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Explaining Spatial Variation in Hindu-Muslim Violence in Gujarat, 2002

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The worst Hindu-Muslim violence in Gujarat (western India) since Partition occurred in 2002. Compiling data on killings reported in the Times of India, we analyze how violence varied across 216 urban and rural areas. This demonstrates that violence was a product of political calculation and economic deprivation. Killings were low where the Hindu nationalist Bharatiya Janata Party (BJP) was weak, but were also low where the BJP was strong; it peaked where the BJP faced the greatest electoral competition. Killings increased with greater economic deprivation, measured by underemployment and youth unemployment. Confounding expectations, violence was lower where Scheduled Castes and Tribes composed a higher proportion of the population. The fact that violence in towns and cities followed a political logic is confirmed by an analysis of the subsequent election: the BJP's vote increased most in districts with the worst violence.

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The Partition violence between Hindus and Muslims, which claimed 200,000 lives, marked the beginning of what was to become a pervasive phenomenon in independent India. Since 1950, an estimated 13,000 incidents of Hindu-Muslim violence have occurred, claiming over 10,000 lives.¹ A systematic causal analysis of these events becomes a challenge in the absence of reliable data, assuming that government data tends to be biased.² That could be one reason why much of the study of ethnic violence in India has followed two approaches: first, the culturalist approach that construes the context of violence rather than the cause. Culturalists focus on a ‘post-riot’ interpretive narrative to identify the processes that generated the riot and its interpretations (and their manipulation) after it has occurred.³ The second approach identifies causation qualitatively, through anecdotal evidence, historical narratives and field reports of human rights groups.⁴ Arguments resulting from both approaches converge on two aspects: that the typical ethnic riot is (i) a multicausal phenomenon emerging from a context of social tensions that are strengthened by historical distortions and myths, and (ii) often a state-sponsored ‘pogrom’ against ethnic minorities (Muslims, in this case) for electoral benefits.⁵ While these studies derive valid descriptive inferences, establishing causation is problematic because anecdotal evidence does not control for other socioeconomic factors and, more significantly, these studies focus only on places where riots have occurred, generating a selection bias and the danger of theoretical overgeneralization.⁶ Among these contributions, Brass uses the post-riot interpretation approach to understand spatial variations, suggesting the presence or absence of ‘institutionalized riot systems’ as the principal factor in predicting occurrence of riots over time and space.⁷ However, this explanation cannot control for other socioeconomic factors, even as it attempts to decipher the cause of violence from its consequences.

Recent studies have attempted to overcome previous limitations. Key proponents include Varshney and Wilkinson, who pioneered a dataset of Hindu-Muslim violence in the period 1950 to 1995 in India.⁸ Varshney proposed a theory founded on the contact hypothesis that argues for the presence or absence of inter-ethnic civic and associational networks as the key variable for variations in occurrence of violence, assuming that the elected state would act in a politically strategic manner.⁹ Using the same dataset, Wilkinson offered a more testable theory that posits the ethnic riot in the same framework of political logic as many culturalists do, but with considerable predictive power. Wilkinson argues that ethnic riots “are best thought of as a solution to the problem of how to change the salience of ethnic issues and identities among the electorate in order to build a winning political coalition.”¹⁰ Violence that is precipitated as a result of this ethnic mobilization is either allowed to continue or stopped,

depending on the will of the government that controls local law and order. His theory is based on an analysis of 167 towns in Uttar Pradesh (north India) for the period 1970 to 1995 and, more recently, of districts in Gujarat for the 2002 Hindu-Muslim violence where he finds violence to have broken out in the most competitive seats.¹¹

The Gujarat violence of 2002 is significant for recording the highest annual death toll in any event of Hindu-Muslim violence in a single state in the history of independent India—984 persons, largely Muslims, were killed after 59 Hindu passengers on a train near Godhra town were killed on February 27. The ‘post-Godhra’ violence, as termed in literature, continued unceasingly for four months and then, intermittently, for another six months. Most shocking was the spread of large-scale violence to rural areas. This was unique and contrary to established literature that treated ethnic violence “an urban phenomenon rooted among the petty bourgeoisie.”¹² Massacres of rural Muslims by thousands of villagers—many neighbors—were rampant and reported widely.¹³ People belonging to the Scheduled Tribes in the eastern tribal belt of Gujarat mobilized in thousands to set upon Muslim people and their properties with an unprecedented fury.¹⁴ Among the manifold consequences of the violence, the biggest is the string of Islamic terror attacks on India in the past decade, whose members have cited retaliation for the Gujarat riots as one of the key reasons for the attacks.¹⁵

Like its predecessors, the anti-Muslim violence was termed a ‘pogrom’ that the Sangh Parivar planned and executed, with support of the Bharatiya Janata Party (BJP) government in the state for electoral benefits in the subsequent assembly elections.¹⁶ The ‘Sangh Parivar’ (Family of Associations), is a Hindu nationalist organization in India, whose principal affiliates are the BJP, the political wing; the Rashtriya Swayam Sevak Sangh (RSS), a paramilitary social body for Hindu males; and, the Vishwa Hindu Parishad (VHP), a religious body for the consolidation and service of Hinduism. While BJP complicity would explain the high scale of violence, it does not without further refinement, explain the uneven distribution of violence across Gujarat. The analysis in our paper investigates the various structural risk factors that are likely to have led to spatial variations in the violence. It elaborates whether the violence influenced the BJP’s electoral fortune; if so, in what political configurations was BJP most likely to cause violence, while controlling for important socioeconomic indicators. The analysis also highlights the danger of selecting on the dependent variable and, therefore, leading to deceptive inferences, such as the amplification of the role of Scheduled Castes and Scheduled Tribes as participants in the violence.

1. Violence in Gujarat in 2002

Gujarat did not experience extreme Hindu-Muslim violence during Partition in 1947.¹⁷ Since then, however, it holds the dubious distinction of being the Indian state with the highest rate of deaths in Hindu-Muslim violence from 1950 to 1995.¹⁸ Why Gujarat is particularly prone to Hindu-Muslim violence is not in the purview of this paper. Yet, of the several reasons provided in qualitative literature, the most plausible is the amorphousness of caste cleavages in Gujarat—more specifically, a vertical integration of upper and middle caste orders unique to the state—unlike strong caste linkages in other states of India which experience more caste violence but less Hindu-Muslim violence.¹⁹

The first large-scale Hindu-Muslim violence in the state occurred in 1969, in Ahmedabad city, following an argument over cows disrupting a Muslim religious procession. It claimed around 600 lives in five days.²⁰ The violence is usually explained as the result of communal propaganda by the BJP (then called the Bharatiya Jana Sangh) and two other parties, dominated by upper-caste Patidars and Vaniyas.²¹ In the 1970s the Congress faced a serious challenge to its power in the state, but it eventually established a stable coalition of caste and religion known as ‘KHAM’: Kshatriyas (a political alliance of upper-caste Rajputs and lower-caste Kolis), Harijans (Scheduled Castes), Adivasis (Scheduled Tribes), and Muslims. In 1981 and then in 1985, violence occurred in Ahmedabad city between upper-caste Hindus and Scheduled Castes. While the first was entirely a caste-based conflict, the anti-reservation riots of 1985 transformed into a Hindu-Muslim conflict within one month.²² The transformation has again been explained as an attempt by the Hindu nationalist parties to politically unify Hindu caste groups.

The 1990s saw a shift from Congress to the BJP in Gujarat. By 1991, the BJP awarded 30% of its district-level leadership positions to the backward castes, who formed their ‘junior’ partners.²³ In 1995, the BJP first came to power, winning 42.5% of votes in the state election, though it continued to be in the opposition in Parliament. Within this tumultuous political situation, the national-level BJP launched a campaign to construct a temple in Ayodhya city of Uttar Pradesh in the honor of Lord Ram, whom some Hindus believe was born on the exact place occupied by the Babri Mosque, dating from the sixteenth century.²⁴ The campaign triggered around 300 Hindu-Muslim riots across India, eventually culminating in the demolition of the Babri Mosque in December 1992. Between September 1990 and January 1993, riots in Gujarat’s urban areas killed 500 people.²⁵ For the first time, violence involved active participation by Hindu upper-caste and middle-class men and even women. In 1969 and 1985, by contrast, violence was generally perpetrated by Scheduled Castes.²⁶

The continuing Ayodhya campaign also sparked the violence in 2002. On February 27, the VHP resolved to begin construction of the Ram Temple. To celebrate the occasion, thousands of *karsevaks*—Hindu volunteers—converged at the site, including many from Gujarat. Returning back to Ahmedabad, around 2,000 boarded the Sabarmati Express train. As the train reached Godhra railway station in Gujarat, on the morning of February 27, a fierce fire engulfed one coach of the train. This claimed 59 lives, mainly *karsevaks*. The cause of the fire was immediately the subject of conflicting interpretations.²⁷ Some believed it was an accident. Others attributed it to an attack by a Muslim crowd from Godhra, after an altercation between Muslim vendors at the station and the *karsevaks* over payment for tea and after the attempted abduction of a Muslim girl by passengers.²⁸ The BJP government, however, immediately issued a press release calling the fire a “pre-planned terrorist attack,” and subsequently called it “inhuman genocide” or “inhuman carnage.”²⁹ In a state where trivial incidents had triggered large-scale violence earlier, this was a trigger of immense magnitude, its impact further heightened by inflammatory headlines published in the vernacular press.

