Crafting Identity: Rise of Hindu Nationalism

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September 14, 2023

Abstract

The rise of Hindu nationalism or "Hindutva"-the ideology of cultural hegemony and politicization of a religious identity-in India has been catching a lot of attention due to its increasing prominence in political and social lives, and its detrimental impact on the lives and livelihoods of minorities. However, the Hindu identity was not always a monolithic and political one. We trace back to a potential crafter of the "Hindutva" identity-a Hindu mythological show, the Ramayan. We study the effects of exposure to this religious media, which aired on the only available TV channel across India in 1987-88, on the increasing salience of religious identity in people's political, social, and personal lives. We proxy for exposure to this show using location and television transmitters obtained from archival data and use signal propagation modeling based on irregular terrain to measure signal strength. Looking at political and social expressions of identity, we find that exposure to TV show is associated with increased vote share and probability of winning for the right-wing, Hindu nationalistic political party, increased conflict between Hindus and Muslims, and decrease in the number of schools runs by a major far-right, Hindu nationalistic organization. In the next steps, we will also be looking at the effects on personal expressions of identity: naming of children and abstinence from foods that are religiously tabooed.

1 Introduction

In this paper, we study if and how religious ideology can spread, craft one's identity, and have tangible political and economic effects. The motivation behind this research is the increasing religious inequality in inter-generational mobility, low growth rates in employment and education, biased against religious minorities in India, and how this cannot be explained by differences in fertility, district-level location, and occupation Sachar (2006); Asher et al. (2018). In concurrence with these trends are reports of increasing right-wing, Hindu nationalistic sentiments and the increasing political clout of India's main right-wing party, Bharatiya Janata Party (BJP), which seeks to promote Hindu nationalism. Our goal is to identify a potential phenomenon that shapes and increases the salience of religious identity, making a part of the population the in-group and the other the out-group. Then, we hope to see if and how increase identity salience and spread of religious ideology leads to poor political, social, and economics outcomes.

To this end, we delve into one medium for the spread of religious ideology and making religious identity more salient—the television. We analyze the effects of a television series in the 1980s in India that depicted a popular Hindu epic *Ramayan*. While there have been anecdotal reports of how influential this TV show was in driving religiously divisive sentiments, there has been no research looking into the effects it has had on political and socio-economic lives. To understand the effects of this television show, we need to have reliable variation in access and exposure to this show. For this, we use details on location of government televisions transmitters from archival records and run the Irregular Terrain Model (ITM) to model TV signal strength using characteristics of both transmitters and the terrain between the transmitters and receiving location. We use this as a measure of exposure to the government television channel, Doordarshan, which aired the TV show from 1987 to 1988.

Television was an influential technology that entered people's homes and communities, and thus was (and continues to be) a potential medium for spread of ideologies. So far, looking at political and social expressions of identity, we find that exposure to TV show is associated with increased vote share and probability of winning for the right-wing, Hindu nationalistic political party, increased conflict between Hindus and Muslims, and decrease in the number of schools runs by a major far-right, Hindu nationalistic organization. We find that a one decile increase in exposure to the TV show had a 0.54% increase in right-wing political vote share, 1.34% increase in right-wing probability of winning a constituency, a 6% increase in inter-religious conflict, and 10% decrease in right-wing religious schools. In the next steps, we will also be looking at the effects on personal expressions of identity: naming of children and abstinence from foods that are religiously tabooed.

The paper is organized as follows, section 2 discusses the relevant literature, and section 3 discusses our data sources. Section 4 and 5 is the methodology and results. We conclude in section 6 with a discussion.

2 Relevant Literature

From a political science angle, Hindu-Muslim violence has been shown to be influenced by the presence of the major right-wing nationalistic party (BJP) Mitra and Ray (2019), political rallies/campaigns (Blakeslee, 2014), and electoral competition and potential benefits and costs of inciting violence (Wilkinson, 2006). Riots have in turn had effects on political outcomes with documented increases in BJP vote share (Blakeslee, 2014; Iyer and Shrivastava, 2018). However, the question remains as to what brings about the popularity of right-wing nationalist parties or increases the benefits of contesting on religious lines.

