includes only state and year fixed effects. In column 2, I have included geographical controls (altitude, latitude, dummies for soil type, coastal dummy and mean annual rainfall of district). Column 3 includes population controls (log population, proportion of urban population, proportion of Muslim population, proportion of workers, proportion of literates and proportion of SC/ST in district) in addition to geographical controls. In Column 4, I have included controls for the religion of the ruler and state level political representation variables (number of effective parties in a state legislature and proportion of seats occupied by Congress, hard Left, soft Left, Janata and Hindu). Standard errors are clustered at native state level and displayed in parentheses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 4: OLS: Total casualties

	(1)	(2)	(3)	(4)
		Geographical	Population	Ruler Religion and
	No Controls	Controls	Controls	Political Controls
British dummy	1.312	0.894	-0.476	0.654
	(0.828)	(0.717)	(0.704)	(1.251)
Geography Controls	NO	Yes	Yes	Yes
Population Controls	NO	NO	Yes	Yes
Ruler Religion and Political Controls	NO	NO	NO	Yes
Year Dummies	Yes	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes	Yes
Observations	12240	11080	11080	8858

Notes: All regressions include state fixed effect and time fixed effects. Column 1 shows the baseline results which includes only state and year fixed effects. In column 2, I have included geographical controls (altitude, latitude, dummies for soil type, coastal dummy and mean annual rainfall of district). Column 3 includes population controls (log population, proportion of urban population, proportion of Muslim population, proportion of workers, proportion of literates and proportion of SC/ST in district) in addition to geographical controls. In Column 4, I have included controls for the religion of the ruler and state level political representation variables (number of effective parties in a state legislature and proportion of seats occupied by Congress, hard Left, soft Left, Janata and Hindu). Standard errors are clustered at native state level and displayed in parentheses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 5: IV: First Stage

	(1)	(2)	(3)	(4)
		Geographical	Population	Ruler Religion and
	No Controls	Controls	Controls	Political Controls
Instrument	0.596***	0.560***	0.486***	0.438***
	(0.172)	(0.161)	(0.133)	(0.123)
Geography Controls	NO	Yes	Yes	Yes
Population Controls	NO	NO	Yes	Yes
Ruler Religion and Political Controls	NO	NO	NO	Yes
Year Dummies	Yes	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes	Yes
Observations	6200	5560	5560	4428
F-stat	12.02	12.12	13.40	12.50

Notes: Notes: All regressions include state fixed effect and time fixed effects. Column 1 shows the baseline results which includes only state and year fixed effects. In column 2, I have included geographical controls (altitude, latitude, dummies for soil type, coastal dummy and mean annual rainfall of district). Column 3 includes population controls (log population, proportion of urban population, proportion of Muslim population, proportion of workers, proportion of literates and proportion of SC/ST in district) in addition to geographical controls. In Column 4, I have included controls for the religion of the ruler and state level political representation variables (number of effective parties in a state legislature and proportion of seats occupied by Congress, hard Left, soft Left, Janata and Hindu). Standard errors are clustered at native state level and displayed in parentheses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 6: IV: Probability of Riot

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	No Controls		Geographical Controls		Population Controls		Ruler Religion and Political Controls	
	OLS	IV	OLS	IV	OLS	IV	OLS	IV
British dummy	0.0106	-0.0458**	0.00541	-0.0513***	-0.00292	-0.0438**	-0.0101	-0.0571**
	(0.0149)	(0.0193)	(0.0152)	(0.0195)	(0.0159)	(0.0218)	(0.0224)	(0.0280)
Geography Controls	NO	NO	Yes	Yes	Yes	Yes	Yes	Yes
Population Controls	NO	NO	NO	NO	Yes	Yes	Yes	Yes
Ruler Religion and Political Controls	NO	NO	NO	NO	NO	NO	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6200	6200	5560	5560	5560	5560	4428	4428

Notes: All regressions include state fixed effect and time fixed effects. Column 1 shows the baseline results which includes only state and year fixed effects. In column 2, I have included geographical controls (altitude, latitude, dummies for soil type, coastal dummy and mean annual rainfall of district). Column 3 includes population controls (log population, proportion of urban population, proportion of Muslim population, proportion of workers, proportion of literates and proportion of SC/ST in district) in addition to geographical controls. In Column 4, I have included controls for the religion of the ruler and state level political representation variables (number of effective parties in a state legislature and proportion of seats occupied by Congress, hard Left, soft Left, Janata and Hindu). Standard errors are clustered at native state level and displayed in parentheses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 7: IV: Total Cases