Violence began in Godhra town but was immediately controlled by the police; however, it spread rapidly to villages and towns that seemed to fall on the train route, leaving a trail of massacres. On February 28, the government brought the 59 corpses to Ahmedabad railway station, further inciting angry Hindu crowds.³⁰ On that day, the VHP declared a Gujarat *bandh* (strike), which was endorsed by the BJP. People were forced to remain indoors, which made their homes and closed shops easy targets. On February 28 alone, 248 Muslims were killed. In three days, the death toll reached 495. Pogrom-like violence, almost entirely against Muslims, spread on an unprecedented scale in villages across the state with sporadic killings continuing until December that year. Qualitative evidence in media and academic reports suggests that the violence was the product of a well-organized ‘riot system’, even though the BJP presented it as spontaneous. In an infamous speech made on March 1, the state’s Chief Minister, Narendra Modi, cited Newton’s third law—“Every action has an equal and opposite reaction”—to justify the killings of Muslims.³¹ The government referred to the massacres as “disturbances.” There is evidence of police complicity in the violence in many places. In the aftermath, moreover, the police failed to properly investigate and prosecute. The Supreme Court of India has since ordered the police to review and reopen 2,000 cases of violence which they had closed.

2. Theory

Hindu-Muslim violence in India is usually described as “communal”, with the term “ethnic” reserved for racially and linguistically distinct groups, including castes. However, we prefer the theoretical distinction made by Gupta: in a ‘communal’ conflict none of the antagonistic groups question the legitimacy of the opponent’s national identity—an upper-caste Hindu does not question the national identity of the backward caste Hindus. An ‘ethnic’ mobilization, however, works primarily on the principle of reassertion of a national identity and the opponent an enemy of the nation, as Muslims in a Hindu-Muslim mobilization.³² We acknowledge the significance of distinguishing between religious and caste violence and, therefore, interchangeably use ‘Hindu-Muslim’ or ‘ethnic’ violence in this paper, specifying ‘caste’ violence when necessary.

With the bloody Partition riots, the Gandhian ethic of non-violence receded as ethnic and caste violence became ingrained in post-colonial Indian society. Mobilization was higher for these identities in the decade 1980s onwards and, among them, religious identities (Hindu-Muslim in particular) were found to generate more violence than those of caste.³³ The worst events of ethnic violence in India include Hindu-Sikh violence in Delhi (around 3,000 dead in four days) in 1984, and Hindu-Muslim violence in Maharashtra in 1984 (109 dead in twelve days), Bihar in 1989 (396 dead in two months), Ahmedabad in 1969 (600 dead in five days, mentioned above), and across India in 1992-93 (around 2,000 killed in five months).³⁴ The intensity of the 2002 violence in Gujarat—at least 495 killed in just three days—means that it be called the worst event of Hindu-Muslim violence in the country. Such civil war-like killings occurring within days in a fully democratic polity like India are rare. A contemporary cross-national example would be the 1983 ethnic violence against Tamils in Sri Lanka when an estimated 2,000 Tamils were killed within two weeks.³⁵

Ethnic violence is assumed to be endemic in India, particularly in Gujarat. The endemic nature of ethnic violence has given the ‘communal riot’ in India an ‘essentialized’ form. Maya Kodnani, a BJP leader, stated during the Gujarat violence in 2002: “This kind of communal violence is part of Gujarat *ki prakruti* (Gujarat’s nature). It is a natural part of life, and should be accepted as such.”³⁶ This primordial approach to explaining ethnic violence rests on the assumption that human beings are inherently in search of their roots and bound by common myths and symbols associated with their ethnicity.³⁷ While this approach has an instrumental utility, in that ‘ties of blood’ can explain the creation of a collective identity in building feelings of nationalism, they cannot explain why resentment occurs between two ‘inherently’ antagonistic groups in one place and not another.³⁸ The manipulation of ethnic identities could be successful in the context of pre-existing antagonism, but people are

unlikely to kill or attack each other only because of ancestral animosities. Illustrating the case of Northern Ireland, if this were true, there would be no peace between Protestants and Catholics in Dunville; violence would be as frequent here as it is in Kileen/Banduff and in the Upper Ashbourne Estates.³⁹ Similarly, on the Zambia-Malawi border, the Chewas and Tumbukas engage in violence on the Malawi side, but are peaceful on the Zambian side.⁴⁰ Alternatively, ‘essentialized’ violence does not explain why it occurs in a specific place at one time and not another. For 25 years between 1950 and 1995 Gujarat either had none or very low incidents of Hindu-Muslim violence—riots were episodic until the major clash in 1969, then again became sporadic in the 1970s, and then more frequent from the 1980s onwards.⁴¹

Rejecting primordialism, many scholars have investigated in ethnographic detail the processes and repertoires that produce a riot. Brass conceptualizes an ‘institutionalized riot system’: a network of actors, groups and connections whose objective is to keep a town or city in a permanent state of awareness of Hindu-Muslim relationships; the cultural construction of fear and subsequent demonization of Muslims, where violence against Muslims is perceived as a legitimate act of self-defense, by a ‘weak’ state, against minority aggression; the implications of coding of the violence as a riot (spontaneous) or a pogrom (organized); and, the recurring phases and ritual-like patterns within a ‘spontaneous’ riot, consequences of which could become the revenge motivation for a subsequent riot.⁴² While these are useful cultural-political frameworks, they contribute less towards understanding why violence can be variable across space (or time), given that these frameworks exist. Or do these frameworks occur variably as well? If they do, under what conditions? Brass later sets up three (albeit “unstable”) contextual factors for a riot to be produced: the numerical strength of the Hindu and Muslim populations—if the Muslims are substantially higher, they could tilt the balance in favor of a rival political party; the presence or absence of political space and political opportunity; the presence or absence of political will to prevent and control riots.⁴³ However, without explaining the emergence of an ‘institutionalized riot system’, which is a key component in a place where Hindu-Muslim riots are endemic, these conditions are not very useful for explaining variation or change.

We will focus on theories that can potentially explain variation in violence across Gujarat’s towns and rural areas in 2002. These theories are able to be tested with information on political, demographic, and economic characteristics before violence occurred. It is crucial to compare all places, including those without violence, rather than focusing exclusively on places with the most violence.⁴⁴

Wilkinson specifies a theory of political logic using a controlled, systematic analysis of Hindu-Muslim violence in India for the period 1950-1995: “The most effective method for elite-dominated ethnic parties to mobilize those target voters who are at risk of voting for the main rival parties will be to use ethnic wedge issues to increase—albeit in the short term—the salience of ethnic issues that will favor their party.”⁴⁵ This is truer in close electoral races, where political parties can maximize strategic swing votes in their favor by raising divisive symbolic issues related to ethnic identity in order to depress the vote of the opponents. Violence that is precipitated as a result of this ethnic mobilization is either allowed to continue or stopped, depending on the will of the government that controls local law and order. The government’s decision to choose between these options depends on the risk of its target voters voting for the opposition, the electoral strength of minorities, and party competition—if the electoral strength of the minorities is high and if there are three or more parties in competition, the government is more likely to control violence.

Multi-ethnic societies provide a wider scope of changing the salience of ethnic issues to suit the political elites. In the United States, the government did not prevent anti-minority violence in the South after 1877 when it looked for white Southern voter support whereas it did prevent violence in the 1940s and 50s when votes of the Blacks mattered.⁴⁶ Similarly, the Rwandan genocide revealed less of antagonistic ties but of individual struggles for political power.⁴⁷ Relative to material goods, the immutability of ascriptive ethnic identities such as caste, religion and, to some extent, language, tend to heighten the success of using divisive issues during elections; people are less willing to compromise on what they see as fixed (caste, color) or sacred (religion), making compromises of an instrumental nature difficult.⁴⁸ While electoral politics does not serve as a cause of ethnic violence, it does serve as a ‘focal point’ facilitating convergence of individual expectations and hence is useful as a mobilization strategy.⁴⁹ In addition, for the political party, the cost of mobilizing voters on an issue that is symbolic is lower than if the voter is mobilized on a material issue, such as employment of an ethnic group wherein the party needs to deliver results if victorious. In the Indian context, the cost is lower also because the Indian state institutionally privileges some forms of mobilization, particularly “traditional” religious ceremonies and processions. Such religious or national obligations cannot be banned by the local administration. These provide opportunity for countermobilization by the other ethnic group which can then be interpreted as ‘illegitimate provocation’ by the minority.⁵⁰

The political logic articulated by Wilkinson is clearly relevant to the 2002 violence. The BJP’s grip on the state had begun to wane. The party had fared poorly in civic and district panchayat elections in 2000, losing seats in Ahmedabad and Rajkot. In September 2001, the

BJP lost to the Congress in two by-elections in view of poor distribution of relief for a massive earthquake that year. The Chief Minister was forced to resign, to be replaced by Modi. Under Modi, however, the BJP again lost two assembly seats out of three in a by-election on February 24, 2002. A complete revival of the Gujarat BJP, particularly for the new chief minister, was vital, before state elections scheduled for the end of 2002.

Hypothesis 1a: Muslims were more likely to be killed where the BJP had the greatest electoral support.

Hypothesis 1b: Muslims were more likely to be killed where the BJP faced greatest electoral competition.