Some works in sociology look into the effect of ideologies in making certain identities more salient. Specifically in reference to the *Ramayan*—a television series on a popular Hindu mythological story revolving around Lord Ram that aired in 1987-1988 and watched by almost a hundred million Indians— these works state the television show was watched in a devotional manner, often in large groups in public places and with some viewers praying to the television set (Cusack, 2012). They claim that the show thus amplified and brought about a unified Hindu identity made religion more salient, and demonized the "other", non-Hindu traditions (Mitra, 1993; Cusack, 2012). Further, it equated Indian tradition with Hindu tradition, and thus the Indian identity with a Hindu, lending itself to appropriation by communal forces (Mankekar, 1999).

While there have been no studies on the effect of media in India on the salience of religion and consequent effects, some work has looked into the political and social effects of other religion-based events. One such event was the *Ram Rath Yatra*, a campaign trail covering thousands of kilometers across India that was organized by the BJP in 1990. The goal was to mobilize the masses to support the demolition of an important mosque. This event led to increased communal violence along the route where the campaign took place, which in turn was shown to increase segregation on religious lines in these areas (Kalra, 2021). Another example of a religion-based event is the *Kumbh Mela*—the largest congregation of pilgrims that happens about once in three years in one of the four sacred rivers in India. The event gathers a lot of attendance; in 2019, 200 million people were estimated to have attended. Baral et al. (2021) find that in areas in areas closer to the *Kumbh Mela* and during times just after the event, the vote share for Hindu nationalist parties, like the BJP, went up and communal violence also went up.

Broadcast media has been shown to be very influential in changing the political and social opinions, behaviors, and actions of the masses. Some of this is a direct response to propaganda encouraged through the media. On one hand, radio shows that promote violent, divisive, and nationalistic propaganda have been associated with increasing violence during the Rwandan Genocide, increasing support for the Nazi party, and leading to negative interethnic sentiments in Croatia (Yanagizawa-Drott, 2014; Adena et al., 2015; DellaVigna et al., 2014). On the other, radio messages to encourage positive interethnic attitudes and defections from violent groups have also been effective in increasing trust and willingness to interact between ethnicities as well as reducing violence and fatalities in Rwanda and central Africa (Blouin and Mukand, 2019; Armand et al., 2020). In many cases, people also respond to media even when the content or message being broadcasted is not directly promoting such an attitude change. The act of being exposed to and watching television and listening to the radio itself is associated with lowering social capital in Indonesia, due to less time spent participating in social organizations (Olken, 2009). Being exposed to lives different than one's own, whether fictional or not, has also been shown to have behavioral impacts. For example, soap operas in Brazil and India that depict urban families that have fewer children and women with more freedom have been influential in reducing fertility, son preference, and acceptability of domestic violence and increasing women's role in household decision-making, especially among rural and low SES populations (Jensen and Oster, 2009; La Ferrara et al., 2012; Bhavnani and Nellis, 2016). This paper falls in the realm of studying the effect of a soap opera, which did not necessarily have a violent message, but was instrumental in making the religious identity more salient thus potentially leading to divisive outcomes.

In addition to political and social outcomes such as the vote share of nationalistic parties and interreligious conflict, we are interested in measuring the salience of religious identity in the personal sphere as well. To measure identity and attitudes, many studies have relied on national and international surveys (like the General Social Survey, Afrobarometer) and public opinion polls (like Pew or Gallup polls) (Bankert et al., 2017; Depetris-Chauvin and Durante, 2017; Falk et al., 2018). However, these can often be limiting in contexts where such sociological surveys are not common (as is the case in India). Even if they exist, they might lack in spatial and temporal granularity that is often needed to answer a causal question, which is the case with many international surveys. Further, survey responses are self-reported and might not accurately represent the true and inherent beliefs that people hold. Thus, we aim to use a revealed preferences method in this paper to uncover if religious identity becomes more salient in people's lives in response to the TV show we are studying. This draws from sociological research which notes that our identity and attitudes can appear in both dayto-day activities such as food and dressing as well as milestones in life such as the decision to marry within or across race/SES/ethnicity and the names we give our children (Appadurai, 1988; Matthews and Wilson, 1999; Abramitzky et al., 2020; Atkin et al., 2021; Baral et al., 2021). Events that make religious identity more salient or increase the status and prestige of being part of certain groups (such as a television show on a popular Hindu mythological story that was watched by millions in a communal manner) can increase the utility of an individual by making their consumption bundle or naming of children closer to higher-status group or more salient identity (in this case, being a religious Hindu vs. being part of a lower caste or linguistic community) (Akerlof and Kranton, 2000).

