

# Holy Cow! Beef Ban, Political Technologies, and Brahmanical Supremacy in Modi's India

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## Abstract

This article focuses on political technologies applied in response to India's contemporary beef ban and ensuing violence. The beef ban, enacted in several Indian states, prevents the slaughter, consumption, and trade of cow meat. Aided by rising Hindu nationalism, the enforcement of this ban has occurred through state and extra-state entities, the latter of which is constituted by cow vigilante groups. Such enforcement – often based on “suspicion” of cow meat possession – has resulted in horrific violence, including arrests, beatings, and lynchings of individuals belonging primarily to Muslim and Dalit communities. In response to the beef ban and associated violence, political technologies like beef detection kits and cattle unique-identification numbers are being introduced. We examine these technologies and accompanying discourse to analyze their role in producing hierarchies. We show the symbolic role of the “sacred” cow in justifying cow protectionism and vigilantism, and how such rhetoric works to objectify cows and obscure violence they face during life and death, while panoptically governing human populations. We analyze how political technologies employed under the beef ban exacerbate marginality of oppressed populations across the human-nonhuman spectrum. We contend these technologies normalize the ideology underpinning the beef ban, heighten and atomize surveillance of marginalized groups, and weaken their already-fraught place in the nation. Within the landscape of perilous Hindu nationalism, we show how a mutual avowal lens can help recognize shared vulnerability and proffer ethical forms of engagements between entangled subject positions.

## Keywords

Surveillance; co-production; animal symbolism; Dalit; Muslim; India; South Asia

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## Introduction

“They accused us of keeping cow meat, broke down our doors and started beating my father and brother. My father was dragged outside the house and beaten with bricks. We came to know later that an announcement had been made from the temple about us eating beef,” said Sajida.

“We have been told that a group of people entered the temple and used a microphone to make the announcement. However, investigations are still underway. We do not know if any of the accused are associated with the temple. We have collected meat samples from Akhlaq's house and sent it to the forensics department for examination,” said Kiran.

(Vatsa 2015)

Speaking to a national media source in India, Sajida, the eighteen-year-old daughter of Mohammad Akhlaq, describes whence a mob beat her father and brother. Sajida lived in Bisara village, located in India's northern state of Uttar Pradesh. On September 28, 2015, a group of Hindu men lynched her father and badly injured her brother under suspicion of possessing cow meat. This brutal violence received media attention in India but is hardly an outlier. In fact, since then, there have been forty-five recorded deaths stemming from cow protectionist violence (“IndiaSpend | Hate-Crime Database” n.d.).<sup>1</sup> There are three things to note: first, these violent acts are primarily carried out by right-wing cow vigilante groups responding to rumors of cow meat possession, second, victims of these attacks are overwhelmingly Muslims and Dalits,<sup>2</sup> and third, as the second quote above suggests, there has been a focus on scientific methods to ascertain the veracity of rumors about cow meat possession.

The incidents referred to above have taken place in a context where Prime Minister (PM) Narendra Modi's government in India has employed a power-knowledge schema using a platform of “scientifically approved” development to advance disciplinary control – via cows – over already marginalized Dalit and Muslim groups. Such control has taken the form of a beef ban whose newest iteration was introduced in 2015 and was unevenly enacted in multiple Indian states. Despite some complexity in enactment, the beef ban has largely operated to marginalize Dalits and Muslims through disciplinary examination and surveillance (c.f. Foucault 1977), while differentiating and excluding subjects across the human-nonhuman spectrum. Such violence has stoked fear and heightened structural inequalities in communities already marginalized within the Indian context (Ashraf 2015a; Krishnan 2017).

Within this milieu, beef detection kits and cattle unique-identification numbers have been introduced to ensure the beef ban's smooth enactment while attempting to curtail violent incidents arising from unfounded suspicion. Based on qualitative analysis of 747 media sources, we examine the beef ban through “scientific” mechanisms, and their deployment in conjunction with the Indian nation-

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<sup>1</sup> Lynching related to cow protection is not new (see Chigateri 2008 for more). However, an uptick in frequency has followed the contemporary iteration of the beef ban.