Varshney makes a compelling argument for inter-communal civic networks.⁵¹ From an investigation of six cities in India, he argues that strong civic and associational ties between Hindus and Muslims deter the formation of a riot system. The difficulty lies in testing this theory systematically across many cases. His own quantitative analysis of Hindu-Muslim violence in the period 1950-1995 used literacy, Muslim population, and city area, and did not measure civic networks. We also lack any measure of civic networks, and so are not able to test the applicability of Varshney's theory.

The theory of desegregation—first proposed by Olzak—counters Varshney's explanation of intercommunal ties and presence of peace in mixed neighborhoods.⁵² Drawn from historical case studies of 77 American cities from 1877 and 1914, Olzak argues that it is the desegregation of political, economic or geographical spheres that creates group antagonism. When the majority group mobilizes against a minority group whom they feel are threatening the status quo of the dominant group, primarily for political resources, threat becomes operative.⁵³ In a recent study of Ahmedabad city, Field et al. suggest that violence occurred more in heterogeneous labor-dominated areas of Ahmedabad where archaic tenancy rights had made it impossible for residents to relocate to segregated areas.⁵⁴ Differential growth rate between Hindus and Muslims is a common rhetoric adopted by radical Hindu leaders who have argued that high Muslim growth rates will cause Muslims to outnumber Hindus.⁵⁵ Although this would apply to a study in variations over time, the argument also applies to the numerical proportion of Muslims in comparison with Hindus in a given space. Studies on racial prejudice show that the sense of cultural threat in one group relative to another is formed by a running process in which the dominant group is led to define and redefine the subordinate group and the relations between them.⁵⁶ Assuming that the literature stating ethnic violence in India to be pogroms against Muslims holds some truth, it is likely that a higher proportion of Muslims relative to Hindus in a given space would enhance the success of constructing a sense of cultural threat.

Hypothesis 2: Muslims were more likely to be killed where they were a larger minority.

Cultural threat is likely to be assuaged with high education levels. Modernization theorists argue that education weakens traditional, ascriptive attachments, including those based on ethnicity. Education is associated with higher levels of tolerance even among those who oppose a group they consider a moderately high threat.⁵⁷ Cross-national analyses find a strong inverse relationship between education and expressions of ethnic prejudice or support for the extreme right.⁵⁸ Urdal found literacy to have a moderately inhibiting effect on riots in 13 states of India.⁵⁹

Hypothesis 3: Muslims were more likely to be killed where literacy was low.

Economic deprivation (absolute or relative) is a thesis similar to cultural threat, one that focuses on a real or perceived threat to one's economic status which leads to frustrations later expressed in violence.⁶⁰ Looking at the large-scale migration in Gujarat in last three decades, including of Muslims, the possibility of creating a perception of economic threat exists as also the presence of the onset of a real threat for resources, such as land for housing.

Hypothesis 4: Muslims were more likely to be killed where unemployment was high.

Related to the argument of economic inequalities, is the literature on the association of specific population changes with security concerns, namely that of youth bulges and their predisposition to participation in political violence.⁶¹ 'Youth bulges'—unusually high proportions of people in their teens and twenties in relation to the adult population—have been historically associated with political upheavals and violence.⁶² The English Revolution of the 17th century, the French revolution of the 18th century, Paris in 1968, Dhaka in 1971, Tehran in the late 70s, Manila in 1986, in Tiananmen Square in 1989, Jakarta in 1998, have all seen youth movements challenge regimes.⁶³ As Huntington says: "Young people are the protagonists of protest, instability, reform and revolution."⁶⁴ Their motive to participate can include grievances such as unemployment, lack of political openness and crowding in urban centers.⁶⁵ In addition, young cohorts present a source of abundant supply of rebel labor having low opportunity cost.

'Youth bulge' literature in India is usually linked to student agitations on campuses. The country, before and after independence, has seen numerous student protest movements, such as the agitations in Gwalior, Indore, Calcutta, Allahabad and Jaipur in the 1950s; the Navnirman Movement in Gujarat in 1974 that led to the overthrow of the incumbent Congress government; the anti-reservation student-initiated movements in India in the 1990s and in 1985 in Gujarat. Some of these agitations turned violent, such as the one in 1985 that began as an anti-reservation movement against Scheduled Castes but became a Hindu versus Muslim clash, claiming 150 lives.⁶⁶ In a study of Indian states, Urdal found robust support of

youth bulges associated with a higher risk of Hindu-Muslim rioting in the period 1956-2002.⁶⁷

Hypothesis 5: Muslims were more likely to be killed where there was a surplus of young adults.

3. Data and Method

Dependent variable

The dependent variable is the number of killings in Hindu-Muslim violence in Gujarat from February 28 to December 31, 2002. Unlike Wilkinson, we do not count the number of riots because of the risk of underestimation: at a time when hundreds of incidents were occurring across the state, non-lethal riots were likely to go unrecorded.⁶⁸

Figures provided by the government are obviously suspect.⁶⁹ Only in 2005 did the Gujarat government, under pressure from an Indian Member of Parliament, provide an official death toll in the post-Godhra violence.⁷⁰ The official death toll (excluding the 59 *karsevaks* who died in the train fire) was then 1,044: 790 Muslims and 254 Hindus. But this excluded many victims whose bodies had not yet been discovered. In 2009, after the legal period of seven years, 228 missing during the violence were officially declared dead. The final official death toll was publicized as 1,180 (again excluding the *karsevaks*). The sum (1,044 + 228) should be 1,272, but the anomaly is unexplained. The state government has recently (in June 2011) destroyed all official records of the violence. Alternatively, non-government organizations could be used as a source of data. Advocates for the victims of ethnic violence may overstate facts to bring about desired political outcomes.⁷¹ Such organizations claim a death toll of around 2,000, mostly Muslims.⁷² Wilkinson and Haid use the Concerned Citizens' Tribunal, a report published soon after the violence.⁷³ We have discovered several inaccuracies. For example, the Tribunal lists "over 200 deaths" in Naroda Patiya and Gam areas in Ahmedabad city; but combing through newspaper and legal reports, we can enumerate only 91 deaths.

We compile original data from the *Times of India (ToI)*, following the procedures used by Varshney and Wilkinson to compile data on Hindu-Muslim violence in India from 1950 to 1995.⁷⁴ They chose *ToI* in part because "unlike several other newspapers, many a time [it] refused to run unchecked rumors about communal violence."⁷⁵ Aside from the advantage of comparability, *ToI* had a wider network of reporters across urban and rural Gujarat than any other English newspaper. Indeed, *ToI*'s Ahmedabad edition won the nationally renowned Prem Bhatia Award for the most objective coverage of the Gujarat violence. Reading the *ToI*'s Ahmedabad edition from February 28 to December 31, 2002, we recorded all deaths

resulting from Hindu-Muslim violence. (Varshney and Wilkinson use the Mumbai edition, but we found that this reported 9% fewer deaths than the Ahmedabad edition.) In addition, we update the number of deaths following subsequent legal investigations, as reported in *ToI's* Ahmedabad edition. For example, 27 deaths were reported in Sardarpura village of Mehsana district at the time. In 2009, this figure was revised to 33.⁷⁶ If the number of deaths is not exact, we follow Varshney and Wilkinson in using the lower rather than the higher number. They exclude killings where personal rivalry is the trigger. In this episode of violence, however, this distinction is impossible to draw, because the Godhra train burning overshadowed all other triggers.

Our figures are compared with others in Table 1. The first measure is used in our quantitative analysis of towns and rural areas. The second incorporates 228 missing persons legally declared dead in 2009. This is available only at the district level, but it is very highly correlated with the first. Our combined total of 984 is lower than the government death count of 1,180, because we always take the minimum number reported. Our measure of killings is fairly highly correlated with Concerned Citizens' Tribunal. It is even more highly correlated with the number of Muslims killed compiled by the State Intelligence Bureau, covering the period February 27 to August 7. The Bureau was headed by a police officer who abhorred the complicity of the state government. The triangulation of our figures with the Bureau's and Tribunal's increases our confidence in their reliability. Most crucially, our figures can be disaggregated below the district level, to locate violence in towns and villages.

Previous literature finds that Hindu-Muslim violence tends to recur in the same places over time.⁷⁷ We can compare the number of killings in each district in 2002 with the number in the violence during the Ayodhya campaign and subsequent demolition of the Babri Mosque (1990-93), the previous peak of violence in Gujarat.⁷⁸ There is a positive correlation ($r = .64$).⁷⁹ But this simply reflects the large number of killings in Ahmedabad in both waves of violence, which in turn reflects the fact that the city has a far higher Muslim population than anywhere else. Controlling for the Muslim population, the correlation is minimal ($r = .14$) and far from statistical significance ($p = .49$).