3 Data

Electoral Data

We are using the legislative election of Indian states. The data spans from 1974 to 2000. We have 3,767 constituencies. We have data on the votes received by different political parties in each election. We focus on our analysis of the votes received by the BJP (Bhartiya Janata Party). In addition, we

also know the winner of the election in each constituency, which is also one of our main dependent variables. The source of the data is (Agarwal et al., 2021).

Hindu Muslim Conflict

For Hindu-Muslim Conflict data we rely on (Wilkinson, 2006) and (Mitra and Ray, 2014). (Wilkinson, 2006) give us the number of Hindu-Muslim conflicts until the year 1995. We used (Mitra and Ray, 2014) who extended the dataset until 2000. For our analysis, we focus on the years from 1974 to 2000. We manually geolocated all the conflicts to the neighbor level using GoogleMaps AI and manual verification.

RSS School

An "RSS school" in India typically refers to an educational institution affiliated with or run by the Rashtriya Swayamsevak Sangh (RSS), a right-wing Hindu nationalist organization in India. The RSS is known for its involvement in various social and cultural activities, including education.

These schools, often called "RSS schools" for simplicity, are usually not formal mainstream educational institutions like government-run schools or private schools. Instead, they are often informal or semi-formal educational centers or organizations that promote the values and ideologies espoused by the RSS.

The RSS is associated with a particular brand of Hindutva, which is a term used to describe a nationalist ideology that seeks to promote the cultural and religious values of Hinduism in India. These schools may focus on imparting education with a strong emphasis on Hindu culture, Indian traditions, and values aligned with the RSS's ideology.

It's important to note that these RSS-affiliated schools are separate from the formal education system in India and often cater to specific communities or individuals who share their ideological and cultural beliefs. The content and nature of education in such schools can vary widely, but they generally promote a specific worldview and cultural ethos.

We scrapped the universe of all existing RSS-affiliated schools in India. In total, there are 11,829 RSS-affiliated schools in India (as of August 2023). In our timeline (1974-2000) 6,910 RSS schools were established. We geolocated the coordinates of each school using GoogleMaps API and manual verification. For each school, we know the year in which the school is established. For our analysis, we will be looking at the establishment of an RSS school.

Madarsa

A Madarsa is a type of Islamic educational institution in India and other parts of the world where Muslims reside. These schools primarily focus on the study of Islamic theology, religious texts, jurisprudence, and other aspects of Islamic culture and civilization. Madrasas play a crucial role in providing religious and traditional education to Muslim students.

We received the information about Madarsa from the annual census of all schools in India by the Unified District Information System for Education Plus (UDISE+). We websrapped the location of Madarsa schools from (schoolgis.nic.in). Similarly, we also have the year of establishment for all Madarsa in India. In total, we have 9641 Madarsa in India in 2017. In our timeframe (1974-2000) 4, 627 Madarsa were established.

TV transmitters and signal coverage

We obtained the historical locations, power, and date of initiation of TV transmitters from archival records and reports published by the Ministry of Information and Broadcasting of India. While various annual reports were important in knowing when new transmitters were built, our primary archival source was a report named Television in India published in 1987 which detailed all the transmitters and their location constructed up to 1987. We also talked with current officials at the ministry as well as accessed technical documents on their transmission to gain an understanding of other important inputs for the model such as the frequency at which the Doordarshan channel is used to air, the average height of towers, polarization of TV waves, etc. While the transmitter locations in the report only gave the city/town where the TV transmitter was located, we obtained geographic coordinates and elevation at which the tower was built through Google Maps and Google Earth. Where possible, we searched for the existence of the Doordarshan television tower but when not available we took the locations of the Doordarshan headquarters in that area (where transmitters were often located), the All India Radio tower or office (likely that the TV tower was also located there), and centroids of the city/town when all other searches failed. The main outputs from the TV signal modeling software are free space signal loss and effective signal loss.