<sup>2</sup> Dalits have historically been the lowest rung in Indian societal hierarchies – lying outside of India's tiered caste system (Roberts 2016), facing discrimination on various fronts (Mandal 2010).

state's rhetoric of cow protectionism. We argue that political technologies serve to discipline already vulnerable human and nonhuman populations, making hyper-visible Muslim and Dalit individuals who work with or consume cows, leaving unchallenged the ideology guiding cow vigilante activities.

The rest of the paper is organized as follows: to situate the 2015 beef ban, we begin with an overview of cow protectionism in the Indian context, explaining the casteist history of beef taboo, differentiation within bovines, and dairy's economic significance. Next, we elaborate on our methodology for collecting and analyzing media sources. We then explicate our theoretical framework, interweaving insights between Foucauldian and critical animal geographic scholarship on governmentality, surveillance, and mutual avowal. A triangulation of these concepts helps analyze our empirical data on the beef detection kit and cattle unique-identification numbers. We illustrate through the case of India's beef ban how the state governs human and non-human populations using technologies that surveil and differentiate, while reinforcing the centering of Brahmanical supremacy.

### **Cow protectionism in India**

The enactment of cow protectionist technologies in India is located within an upper-caste Hindu history of upholding the cow as sacred, and symbolic of the Indian nation. Within this realm, we situate the history of beef taboo and cow protectionism, its implications in a political landscape marked by heightened nationalism, and pushback to cow protectionism from an anti-casteist and anti-speciesist perspective.

*India's casteist history of beef taboo:* In contemporary India, beef is considered taboo food for caste Hindus.<sup>3</sup> However, during the Vedic and post-Vedic period<sup>4</sup>, Brahmins – the priestly caste, or the upper echelon within Hindus – had cow meat as part of their diet (Ashraf 2015b). At that time, Buddhism – which criticized the *excessive* consumption and ritualization of beef – began to gain popularity within India (Ashraf 2015b). In 412 CE, within a broader attempt to avert Buddhism's spread within India, Brahmins usurped the cow's symbolism and declared it sacred; and thereby worthy of worship and protection. Competing with Buddhist popularity and ideas, Brahmins declared beef as taboo. Such historical context helps counter an amnesiac association of cows with sacredness, or a common misconception that beef-eating did not exist prior to Islamic presence in India (Ilaiah 1996).

This taboo had the inadvertent effect of making beef and buffalo milk *more* accessible for Dalit populations. For these groups, food availability was scarce, and a lowered demand for beef by caste Hindus allowed Dalits access to dead or dying cows for protein (Ashraf 2015b; Nair 2016). The low casteised position of buffaloes made buffalo products unsuitable for Hindu religious rituals, thereby also providing Dalits access to its milk and meat (Narayanan 2018a). These trends continue into contemporary India, where Dalits rely on beef to combat hunger and malnutrition. Studies find that a memory of beef invoked a pleasant memory for Dalits: “a minimal luxury, of having just enough” (Nair 2016). Similarly, Sukumar (2015) recalls that news about dead bovines invoked a celebratory spirit in Dalit communities, as it ensured a full meal that day. Many Dalits also hung bovine legs or flesh from the roof, whose smell, “always linger[ed] in our houses, [and formed] an integral part of our existence (Sukumar 2015). B.R. Ambedkar (1948), arguably one of India's most important leaders; who led its Dalit Buddhist movements, posits that Dalit subject formation as “untouchable” itself is co-constructed with beef consumption.