Method

The primary administrative unit of governance is the district, which has become the standard unit in quantitative analyses of violence in India.⁸⁰ But there were only 25 districts in Gujarat in 2002. Such a small number of cases poses the danger of more inferences than observations.⁸¹ Districts are enormous, with an average population of two million, and combine rural and urban areas. Therefore we conduct analyses at the level of the town, which

is the basic administrative unit for urban areas. The 2001 Census provides data on 191 towns, ranging in population from 338 to 4.4 million. Unfortunately the Census provides no detailed data on the equivalent rural unit, the village, but only on the rural population of each district. Therefore we can analyze 25 rural areas, ranging from 187,000 to 2.2 million.⁸²

As the dependent variable counts the number of events, negative binomial regression is used. In principle, we would prefer a hurdle model which divides the outcome in two: first, whether any deaths occurred (logistic regression); second, if any occurred, how many occurred (truncated negative binomial regression). But a hurdle model doubles the number of parameters, and this is not efficient with a limited number of observations.⁸³ Negative binomial regression models the number of deaths in each area:

$$\tilde{\mu}_i = \exp\left(\beta_0 + \sum \beta_{ki} X_{ki}\right) \delta_i$$

where X_k are independent variables and δ is the error term, drawn from the Gamma distribution with mean of 1 and variance of α . We pool the 191 towns and 25 rural areas because there are no compelling theoretical reasons to expect the causes of violence to have operated differently in urban and rural areas. (This assumption will be tested below.) Social and economic variables, such as the proportion of agricultural laborers, measure many of the differences between town and country. Any remaining differences are captured by a binary variable coded 1 for town and 0 for rural. Muslim population is used to capture, to put it crudely, the potential number of victims. The variable is transformed by taking the logarithm, like an exposure term (though its coefficient is not constrained to one). Needless to say, this variable is strongly correlated with the logarithm of the Hindu population ($r = .83$). (The Appendix provides descriptive statistics and correlations.)

Independent variables

To test Hypotheses 1a and 1b, we examine the prior election to the Gujarat State Assembly in 1998.⁸⁴ The absence of election data at the town level poses a challenge. The 182 constituencies of the State Assembly often cross town boundaries, but do not cross district boundaries, and so we measure electoral results at the district level. We calculate the proportion of votes won by the BJP, which ranges from 28% to 59%, as has been done in electoral studies in Gujarat.⁸⁵ Following Hypothesis 1a, we expect the number of deaths to increase with BJP vote. Following Hypothesis 1b, we expect the number of deaths to peak where the BJP vote is close to the threshold of electoral victory—around 39% in 1998—and then would fall where the BJP vote is high enough to assure victory.⁸⁶ This is tested by adding a quadratic term.

Hypothesis 2 is tested by the proportion of Muslims. We expect areas with a higher proportion of Muslims to have more killings. Hypothesis 3 is tested by the proportion of total population aged 7 and over who are literate. Hypothesis 4 is tested with the conventional division of the Indian population into two categories: “main” workers, who have worked for at least six months of the year, and “marginal” workers, who have worked for less. The reference category is non-workers. We expect areas with more marginal workers to have more killings. The hypothesis is also tested using the four occupational categories provided by the Census.⁸⁷ Variables are entered for the proportion of cultivators (who own land), of agricultural laborers, and of household-industry workers. The reference category is “other workers,” encompassing all other occupations from factory workers to professionals. We expect a positive association between agricultural workers, the most disadvantaged occupation, and the number of killings.

Hypothesis 5 is tested using the age range of 15-34 years. Although 15-24 is common in the literature, we extend the range because many people subsequently convicted of violence were in their late twenties or thirties at the time.⁸⁸ The denominator is the population aged 15 years and above, which Urdal argues is more appropriate than total population.⁸⁹ Combining Hypotheses 5 and 4, we also create a measure of youth unemployment. This is the proportion of people aged 15-34 years who are either marginal workers or non-workers, and who are available for or seeking work.⁹⁰

The proportion of the population who are in Scheduled Tribes and in Scheduled Castes is obviously important to consider. There is no clear theoretical hypothesis, but commentators have emphasized the prominent role of both groups in this wave of violence, and so we expect a positive association.⁹¹

5. Results

Table 2 shows the results. Model 1 begins with social and economic variables, while Model 2 adds BJP vote. The coefficients are expressed as incidence-rate ratios. For independent variables measured as a percentage, this ratio estimates how much a change of one percentage point in the independent variable would multiply the predicted number of killings. Models can be compared using the corrected AIC, which is most appropriate where the number of observations is not large.⁹² The high value of α reveals pronounced overdispersion (compared to a Poisson distribution, which would be indicated by $\alpha = 0$), even controlling for Muslim population. This can be interpreted as showing that each killing in an area made further killings there more likely.

Model 1 shows that predicted killings increased with the Muslim population. The positive effect is entirely expected, of course, but it is noteworthy for being disproportionate. (A proportionate effect would mean an incidence-rate ratio of $e^1 = 2.7$, which can be rejected at $p < .001$.) A tenfold increase in Muslim population would multiply the predicted number of killings by sixteen. Hypothesis 2 is not supported, as the proportion of Muslims reduces rather than increases the number of killings (though this is not statistically significant in Model 1). In a few towns Muslims outnumbered Hindus, which might suggest a non-monotonic effect, whereby killing was lowest where the Muslim proportion was near zero or above half. A quadratic term, however, reveals no such effect.

Hypothesis 3 is contradicted, as literacy actually increases the predicted number of killings (though this just falls short of conventional statistical significance, $p = .051$). Hypothesis 4 is supported in two respects. The predicted number of killings increases where more people were marginal workers and where more young people were unemployed. The proportion of agricultural laborers, however, has no effect.⁹³ Hypothesis 5 is not supported, for the youth bulge has no discernible effect. Youth unemployment is not a consequence of youth bulge, for the two are negatively correlated ($r = -.60$). Restricting the age range to 15 to 24 does not alter this result. Finally, Scheduled Tribes and Scheduled Castes both have the opposite effect from that expected, for they reduce the number of killings. These social and economic variables leave a large unexplained differential between urban and rural areas, shown by the huge effect for the binary variable for towns. This binary variable is a partial effect, of course, which must be interpreted alongside the other variables. Rural areas generally had a higher proportion of marginal workers and a lower proportion of Muslims, and both these variables increase the number of killings. With these offsetting effects, the overall death rate (per Muslim population) was almost identical between rural and urban Gujarat.

When BJP vote is added in Model 2, the results for social and economic variables remain broadly similar. The proportion of Muslims now attains statistical significance, contradicting Hypothesis 2. Combining this result with the positive and disproportionate effect of Muslim population, we can say that violence was worst where Muslims were concentrated in the largest numbers but also where they were most outnumbered by Hindus. Scheduled Caste just elides conventional statistical significance, though the estimated effect is hardly diminished. Most importantly, BJP vote in the 1998 election has a powerful non-monotonic effect. Figure 1 shows how the incidence rate varies with the percentage voting for the BJP, compared to the incidence at the median vote of 46.7%. In districts where the BJP was weakest, fewer killings would be predicted, controlling for social and economic factors. Where the BJP was

strongest, however, even fewer killings would be predicted, in accordance with Hypothesis 1b. Muslims were most vulnerable where the BJP gained about 36% of the vote, which is very near the threshold for winning a State Assembly seat in 1998. Note that the percentage voting for the BJP is not simply the inverse of the percentage voting for Congress ($r = -.42$). Adding the latter variable (whether alone or with a quadratic term) reveals no effect.

In sum, then, we find that violence depended on the size of the Muslim population, on economic deprivation, on Scheduled Castes and Tribes, and on the BJP's electoral competitiveness. The robustness of these results has been tested in various ways. One concern is the influence of Ahmedabad, which had by far the highest killings: 279. Adding a binary variable for this city suggests almost sixteen times more killings than would be predicted ($p = .06$). But this barely alters the other effects. The only exception is that Muslim proportion edges beyond statistical significance ($p = .059$), as does the binary variable for towns. Another concern is whether variables affected rural areas differently from towns. This is tested by entering interaction terms between each variable and a binary variable for rural. To get around the ensuing collinearity, we use stepwise backward negative binomial regression, removing variables if $p > .10$. The only statistically significant difference between urban and rural is that Muslim proportion has an even stronger negative effect in rural areas ($p = .034$). A final concern is that the results reflect geographical proximity to the precipitating trigger at Godhra. This is tested by entering distance (for rural areas, measured from the district capital). Distance does have a strong negative effect ($p = .003$). The other effects remain very similar. BJP vote is somewhat attenuated (as it is highly correlated with distance, $r = .77$), but the non-monotonic effect remains.

6. Discussion

Before discussing our results, we should acknowledge their limitations. The data are ecological, and the units of analysis are huge. The Census releases only a limited range of social and economic data. BJP vote is necessarily measured at the district level. What is most frustrating is that we have no data to test Varshney's theory of inter-ethnic associations. Despite these limitations, our quantitative analysis has the advantage of systematically comparing places where killings did not occur as well as where they did.

Our findings are unexpected in several respects. Violence was higher where Scheduled Castes and Tribes constituted a smaller proportion of the population. Yet literature on 2002 has emphasized the part played by "Hindutva-ised" Scheduled Tribes in rural areas and Castes in urban areas. There is no necessary contradiction, but our results highlight the danger of implying that most Tribes and Castes participated in violence.⁹⁴ We suggest that the Sangh

Parivar's attempts at Hindutvaisation—branding Muslims as oppressors of Castes and Tribes—were most likely to succeed when these subordinated groups were too small a minority to forge their own class or clan interests. In a study of anti-Muslim violence in Bharuch district in 1993, Pinto suggests that numerically strong Tribes of Valia sub-district did not participate in the violence, unlike their counterparts in Dediapada and Sagbara sub-districts, because of strong class alliances among the former.⁹⁵ They identified both Hindus and Muslims as their enemies. It is notable that Tribes in all these sub-districts abstained from violence in 2002.