Freespace and Effective Signal

In Figure 1, we plot the location of all 200 transmitters in India. We calculate the signal loss at approximately 20,000 Indian Zip-Code boundaries. The Figure shows the location of transmitters with the free space signal. We can see in the figure that the signal quality is driven by the distance and the power of the transmitters. Figure 2 shows the zoomed satellite map of central east Indian territory with both rugged and plain topography with transmitters. Figure 3 plots the hypothetical free space signal at the zip code level. It shows that the zip region near the transmitter has the better signal quality and it deteriorates as we move away from the transmitters. The darker is region the better is signal quality. Figure 4 plots the effective signal quality which takes into consideration the ruggedness. We can see that the quality of signal in free space and effective signal differs considerably in the regions which are relatively rugged.

Additionally, we have obtained a survey (NFHS-1), where 80,000 households (representative of all of India) were asked if the household has a TV Set at home. We plot the relationship between TV Signal quality and Availability of TV at the district level and we can see in Figure 5, that we see a positive relationship between signal quality and availability of TV. The relationship between TV availability is stronger with the Effective Signal than with the Freespace signal. This evidence validates our instrument to a large degree.

4 Methodology

TV signal calculation

To measure the exposure of the TV show, we use a signal modeling technique called Irregular Terrain Model (Hufford, 2002). This is a model of signal propagation that takes into account how natural barriers to signal in the form of terrain lead to natural variation in signal strength to the areas around a TV transmitter. We utilized code developed by Olken (2009) to model the signal strength. The key inputs are the location, height, power, and frequency of the television transmitters, the location of receivers (which we proxy with centroids of districts/constituencies), and raster data of natural terrain to understand elevation and natural barriers between the transmitters and receivers.

The two key outputs are free space signal loss and effective signal loss. Free space signal loss calculates how much of the TV signal is lost between the transmitter and the receiver accounting for distance and climatic factors, assuming there are no other barriers to obstruct the signal. Thus, this does not take into account the topography between the transmitter and the receiver which could obstruct the signal. The second output is the effective signal loss which does factor in the topography and thus often shows more loss in signal than free space loss. Our main proxy for exposure to the government TV channel that aired the religious show is the effective signal strength. However, in all regressions, we control for free space signal strength. The reason for this is that TV transmitter locations themselves are often endogenous; they are located in cities or district head-quarters, and thus the areas closer to TV transmitters most likely vary in many characteristics from those who are in areas further away from TV transmitters, in addition to differences in TV signal that depreciates with distance. Thus, it is not convincing to use free space signal strength as a proxy for exposure to the television show. However, controlling for free space signal strength while using effective signal strength as a proxy enables us to use the natural, unplanned variation that occurs in signal strength due to topographical barriers while controlling for the various unobservables in area characteristics and TV transmitter location decisions (captured by the free space signal strength). Effective signal loss is supposed to be modeled as a continuous variable since there isn't a particular, objective cutoff above which we can say that an area is definitely exposed to the TV show (Crabtree and Kern, 2018).

An important detail that makes this model viable for the use of modeling exposure to the TV show is that at the time of the show (1987-88) only government transmitters were available and there was only one government channel (Doordarshan). It is lucky that the study was temporally placed before the introduction and massive expansion of TV to private companies and channels starting in the 1990s. Thus, there is no competition in terms of viewership of the government TV channel in my context. There is still an issue of separating out the effects of this the *Ramayan* TV show compared to the other shows that aired on the same channel. As noted before, the *Ramayan* is anecdotally shown to be massively popular with millions of viewers glued to communal TVs every Sunday for 1 hour. There are no other shows of a religious nature, but it is possible that some other shows could lead to similar changes in identity salience. Our next steps to account for this will be to make

use of the roll-out of TV transmitters (instead of just accounting for transmitters pre-1987) to show that the roll-out of TV before the Ramayan did not have a similar effect in increasing the salience of religious identity.