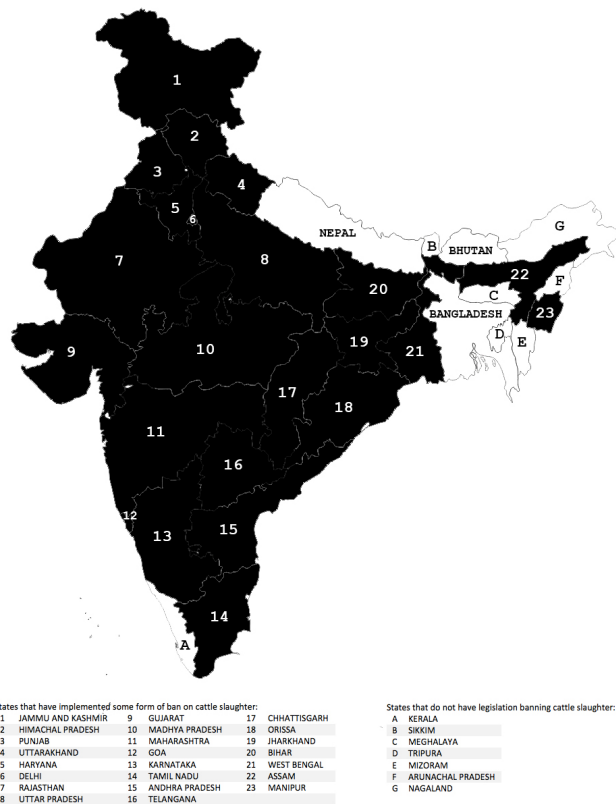
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<sup>3</sup> Following from Roberts (2016), we use the term to denote those who belong, albeit differentially, within the tiered caste system in India.

<sup>4</sup> The Vedic and post-Vedic period occurred between 1500-500 BCE and is associated with formulation of the caste system.

Dalits and Muslims have also historically been involved in livelihoods associated with cow meat, including leather-work and butchery (Ilaiyah 1996). These groups often face violence while working in slaughterhouses and tanneries (Govindrajan 2018, 68), and consider the Indian nation-state’s cow protectionist tactics an attack on their livelihoods (Narayanan 2018a). The taboo against beef and – by extension – against populations associated with it, produces a point of alignment between Dalit and Muslim populations (Das 2015). Thus, while recognizing historical and regional variation in their experiences of violence in India,<sup>5</sup> we consider the collective impacts of the beef ban and its emergent technologies on Dalits and Muslims.

*Cow protectionism and beef ban:* The secular Indian nation-state has witnessed a paradoxical translation of religious beef taboo into a policy banning cow slaughter in numerous states. This ban is not entirely new, with historic pushback to beef consumption in postcolonial India.<sup>6</sup> However, such stigma received a new lease on life through a 2015 ordinance rendering cow slaughter and its consumption illegal in numerous states, as shown in figure 1 (see Appendix 1 for a state-level understanding of beef ban policy). This ordinance draws on the Indian Constitution’s recommendation to protect cows based on their political value and commercial worth (Narayanan 2018a, 341).



**Figure 1:** Map of India with shading indicating states that have implemented some form of ban on cattle slaughter. Prepared by authors.

<sup>5</sup> Hindu-Muslim communal violence in postcolonial, and importantly, post-Partition India is fairly routinized, occurring through episodic institutionalized riots (Brass 2011) as well as through more “banal” forms of everyday discrimination against Muslims, such as in the job market (Thorat and Attewell 2007) and to obtain rental housing (Thorat et al. 2015).

<sup>6</sup> For example, a 2011 beef festival at a university and demands to include beef in hostel menus was met with vehement opposition by a right-wing political party’s student chapter, alleging that those making such demands were “traitors” in a Hindu-majority country (Das 2015).

The breaching of a state's beef ban laws results in a fine and possible jail sentence, with the severity of the punishment varying between states, ranging from life sentences in Gujarat (First Post Staff 2017) to five years in jail and a \$145.64<sup>7</sup> [₹10,000] fine in Maharashtra (Khan 2017; Z. Shaikh 2017). In May 2017, the federal government banned cattle sale for slaughter, deploying a rule issued under the 1960 Prevention of Cruelty to Animals Act (Jaffreot 2017).