Another unexpected finding is that literacy did not reduce violence and indeed possibly increased it. The impact of education in eroding ethnic prejudice has found immense cross-national empirical evidence in studies of race and prejudice. Of course, literacy indicates only a bare minimum of education.⁹⁶ Nevertheless, we suggest that this finding accords with the vast qualitative literature that highlights the ethnocentric content of schooling since the BJP came to power in Gujarat in 1995. Comparisons have even been made with the educational systems of Nazi Germany and Hutu-dominated Rwanda.⁹⁷ More broadly, recent research on less developed countries finds that increased human capital does not produce more secular attitudes; if anything, it strengthens ethnic identification.⁹⁸

Literacy can also be interpreted as a proxy for economic development.⁹⁹ There is no indication, then, that development reduces violence. Economic deprivation, however, does increase it. The greater the proportion of people who worked for less than six months, and the higher the unemployment rate among young adults, worse the violence. This finding suggests that where competition for jobs is more severe, Hindus are more likely to blame Muslims for their plight. Even if the urban middle classes take the lead in planning and coordinating violence, they might depend on a reserve of unemployed and underemployed people to do the actual killing—perpetrators are often paid in money, liquor, or kerosene.¹⁰⁰

Our findings provide further evidence for the BJP's crucial role in orchestrating the violence. This is not surprising, given the weight of qualitative evidence, and the arguments of scholars like Brass and Wilkinson. What is less obvious, however, is that violence was actually lowest in districts where the BJP had won a majority of voters in 1998. By implication, the party had the power to prevent as well as inflame violence. Violence was highest in districts where the BJP could expect to face the most intense competition in the forthcoming election. The party apparently anticipated to benefit from the violence, because in July the Chief Minister resigned and dissolved the State Assembly in an attempt to precipitate an early election—nine months before elections were scheduled. Delay was imposed by the Chief Election Commissioner, and the election was held in December 2002.

Did violence actually help the BJP? Opinion polls conducted after the election indicated that a quarter of BJP voters were influenced by the riots and security issues rather than livelihood and development.¹⁰¹ We can investigate this systematically by investigating how BJP's vote share changed from 1998 to 2002. Taking districts as our unit of analysis, this change can be treated as a dependent variable. The independent variable is the total number of killings expressed as death rate per 1000 Muslim population.¹⁰² Figure 2 shows a very strong positive correlation, with $r = .81$.¹⁰³ The regression coefficient predicts that moving from the median death rate (.023) to the 90th percentile (.600) would increase the BJP's vote share by over 12 percentage points. One district, Panchmahals, had a much higher death rate than any other, but removing it barely weakens the strength of the association (illustrated by the broken line). In short, there is strong quantitative evidence that violence did in fact yield electoral rewards for the BJP.

One final effect of violence can be traced. There are many allegations that the state government rewarded police officials who had permitted violence, while punishing those who repressed it. This can be tested using an affidavit recently submitted by the former chief of the State Intelligence Bureau.¹⁰⁴ He provides detailed information on police chiefs who were promoted or demoted in the aftermath of the violence.¹⁰⁵ We use this to construct an ordinal variable for 29 police districts: 6 with promotion, 15 with no action, and 8 with demotion. As above, the independent variable is the total number of killings expressed as death rate per Muslim population. Ordinal logistic regression reveals a strong association ($p = .005$). In a police district with no killings, the predicted probability of demotion is .43 and of promotion is .04. In a police district with a high death rate like Ahmedabad city (the third most violent), the predicted probabilities are .01 and .85 respectively.

7. Conclusion

The terrible violence that occurred in Gujarat in 2002 demands explanation, as one of the worst episodes of ethnic violence that has occurred under a democratic government. Although most observers argue that the state government was complicit—at least—in the killings, this does not explain why violence varied so widely across the state.¹⁰⁶ Having compiled detailed data on the number of killings in each town and in the rural portions of each district, we can systematically investigate which social, economic, and political factors were associated with violence. Our findings provide an important corrective to studies that emphasize Scheduled Castes and Tribes as perpetrators of violence, because we find that places with a higher proportion of these groups tended to have fewer killings. Our findings emphasize the significance of economic deprivation, specifically unemployment among

young adults and underemployment. Places with a higher rate of literacy, however, were no less prone to violence. Above all, our findings reiterate the importance of political elites, while uncovering an implicit logic behind the BJP's political strategy. The party did not foment violence in places where it had sufficient support to win the forthcoming election. Muslims were most vulnerable where the BJP had about 36% of the vote, where the party had a chance to win at the next election, but where victory was far from assured. We also demonstrate that violence did indeed boost the BJP's vote in the subsequent election.

Future research analyzing variation across Gujarat should incorporate more subtle sociological indicators. One obvious task is to measure the strength of associational ties between Hindus and Muslims. Another is to incorporate some of the intricacies of caste identities, beyond the simple classification of Scheduled Castes and Tribes. It is notable that the peninsular region of Gujarat—Saurashtra—did not witness large-scale violence in 2002. Before 1948, this region was a mosaic of princely states dominated by Rajput families. They constructed political alliances that excluded upper-caste Hindus (Vaniyas and Brahmins) but often extended to powerful Muslim families, formerly Mughal nobles.¹⁰⁷ We conjecture that this historical legacy means that there was less violence against Muslims in areas with a substantial presence of Rajputs. Future research might test this conjecture by mapping the detailed caste classifications provided by the 1931 Census (or the 2011 Census, when it becomes available).

Finally, the systematic analysis of spatial variations in violence should be extended to a local level. Ahmedabad is considered here as a single observation, with one of the highest rates of killing.¹⁰⁸ Across the city, however, there was enormous variation among neighborhoods. Some places were almost entirely peaceful, while others witnessed large-scale massacres. For example, within the electoral ward of Behrampura, the heterogeneous neighborhoods of Ram Rahimnagar and Santoshnagar behaved differently; one was peaceful, the other violent. In Naroda ward, the Muslim neighborhood of Naroda Patiya on one side of the main road was violent, whereas the same neighborhood located across the road was peaceful. Future research should investigate these local variations. At this scale, it will be feasible to combine quantitative analysis with ethnographic investigation. Certainly both methods are necessary to fully explain this outbreak of savage violence, and thus to enhance our understanding of the threats to India's multi-ethnic democracy.

NOTES

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³ Stanley Tambiah, "Reflections on Communal Violence in South Asia," *The Journal of Asian Studies* 49:4 (1990): 741-60; Gyanendra Pandey, "In Defense of the Fragment: Writing about Hindu-Muslim Riots in India Today," *Representations* 37 (1990) 27-55; Paul Brass, *Theft of an Idol: Text and Context in the Representation of Collective Violence* (Princeton: Princeton University Press, 1997); Paul Brass, *The Production of Hindu-Muslim Violence in Contemporary India* (Seattle: University of Washington Press, 2003); Manali Desai, "Colonial Legacies and Repertoires of 'Ethnic' Violence: The Case of Western India, 1941-2002," *Journal of Historical Sociology* 22: 2 (2009):147-79. See Rogers Brubaker and David D. Laitin, "Ethnic and Nationalist Violence," *Annual Review of Sociology* 24 (1998: 423-52) for a review.

⁴ Ghanshyam Shah, "Communal Riots in Gujarat: Report of a Preliminary Investigation," *Economic and Political Weekly* 5:3/5 (1970): 187-200; Ghanshyam Shah, "Anatomy of an Urban Riot: Ahmedabad 1973," *Economic and Political Weekly* 9:6/8 (1974): 233-40; Asghar Ali Engineer, *Communalism in India: A Historical and Empirical Study* (New Delhi: Vikas Publishing House, 1995); Asghar Ali Engineer, ed. *The Gujarat Carnage* (New Delhi: Orient Longman, 2003); Ganesh Devy, "Tribal Voice and Violence," *Seminar* 513 (2002); Achyut Yagnik and Suchitra Sheth, *The Shaping of Modern Gujarat: Plurality, Hindutva and Beyond* (New Delhi: Penguin, 2005); Ornit Shani, *Communalism, Caste and Hindu Nationalism: The Violence in Gujarat* (Cambridge: Cambridge University Press, 2007).

⁵ The political argument is not new. See Donald Horowitz, *Ethnic Groups in Conflict* (Berkeley: University of California Press, 1985), 291. He notes that societies in which ethnic conflict is at moderate levels or in which ethnic divisions must compete for attention with other sources of tension produce party systems that sometimes foster and sometimes moderate ethnic conflict.

⁶ Z.K. Hasan, "Communalism and Communal Violence in India," *Social Scientist* 10:2 (1982) 25-39; Gopal Krishna, "Communal Violence in India: A Study of Communal Disturbance in Delhi, part II," *Economic and Political Weekly*, 20: 3 (1985) 117-31; S. Mayaram, "Communal Violence in Jaipur," *Economic and Political*

Weekly 28:46/47 (1993): 2524-41; Shah, "Communal Riots in Gujarat"; Shah, "Anatomy of an Urban Riot"; Engineer, *Communalism in India*; Engineer, ed. *The Gujarat Carnage*.

⁷ See p. 15 in Brass, *Theft of an Idol*; Brass, *The Production of Hindu-Muslim violence*.

⁸ Ashutosh Varshney and Steven I. Wilkinson, *Varshney-Wilkinson Dataset on Hindu-Muslim Violence in India, 1950-1995*, (Ann Arbor, MI: Inter-university Consortium for Political and Social Research (distributor), February 17, 2006).