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	No Controls		Geographical Controls		Population Controls		Ruler Religion and Political Controls	
	OLS	IV	OLS	IV	OLS	IV	OLS	IV
British dummy	-0.00402	-0.0716***	-0.0242	-0.0988**	-0.0486	-0.0847**	-0.0837	-0.120**
	(0.0165)	(0.0251)	(0.0262)	(0.0385)	(0.0329)	(0.0390)	(0.0515)	(0.0523)
Geography Controls	NO	NO	Yes	Yes	Yes	Yes	Yes	Yes
Population Controls	NO	NO	NO	NO	Yes	Yes	Yes	Yes
Ruler Religion and Political Controls	NO	NO	NO	NO	NO	NO	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6200	6200	5560	5560	5560	5560	4428	4428

Notes: All regressions include state fixed effect and time fixed effects. Column 1 shows the baseline results which includes only state and year fixed effects. In column 2, I have included geographical controls (altitude, latitude, dummies for soil type, coastal dummy and mean annual rainfall of district). Column 3 includes population controls (log population, proportion of urban population, proportion of Muslim population, proportion of workers, proportion of literates and proportion of SC/ST in district) in addition to geographical controls. In Column 4, I have included controls for the religion of the ruler and state level political representation variables (number of effective parties in a state legislature and proportion of seats occupied by Congress, hard Left, soft Left, Janata and Hindu). Standard errors are clustered at native state level and displayed in parentheses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 8: IV: Total casualties

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	No Controls		Geographical Controls		Population Controls		Ruler Religion and Political Controls	
	OLS	IV	OLS	IV	OLS	IV	OLS	IV
British dummy	-0.218	-1.509**	-0.608	-2.189**	-0.777	-1.434	-1.211	-1.622
	(0.315)	(0.603)	(0.543)	(0.860)	(0.628)	(0.960)	(0.995)	(1.243)
Geography Controls	NO	NO	Yes	Yes	Yes	Yes	Yes	Yes
Population Controls	NO	NO	NO	NO	Yes	Yes	Yes	Yes
Ruler Religion and Political Controls	NO	NO	NO	NO	NO	NO	Yes	Yes
Year Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6200	6200	5560	5560	5560	5560	4428	4428

Notes: All regressions include state fixed effect and time fixed effects. Column 1 shows the baseline results which includes only state and year fixed effects. In column 2, I have included geographical controls (altitude, latitude, dummies for soil type, coastal dummy and mean annual rainfall of district). Column 3 includes population controls (log population, proportion of urban population, proportion of Muslim population, proportion of workers, proportion of literates and proportion of SC/ST in district) in addition to geographical controls. In Column 4, I have included controls for the religion of the ruler and state level political representation variables (number of effective parties in a state legislature and proportion of seats occupied by Congress, hard Left, soft Left, Janata and Hindu). Standard errors are clustered at native state level and displayed in parentheses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.

Table 9: Robustness Check: Effect of Death of Ruler Without Natural Heir

	(1)	(2)	(3)
	Probability of Riots	Total Cases	Total Casualties
Ruler Died Without a Natural Heir Dummy	0.00136	-0.0261	-0.606
	(0.00991)	(0.0296)	(0.560)
Geography Controls	Yes	Yes	Yes
Population Controls	Yes	Yes	Yes
Ruler Religion and Political Controls	Yes	Yes	Yes
Year Dummies	Yes	Yes	Yes
State Dummies	Yes	Yes	Yes
Observations	3377	3377	3377

Notes: All regressions include state fixed effect time fixed effects, geographical controls (altitude, latitude, dummies for soil type, coastal dummy and mean annual rainfall of district), population controls (log population, proportion of urban population, proportion of Muslim population, proportion of workers, proportion of literates and proportion of SC/ST in district), dummies for the religion of the ruler and state level political representation variables (number of effective parties in a state legislature and proportion of seats occupied by Congress, hard Left, soft Left, Janata and Hindu). Standard errors are clustered at native state level and displayed in parentheses. * denotes significant at 10%; ** denotes significant at 5% and *** denotes significant at 1%.