The ban on cow slaughter, sales, and consumption in many Indian states has exacerbated structural inequalities within livelihoods in the agricultural, leather, and meat sector (Johari 2015; Banerjee 2015; Ashraf 2017; Jain 2017; Bhardwaj 2017), consumption practices (Dube 2015; Kulkarni 2017; Johari 2014) malnutrition (Mohanty 2017; Daniyal 2015a), education (Minhaz 2015; Scroll Staff 2017b; Rather 2016), healthcare (Daniyal 2015b; Express Web Desk 2017; Scroll Staff 2017a), and altered household planning – with offices disallowing beef and other meat consumption within workspaces (Johari 2014). The ban has also heightened Muslim and Dalits' sense of fear in public spaces of work and private spaces of the home (IndiaTimes Staff 2017; TNN 2017; Abraham and Rao 2017).

Numerous extra-legal groups known as *gau rakshaks* [cow protectors] are involved in cow protectionism. *Gau rakshak* ideology along sectarian lines dates back to the eleventh century in response to the arrival of Islam (Narayanan 2018a). In late nineteenth century, these attempts were formalized to advance the notion of an upper-caste Hindu nation under the mantle of cow protectionism. In the 1880s, Dayanand Saraswati established a society for cow protection (Govindrajan 2018). These groups have been affiliated with the Rashtriya Swayamsevak Sangh (RSS)<sup>8</sup> and other right-wing Hindu nationalist organizations. They are active in states with stringent laws about cattle slaughter and in others states with milder restrictions like Kerala, arguably to keep the issue “on the boil, possibly for political dividend later” (Shepherd 2018). These groups

...regularly make public claims and representations about food practices (for example, valorization of vegetarianism, and stigmatization and criminalization of beef-eating), seek social affirmation for their claims, demand conformity from others, and impose the same upon all with force or the threat of it (Natrajan and Jacob 2018).

Such violence includes beating or lynching individuals suspected of carrying beef. Vigilante activity has resulted in lynching, assault, and arrests of 297 Indians to date, ten per cent of whom have been Dalit and fifty-seven per cent of whom have been Muslim, with twenty per cent of unknown ethnicity (Abraham and Rao 2017; IndiaSpend Staff 2017). Forty-six Indians have been killed to date (“IndiaSpend | Hate-Crime Database” n.d.).

In these acts, unverified accusation-filled rumors play a salient role, and have initiated fifty-two per cent of vigilante attacks (Abraham and Rao 2017).<sup>9</sup> These activities produce fear and interfere in lawful cattle trade, causing economic losses (Shepherd 2018). *Gau rakshaks* primarily target Muslims

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<sup>7</sup> We have considered 1USD = 68.66 INR (as per the conversion rate on July 30, 2018).

<sup>8</sup> The RSS is a right-wing organization that espouses the ideologue of creating a Hindu nation and is constituted primarily by upper-caste Hindus.

<sup>9</sup> Similar to cow protectionism occurring through rumors, there has been a spate of mob violence and numerous deaths following the circulation of rumors on social media platforms, particularly WhatsApp (Pokharel and Griffiths 2018).

and Dalits, groups who are rendered “suspicious” because of their close associations with beef.<sup>10</sup> These groups constitute the majority of workers in leather, dairy, and egg industries, and they raise, transport, and trade cows and water buffaloes. In Maharashtra, the government has created an Honorary Animal Welfare Officer position for each district, wherein all publicly known applicants have been *gau rakshaks* (Jaffrelot 2017). Their hire suggests a condoning of extra-legal activities by the state, and continuum between these entities.

We read cow vigilante activities within a landscape of heightened Hindu nationalism following PM Narendra Modi's election. Modi has long been a cadre of the RSS and was Chief Minister of Gujarat during the genocide against its Muslim population in 2002. In that context, he was accused – at best – of a slow and inadequate response, while others charged him with culpability for the horrific violence (Ganguly 2003). Modi's ascent to the national stage has been met with a mixed response, with Dalits and Muslims primarily fearful (Shepherd 2018). While Modi, in his capacity as PM, has claimed that “everyone has the undeniable right to retain or adopt the religion of his or her choice without coercion or undue influence,” these promises have not translated into an admonishment of party members contemptuous of secularism, and his administration has been slow to condemn cow vigilante activities (Jaffrelot 2017).