⁹ Ashutosh Varshney, *Ethnic Conflict and Civic Life: Hindus and Muslims in India* (New Haven: Yale University Press, 2002). Gordon W. Allport, *The Nature of Prejudice* (Boston: Addison Wesley, 1954).

¹⁰ See p. xv in Wilkinson, *Votes and Violence*.

¹¹ These results are limited by the small number of units and the absence of controls for Scheduled Castes and Tribes, which we show to be important for explaining the 2002 violence.

¹² See p. 106 in Engineer, *Communalism in India*.

¹³ For example, Dipankar Gupta, "Limits of Tolerance: Prospects of Secularism in India after Gujarat," *Economic and Political Weekly* 37:46 (November 16-22, 2002): 4615-20.

¹⁴ Gupta, "Limits of Tolerance"; Devy, "Tribal Voice and Violence."

¹⁵ Indian Mujahideen, "The Rise of Jihad, Revenge of Gujarat," *Outlook* (July 29, 2008); Institute for Defense Studies & Analyses, "Who is the Indian Mujahideen?," (2009).

¹⁶ Paul Brass, *Forms of Collective Violence: Riots, Pogroms and Genocide in Modern India* (Gurgaon: Three Essays Collective, 2006); Engineer, ed. *The Gujarat Carnage*.

¹⁷ Yagnik and Sheth, *The Shaping of Modern Gujarat*.

¹⁸ Varshney and Wilkinson, *Varshney-Wilkinson dataset*.

¹⁹ Harald Tambs-Lyche, "Reflections on Caste in Gujarat," in *The Idea of Gujarat: History, Ethnography and Text*, eds. Edward Simpson and Aparna Kapadia (Orient Blackswan, 2010); Shani, *Communalism, Caste and Hindu Nationalism*; Gupta, "Limits of Tolerance."

²⁰ Varshney and Wilkinson, *Varshney-Wilkinson dataset*.

²¹ Engineer, ed. *The Gujarat Carnage*.

²² Howard Spodek, "From Gandhi to Violence: Ahmedabad's 1985 Riots in Historical Perspective," *Modern Asian Studies* 23:4 (1989); Jan Breman, *The Making and Unmaking of an Industrial Working Class* (Oxford, Oxford University Press, 2004).

- ²³ See p. 269 in Kanchan Chandra, *Why Ethnic Parties Succeed: Patronage and Ethnic Head Counts in India* (Cambridge, UK: Cambridge University Press).
- ²⁴ Howard Spodek, "In the Hindutva laboratory: Pogroms and politics in Gujarat, 2002," *Modern Asian Studies* 44:2 (Published online by Cambridge University Press, June 13, 2008).
- ²⁵ Engineer, ed. *The Gujarat Carnage*; Varshney and Wilkinson, *Varshney-Wilkinson dataset*.
- ²⁶ Engineer, ed. *The Gujarat Carnage*.
- ²⁷ A special court in Ahmedabad recently convicted 31 Muslims from Godhra for setting the train on fire; 11 were sentenced to death (*Times of India*, February 23, 2011).
- ²⁸ The Commission of Inquiry, *Report of Justice GT Nanavati and Justice Akshay H Mehta, Part-I, Sabarmati Express Train Incident at Godhra* (September 18, 2008).
- ²⁹ Aakar Patel, Dileep Padgaonkar and B.G.Vergheese, *Rights and Wrongs: Editors' Guild Fact-Finding Mission Report* (New Delhi, May 3, 2002).
- ³⁰ Prashant Dayal, *9166 Up: 2002 Ramkhanon nu Adhurun Satya* (Ahmedabad: Sainath Publication, 2009).
- ³¹ *Times of India* (March 2, 2002). The violence was justified as 'svabhavik pratikriya', a 'natural reaction' to the Godhra incident. See Parvis Ghassem-Fachandi, "Ahimsa, Identification and Sacrifice in the Gujarat pogrom," *Social Anthropology* 18:2 (2010: 155-75). Similar statements, giving a 'spontaneous' flavor to organized violence, have been seen in the past. After the assassination of Indira Gandhi by her Sikh bodyguards in 1984, her successor and son Rajiv Gandhi justified the massacres of Sikhs: "Once a mighty tree falls, it is only natural that the earth around it shakes" (BBC News 2009).
- ³² Gupta, "Limits of Tolerance."
- ³³ Steven I. Wilkinson, "Which Group Identities Lead to Most Violence? Evidence from India," in *Order, Conflict, and Violence*, eds. S. Kalyvas, I. Shapiro and T. Masoud (Cambridge, UK: Cambridge University Press, 2008).
- ³⁴ Hindu-Sikh violence from BBC News (August 8, 2005; November 1, 2009); other figures from *Varshney and Wilkinson dataset*.
- ³⁵ Stanley Tambiah, *Sri Lanka: Ethnic Fratricide and the Dismantling of Democracy* (London: Tauris, 1986).
- ³⁶ Infochange Books and Reports, *Gujarat Riots: The Impact on Women: Fact-finding report* (April 16, 2002).
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- ³⁹ Varshney, *Ethnic Conflict and Civic Life*.
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- ⁴¹ Varshney, *Ethnic Conflict and Civic Life*.
- ⁴² Brass, *Theft of an Idol*; Brass, *The Production of Hindu-Muslim Violence*; Desai, “Colonial Legacies”; Paul Brass, ed. *Riots and Pogroms* (Macmillan: London, 1996); Tambiah, “Reflections on Communal Violence.”
- ⁴³ Paul Brass, “Riots, Pogroms, and Genocide in Contemporary India: From Partition to the Present,” *Prepared for the Hiroshima Peace Institute Conference on Comparative Research into Genocide and Mass Violence* (Hiroshima, Japan: March 22-26, 2004).
- ⁴⁴ Gary King, Robert O. Keohane and Sidney Verba, *Designing Social Enquiry: Scientific Inference in Qualitative Research* (Princeton University Press, 1994); Varshney, *Ethnic Conflict and Civic Life*; Wilkinson, *Votes and Violence*; Michael Biggs and Kenneth T. Andrews, “The Dynamics of Protest Diffusion: Movement Organizations, Social Networks, and News Media in the 1960 Sit-Ins,” *American Sociological Review* 71:5 (2006: 752-77).
- ⁴⁵ Wilkinson, *Votes and Violence*, p. 23.
- ⁴⁶ Wilkinson, “Which Group Identities Lead to Most Violence?”
- ⁴⁷ Scott Strauss, “Order in Disorder: A Micro-Comparative Study of Genocidal Dynamics in Rwanda,” in *Order, Conflict, and Violence*, eds. S. Kalyvas, I. Shapiro and T. Masoud (Cambridge: Cambridge University Press, 2008).
- ⁴⁸ Horowitz, *Ethnic Groups in Conflict*; A. Rabushka and K.A. Shepsle, *Politics in Plural Societies: A Theory of Democratic Instability* (Columbus, OH: Charles E Merrill, 1972); Jon Elster, C. Offe and U.K. Preuss, *Institutional Design in Post-Communist Societies: Rebuilding the Ship at Sea* (Cambridge: Cambridge University Press, 1988); J. Ginges, S. Atran, D. Medin and K. Shikaki, “Sacred Bounds on Rational Resolution of Violent Political Conflict,” *Proceedings of the National Academy of Sciences of the United States of America* (PNAS, 2007); J. Ginges and S. Atran, “What Motivates Participation in Violent Political Action: Selective Incentives of Parochial Altruism?,” *Annals of the New York Academy of Sciences* 1167 (2009: 115-23).
- ⁴⁹ Varshney, *Ethnic Conflict and Civic Life*.

⁵⁰ The 1969 violence in Ahmedabad was said to be precipitated by Muslims disrupting a Hindu religious procession soon after the Hindus were said to have done the same with the Muslims; Wilkinson, *Votes and Violence*.

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⁶² Samuel Huntington, *The Clash of Civilizations and the Remaking of World Order* (Simon and Schuster, 1997); Urdal, "Population, Resources and Political Violence."

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⁶⁹ Bohstedt, “Gender, Household and Community Politics”; Wilkinson, “Riots.”

⁷⁰ Rajya Sabha, *Government of India: Ministry of Home Affairs* Question No. 5209 (May 11, 2005).

⁷¹ A prominent human rights activist has been alleged to have doctored evidence in post-Godhra violence. See *Economic Times*, April 14, 2009; *Times of India*, December 1, 2011.

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⁷⁴ Varshney and Wilkinson, *Varshney-Wilkinson dataset*.

⁷⁵ See p. 92 in Varshney, *Ethnic Conflict and Civic Life*.

⁷⁶ See *Times of India*, March 2, 2002 for the initial death toll and *Times of India*, August 11, 2009 for the revised figure.

⁷⁷ Varshney, *Ethnic Conflict and Civic Life*; Wilkinson, *Votes and Violence*; Wilkinson and Haid, “Ethnic Violence as Campaign Expenditure.”

⁷⁸ Varshney and Wilkinson, *Varshney-Wilkinson dataset*.

⁷⁹ The number of districts increased from 19 in 1991 to 25 in 2001, as 6 new districts were split off from 7 districts. We redistributed killings from these 7 districts to the new districts, according to delimitation boundaries listed in the state government’s District Panchayat websites. For example, see <http://bharuchdp.gujarat.gov.in/bharuch/> for Bharuch.

⁸⁰ Wilkinson, “Which Group Identities Lead to Most Violence?”

⁸¹ King, Keohane and Verba, *Designing Social Enquiry*.