Specification

We are following Wang (AER 2021) and Zhuravskaya et al. (AEJ: Applied 2023).

 $Y_{it} = \beta_0 (\text{Effective Signal})_i \times \text{Post}_t + \beta_1 (\text{Freespace Signal})_i \times \text{Post}_t + \gamma_i + \theta_t + \epsilon_{it}$

where $\mathbf{Y}_{it} \in (\text{BJP Vote Share, BJP Winner, RSS School, Madarsa)}$ is the outcome variable. Freespace Signal is the signal strength in free space without any topographical barrier. Effective Signal is the signal strength accounting for topographical barriers. Post is dummy equals 1 after 1986. γ_i and θ_t are constituency and year fixed effect respectively. We control for free space signal strength, the reason for this is that TV transmitter locations themselves are often endogenous and this helps with isolating the effect purely driven by geographic ruggedness.

Our main coefficient of interest is β_0 . Our hypothesis is that for outcomes of electoral outcomes of right-wing Hindu nationalistic party and Hindu-Muslim conflict: $\beta_0 > 0$

5 Results

Given our data and regression specification, we present the results of exposure to the TV show *Ramayan* on the outcomes of electoral, conflict, and religious schools. While we have fixed effects for the spatial unit (district/assembly constituencies) and year in all the regressions, we show the results with and without controlling for the free-space signal to highlight the robustness of our results.

In Table 1, columns 1 and 2, we find that constituencies with higher exposure to the TV show have a greater increase in the vote share for BJP, the right-wing Hindu nationalistic party. To make the magnitudes more interpretable: a one decile increase in effective signal is associated with a 0.54% increase in BJP vote share. In Table 1, columns 1 and 2, we find that a higher effective signal is also associated with an increased probability of BJP winning the elections; a one decile increase in effective signal is associated with a 1.34% increase in the probability of winning a constituency.

In Table 2, columns 1 and 2 present the results on the number of Hindu-Muslim conflicts in a constituency while columns 3 and 4 present the results on the indicator of whether there was any conflict between Hindus and Muslims in the time period. Across the two outcomes, we find that exposure to the TV show increased inter-religious conflict. A one decile increase in effective signal is associated with a 6% increase in conflict, with respect to the mean.

For the effect of TV show exposure on religious schools, we had multiple hypotheses. On one hand, the exposure to the TV show and increased salience of religion through that could increase the number of Hindu nationalistic schools. On the other hand, the TV show could be substituted as a medium for nationalistic sentiment and thus decrease the need for Hindu religious schools. We find in our analysis (columns 1 and 2 of 3) that a higher effective signal decreases the presence of RSS schools; a one decile increase in signal is associated with a 10% decrease in RSS schools. There is no significance on madrasas (Muslim religious schools).

6 Conclusion and Discussion

In this paper, we study one of the potential drivers of a very important phenomenon that has changed the social fabric of India. In a land of diversity in religious, caste, and linguistic identities, an identity being crafted along one of these lines that makes one facet of identity more salient than other identities a person might have can have huge implications for who is seen as the in-group and the out-groups. This in turn has implications for political, social, and economic interactions and the well-being of these groups.

We find that exposure to the Ramayan TV series is associated with an increase in BJP vote share and the chances of BJP winning the election. We also find that TV series lead to an increase in Hindu-Muslim conflict. Finally, we find that Hindu and Muslim religious school has been affected differently by the exposure of the Ramayana TV series. We find that the number of RSS Schools (Hindu religious schools) opening decreases by exposure to the Ramayana TV series while there is no visible impact on Madarsa.