⁸² Census of India, “Area Profiles,” *Gujarat District Handbooks, Population Profiles (India, States and Union Territories)* (Delhi: Controller of Publications, 2004); Census of India, *Tables on Religion, C-Series for Gujarat state* Table C-1: “Population by Religious Community” for towns of Gujarat, available on CD.

⁸³ The hurdle model (estimated using Joseph Hilbe’s hnblogit for Stata) equivalent to Model 2 in Table 1 yields a corrected AIC of 435.4. This is substantially higher, indicating that the additional parameters are not justified.

⁸⁴ Election Commission of India, *Constituency Data Summary: 1998 Legislative Assembly of Gujarat, Statistical Report*, http://eci.nic.in/eci_main/StatisticalReports/SE_1998/StatisticalReport-GUJ98.pdf (1998: 16-197).

⁸⁵ A. Prakash, “Re-imagination of the State and Gujarat’s Electoral Verdict,” *Economic and Political Weekly* 38:16 (2003: 1601-10); S. Mishra, “Gujarat Elections 2002: Vote Shares across Regions,” *Economic and Political Weekly* 38:18 (2003: 1804-09).

⁸⁶ The relationship between the percentage of votes won by the BJP and the election of a BJP candidate is estimated by logistic regression for the 182 state assembly seats. The predicted probability is greater than half once the BJP vote exceeded 39%.

⁸⁷ Census of India, *Economic Tables for Gujarat state, B-series for Gujarat state* Table B-1 “Main workers, Marginal workers, Non-workers and those marginal workers, non-workers seeking/available for work classified by age and sex” for districts of Gujarat, available on CD.

⁸⁸ For example, Mumbai Special Court, “The State of Gujarat versus Jaswantbhai Nai (and others),” *Court of Special Judge for Gr. Mumbai Sessions* case no. 634 (April 19, 2008).

⁸⁹ Urdal, “A Clash of Generations?”

⁹⁰ Youth bulge and youth unemployment are not available for individual towns, and so these variables measure the percentage for the district’s entire urban population.

⁹¹ Ashis Nandy, “Gujarat: Blame the Middle-Class,” (Times of India, January 14, 2008); Devy, “Tribal Voice and Violence”; Gupta, “Limits of Intolerance.

⁹² Defined as

$$AIC_c = -2\log(L) + 2p + \frac{2p(p+1)}{n-p-1}$$

where L is the likelihood, n is the number of observations, and p is the number of parameters. See Kenneth P. Burnham and David R. Anderson, "Multimodel Inference: Understanding AIC and BIC in Model Selection," *Sociological Methods and Research* 33 (2004: 261-304). For negative binomial regression, $p = K + 2$ (β_k , plus β_0 and α).

⁹³ The proportions of agricultural laborers and of cultivators are highly correlated, of course, but dropping either makes no difference. The ratio of the former to the latter, as a measure of land hunger, is also not significant.

⁹⁴ The Bhil tribe among the Scheduled Tribes is portrayed as more susceptible to Hindutva indoctrination and subsequent violence. But including a measure for Bhil percentage at the district level showed no significant effect. For the role of Bhils, see Yagnik and Sheth, *The Shaping of Modern Gujarat*; Gupta, "Limits of Intolerance"; Devy, "Tribal Voice and Violence"; Lancy Lobo, "Adivasis, Hindutva and the Post-Godhra Riots in Gujarat," *Economic and Political Weekly* 37:48 (2002:4844-49).

⁹⁵ S. Pinto, "Communalisation of Tribals in South Gujarat," *Economic and Political Weekly* 30:39 (1995: 2416-19).

⁹⁶ In India, literacy and education are often seen as distinct from each other. Many certified as 'literate' in the census data are not functionally so; they are 'early literates' (UNESCO 2007) who are not proficient in the 3Rs. In Gujarat, 'early literacy' holds true largely for rural areas where poverty compels children to drop out of schools. See Brij Kothari, A. Pandey and A. Chudgar, "Reading out of the 'idiot box': same-language subtitling on television in India," *The Massachusetts Institute of Technology Information Technologies and International Development* 2 (2005: 1).

⁹⁷ Spodek, "In the Hindutva Laboratory"; J. Walker-Keleher, "Reconceptualizing the Relationship between Conflict and Education: The Case of Rwanda," *Praxis: The Fletcher Journal of Human Security* 31 (2006: 35-53); M.K. Lange and A. Dawson, "Intolerance Education: An Investigation of the effects of Societal Education on Ethnic Violence," *Paper presented at the annual meeting of the American Sociological Association Annual Meeting, Sheraton Boston and the Boston Marriott Copley Place* (Boston, MA, 2008).

⁹⁸ W. Friedman, M. Kremer, E. Miguel and R. Thornton, "Education as Liberation?," *National Bureau of Economic Research* (Working paper)16939 (2011).

⁹⁹ For example, see measures used in Wilkinson, *Votes and Violence*; Wilkinson and Haid, "Ethnic Violence as Campaign Expenditure."

¹⁰⁰ Tambiah, “Reflections on Communal Violence”; Ashis Nandy, “Gujarat 2002: Obituary of a Culture,” *Seminar* 513 (2002); Devy, “Tribal Voice and Violence”; Shani, *Communalism, Caste and Hindu Nationalism*.

¹⁰¹ Wilkinson and Haid, “Ethnic Violence as Campaign Expenditure.”

¹⁰² This total includes missing later declared dead.

¹⁰³ The coefficient of death rate has t -value = 6.6, $p < .001$; a quadratic term is not statistically significant. Alternatively, the death rate reduces the Congress party’s vote share, but the effect is only half as large.

¹⁰⁴ R.B. Sreekumar, “Suggestions to the Special Investigation Team (SIT) for further action on the enquiry/investigation on Mrs. Jafri’s complaint and other riots cases,” Affidavit RBS/COM/327C/2010, submitted to Justices Nanavati-Mehta Commission (September 3, 2010).

¹⁰⁵ We exclude information on junior police officers and other government officials.

¹⁰⁶ Wilkinson and Haid, “Ethnic Violence as Campaign Expenditure.”

¹⁰⁷ Harald Tambs-Lyche, “Reflections on Caste in Gujarat.”

¹⁰⁸ Breman’s studies of the breakdown of labor hierarchy and the role of retrenched mill workers in Hindu-Muslim violence in Ahmedabad city provide good reason for understanding local dynamics. For example, Breman, *The Making and Unmaking of an Industrial Working Class*.

Figure 1: Association between BJP vote and killings

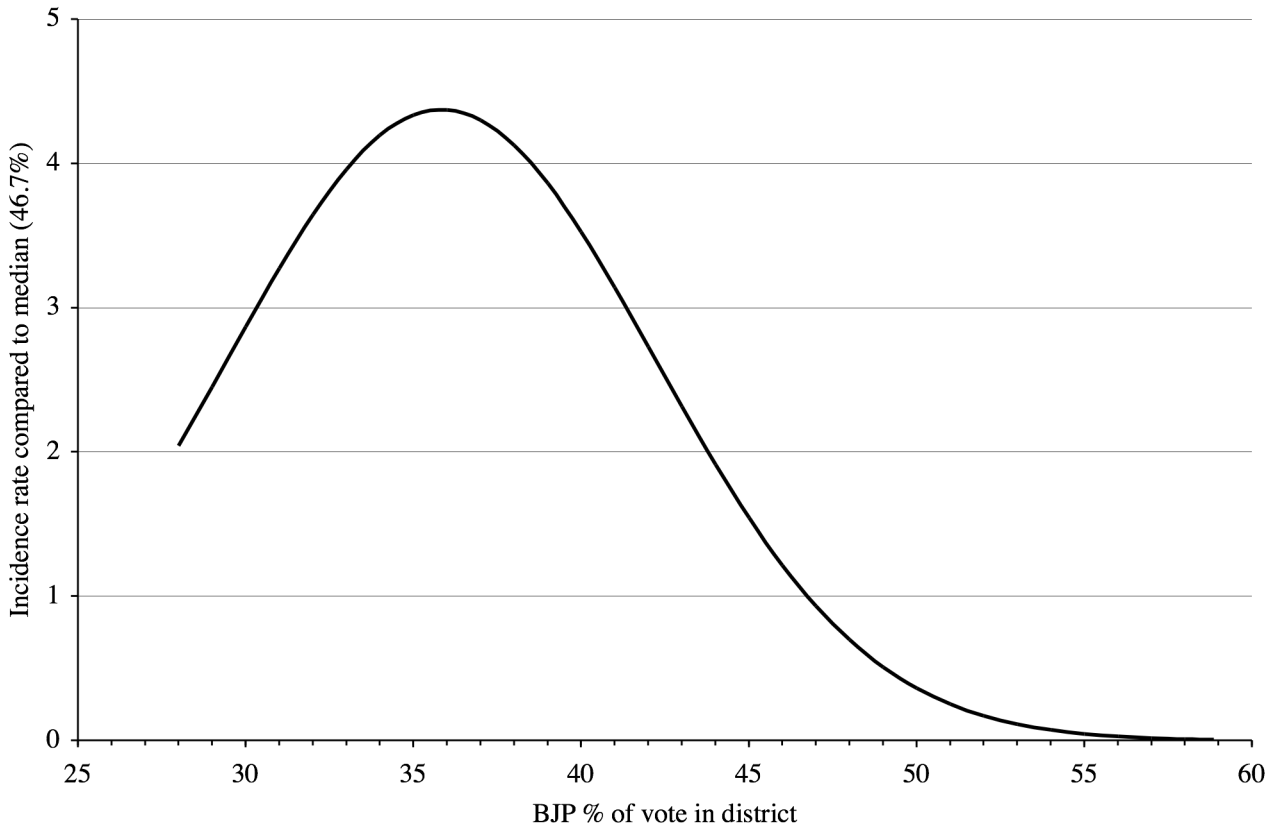


Figure 2: Association between killings and change in BJP vote (1998 to 2002)