There is still an issue of separating out the effects of this the Ramayan TV show compared to

the other shows that aired on the same channel. As noted before, the *Ramayan* is anecdotally shown to be massively popular with millions of viewers glued to communal TVs every Sunday for 1 hour. There are no other shows of a religious nature, but it is possible that some other shows could lead to similar changes in identity salience. Our next steps to account for this will be to make use of the roll-out of TV transmitters (instead of just accounting for transmitters pre-1987) to show that the roll-out of TV before the Ramayan did not have a similar effect in increasing the salience of religious identity.

In the next steps, we delve into rich and granular individual-level data to look into the effects of the TV show on behavioral expression of identity thorugh revealed preferences: naming of children and abstinence from foods that are religiously tabooed. This will link the political and socio-economic outcomes we have documented so far to more individual-level changes in crafting of and affinity to one's religious identity.

	(1)	(2)	(3)	(4)
Dependent Variable	BJP Vote	BJP Vote	BJP Winner	BJP Winner
Effective $\operatorname{Signal}_i \times \operatorname{Post}_t$	0.063^{***} (0.015)	0.085^{***} (0.022)	0.001^{**} (0.000)	0.002^{***} (0.001)
Freespace $\text{Signal}_i \times \text{Post}_t$		-0.056 (0.042)		-0.002^{*} (0.001)
Mean of Dep. Var.	22.09461	22.09461	0.22214	0.22214
Observation(n)	9,633	9,633	9,633	9,633
Year & Constituency FEs	51	51	51	51
Cluster SE	Constituency	Constituency	Constituency	Constituency
Flexible Control	53	51	53	51
R-Squared	.767	.767	.472	.473

Table 1: Impact of Ramayan on electoral outcomes

Table 2: Impact of Ramayan on Hindu-Muslim Conflict

	(1)	(2)	(3)	(4)
Dependent Variable	HM Conflict	HM Conflict	HM Conflict (Dummy)	HM Conflict (Dummy)
Effective $\operatorname{Signal}_i \times \operatorname{Post}_t$	$\begin{array}{c} 0.000236^{***} \\ (0.000079) \end{array}$	$\begin{array}{c} 0.000197^{***} \\ (0.000058) \end{array}$	$\begin{array}{c} 0.000121^{***} \\ (0.000037) \end{array}$	$\begin{array}{c} 0.000098^{***} \\ (0.000036) \end{array}$
Freespace $\text{Signal}_i \times \text{Post}_t$		0.000103 (0.000141)		0.000059 (0.000078)
Mean of Dep. Var.	0.01103	0.01103	0.00735	0.00735
Observation(n)	104,858	104,858	104,858	104,858
Year & Constituency FEs	51	51	51	51
Cluster SE	Constituency	Constituency	Constituency	Constituency
Flexible Control	53	51	53	51
R-Squared	.155	.155	.116	.116

Table 3: Impact of Ramayan on religious schools

	(1)	(2)	(3)	(4)
Dependent Variable	RSS School	RSS School	Madarsa	Madarsa
Effective $\operatorname{Signal}_i \times \operatorname{Post}_t$	-0.000832*** (0.000165)	-0.000857*** (0.000246)	0.000025 (0.000288)	-0.000214 (0.000293)
Freespace $\operatorname{Signal}_i \times \operatorname{Post}_t$		$\begin{array}{c} 0.000065 \\ (0.000392) \end{array}$		$\begin{array}{c} 0.000621 \\ (0.000507) \end{array}$
Mean of Dep. Var.	0.06948	0.06948	0.00735	0.00735
Observation(n)	104,858	104,858	104,858	104,858
Year & Constituency FEs	51	51	51	51
Cluster SE	Constituency	Constituency	Constituency	Constituency
Flexible Control	53	51	53	51
R-Squared	.191	.191	.089	.089







Figure 2: Loaction of transmitters in the plain and rugged areas

Figure 3: Freespcae Signal in the plain and rugged areas. The darker the region stronger the TV signal

Figure 4: Effective Signal (taking into consideration the geographic ruggedness) in the plain and rugged areas. The darker the region stronger the TV signal





Figure 5: Relationship between Survey of TV Availability and Signal Loss (Effective Signal)

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