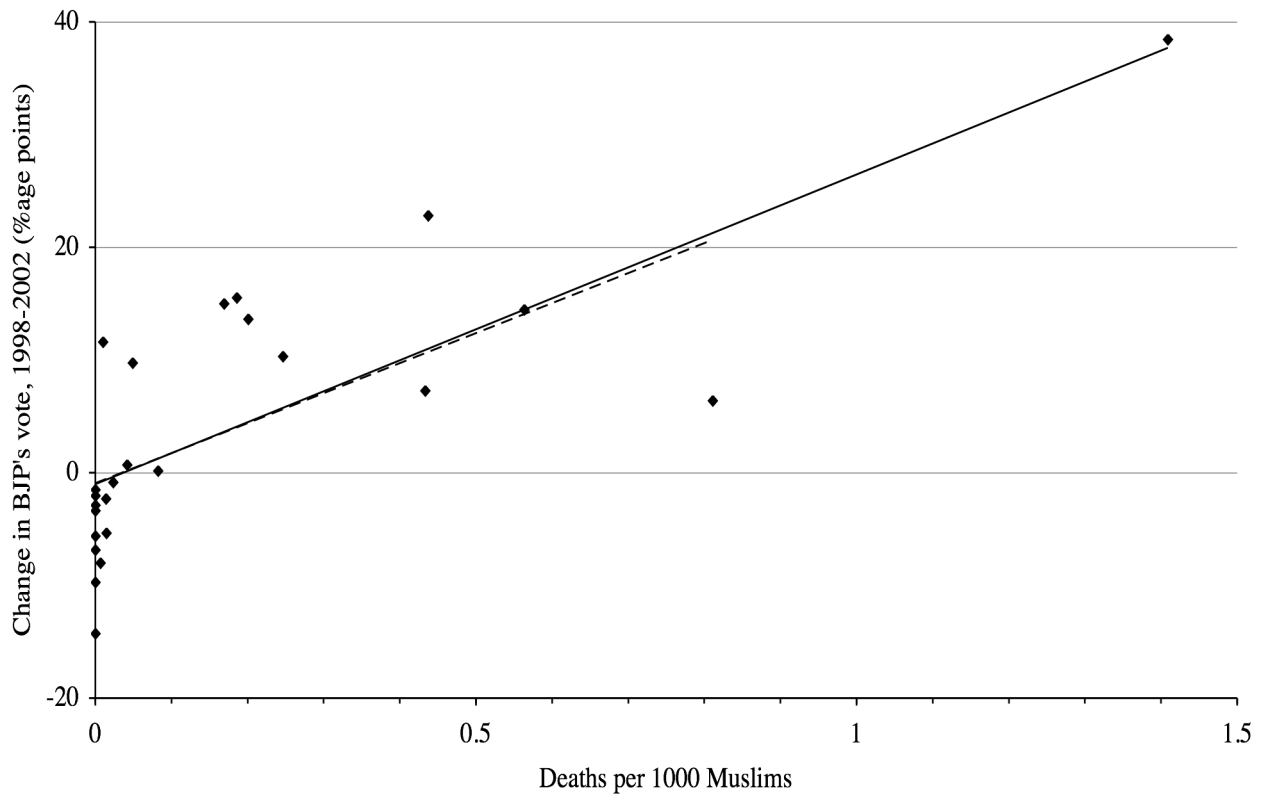


Table 1: Measures of violence in Gujarat, 2002

<i>Measure</i>	<i>Source</i>	<i>Correlation by district</i>	
		<i>Total</i>	<i>(per Muslim population)</i>
(1) Killings	<i>Times of India</i>	756	1.00
(2) Killings plus subsequent missing	<i>Times of India</i>	984	.99
(3) Killings	Concerned Citizens' Tribunal	798	.88
(4) Muslims killed	State Intelligence Bureau	704	.92 ^a
(5) Killings in 1990-93	Varshney and Wilkinson 2006	539	.14 ^b

^a Correlation across 29 police districts, excluding Westpol Vadodara
^b Muslim population in 2001 used as denominator

Table 2: Deaths in Hindu-Muslim violence in Gujarat's towns and rural areas, 2002 (N = 216)

Negative binomial regression	1			2		
	irr	se	p	irr	se	p
Muslim population, logged	3.33	.59	.00 ***	4.07	.72	.00 ***
Muslims as % of population	.96	.02	.11	.95	.02	.02 *
Literates as % of population aged 7 and over	1.08	.04	.05	1.05	.05	.32
Main workers as % of population	.89	.10	.30	.88	.10	.29
Marginal workers as % of population	1.60	.30	.01 *	1.52	.27	.02 *
Agricultural labourers as % of population	.98	.03	.48	.98	.03	.57
Cultivators as % of population	1.05	.05	.28	1.03	.05	.47
Household-industry workers as % of population	.76	.12	.08	.79	.12	.12
Unemployed aged 15-34 as % of population aged 15-34	1.27	.15	.04 *	1.29	.15	.03 *
Aged 15-34 as % of population aged 15 and over	.99	.16	.96	1.09	.17	.58
Scheduled Castes as % of population	.82	.08	.03 *	.84	.08	.06
Scheduled Tribes as % of population	.92	.02	.00 ***	.92	.02	.00 ***
Town	21.45	28.26	.02 *	38.71	47.41	.00 **
BJP % of vote in district				2.43	.93	.02 *
BJP % of vote in district, squared				.99	.00	.01 **
alpha (coefficient)	3.84	.85	.00 ***	2.95	.66	.00 ***
AIC corrected		438.0			422.1	

irr: incidence-rate ratio; se: standard error; p: p-value (two-tailed; one-tailed for alpha), *** p < .001, ** p < .01, * p < .05

Table A1: Descriptive statistics

Variable	Rural areas (N = 25)			Towns (N = 191)		
	min	mean	max	min	mean	max
Deaths in Hindu-Muslim violence	0	12	164	0	2	279
Muslim population	2,792	75,961	242,037	6	14,104	561,672
Muslims as % of population	0.7	5.9	21.8	0.7	16.9	88.2
Literates as % of population aged 7 and over	41.4	61.5	72.7	32.3	77.6	93.2
Main workers as % of population	30.7	35.1	42.9	22.4	31.0	72.4
Marginal workers as % of population	8.6	12.2	21.1	0.0	3.0	16.7
Agricultural labourers as % of population	21.1	33.5	48.8	0.0	7.7	62.3
Cultivators as % of population	19.1	37.9	64.1	0.0	4.5	28.2
Workers in household industry as % of population	0.9	1.8	5.6	0.0	3.0	37.7
Unemployed aged 15-34 as % of population aged 15-34	6.0	10.4	17.2	4.1	10.6	15.7
Aged 15-34 as % of population aged 15 and over	47.3	52.5	56.1	51.3	54.3	62.3
Scheduled Castes as % of population	0.5	6.6	11.9	0.0	7.1	29.9
Scheduled Tribes as % of population	0.1	24.5	93.8	0.0	6.0	47.9
BJP % of vote in district	27.6	42.8	58.9	27.6	44.6	58.9

Table A2: Correlation matrix

Variable	Correlations														
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Deaths in Hindu-Muslim violence															
(2) Muslim population, logged	.23														
(3) Muslims as % of population	-.07	.35													
(4) Literates as % of population aged 7 and over	-.03	-.19	-.06												
(5) Scheduled Castes as % of population	.01	.09	-.06	-.09											
(6) Scheduled Tribes as % of population	.03	.01	-.17	-.12	-.29										
(7) Main workers as % of population	.00	-.22	-.41	-.08	-.32	.14									
(8) Marginal workers as % of population	.16	.28	-.21	-.54	-.10	.40	.08								
(9) Agricultural labourers as % of population	.03	.23	-.20	-.40	-.08	.29	.20	.76							
(10) Cultivators as % of population	.15	.31	-.26	-.55	-.03	.36	.19	.84	.72						
(11) Household-industry workers as % of population	-.03	.00	.10	-.09	.03	-.11	-.18	.06	-.08	-.09					
(12) Unemployed aged 15-34 as % of population aged 15-34	.10	-.04	-.01	-.01	.07	.05	-.25	.15	.03	.02	-.03				
(13) Aged 15-34 as % of population aged 15 and over	-.07	-.22	-.02	.13	-.08	.00	.21	-.30	-.28	-.29	-.01	-.60			
(14) Town	-.14	-.43	.26	.52	.04	-.39	-.26	-.77	-.66	-.85	.10	.02	.24		
(15) BJP % of vote in district	-.09	-.01	-.09	-.09	.16	-.24	.15	-.22	-.12	-.10	.10	-.42	.25	.08	
(16) BJP % of vote in district, squared	-.08	-.01	-.08	-.09	.15	-.22	.14	-.21	-.11	-.09	.10	-.42	.23	.07	1.00