*Critiquing the beef ban:* The beef ban has been criticized from an animal-centered perspective and as a facet within growing nationalist intolerance. The former line of critique argues that cow protectionism is incompatible with protecting cows (Narayanan 2018a), and prioritizes cows at the cost of other bovines and non-bovines (Narayanan 2018a, 2018b; Govindrajan 2018; Dave 2017). The beef ban considers slaughter as the only form of violence and fails to take into consideration how cows are oppressed throughout their lifetime – including for dairy (Narayanan 2018a). As such, the sacred valence accorded to the cow does not foreclose its commodification for economic gain. Further, cow protection rhetoric predicated on the cow's sacrality as “mother goddess” denies its subjectivity, further erasing bodily violence due to commodification (Narayanan 2018a). There are close links between the dairy and slaughter industry whereby cows considered unproductive for dairy are sent for slaughter. In fact, animal welfare organizations posit the impossibility of a “cow protection policy that prohibits cow slaughter, but not the breeding of animals for dairying” (Narayanan 2018b, 347). This is striking given India's “white revolution,” where economic revitalization is sought through the dairy sector, making cows the *modus operandi* for development (Govindrajan 2018). Beyond violence to cows, the beef ban entails a great deal of speciesism towards other bovines and non-bovines. While the slaughter of non-bovines is sanctioned outright, the slaughter of other bovines does not follow from constitutional provisions, which suggests steps to protect all cattle (Narayanan 2018a). The differentiation within bovines stems from historical associations of buffaloes with the lower-caste, deeming them killable, and of Jersey cows with a foreignness that denies them sacrality (Narayanan 2018a; Govindrajan 2018).

The beef ban and cow vigilantism have also been critiqued as facets within a broader trend of growing intolerance (Jaffrelot 2017; The Editorial Board 2017). Such pushback includes several social movements, including some entitled “not in my name,” which have occurred across numerous Indian cities (“Protest Diaries: Not in My Name, Break the Silence and More” 2017), statements by celebrities, and a return of state-awarded prizes by artists and intellectuals (Jaffrelot 2017).

Moreover, to curb vigilante activity even while facilitating the beef ban's deployment, several intervention methods have been proposed. These include disseminating ELISA beef and water buffalo

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<sup>10</sup> There are parallels to this suspicion of groups based on their association with animal slaughter in other historic and geographic contexts, where a mistreatment of animals is attributed to a certain troubling quality of the group itself, marking them as “other.” This othering is then used to justify prejudice or violence (Svärd 2014; Dave 2017).

meat detection kits (Press Trust of India 2017; F. Shaikh 2017), placing cameras in slaughterhouses (Jaiswal 2017), assigning unique-identification numbers to cattle (Press Trust of India 2018a; Scroll Staff 2017c), and geotagging livestock farmers' houses (Press Trust of India 2018b). In this paper, we focus on ELISA beef detection kits and cattle unique-identification numbers, showing how both technologies disperse and atomize surveillance, heighten vulnerability, and normalize the beef ban's ideological underpinnings. We now elaborate on our methodology and theoretical engagements with governmentality, surveillance, and animal symbolism to analyze political technologies accompanying India's beef ban.

## Methodology

In March 2015, a state-based animal preservation bill was approved at the federal level, instituting a beef ban in the state of Maharashtra. This bill had rapid ripple effects on legislation in other states, and on myriad facets of cow protectionism. The beef ban and subsequent cow vigilante activities received substantial media coverage. Parikh collected over 700 media articles about this issue from March 2015 to mid-2016.<sup>11</sup> These documents were primarily in English, and included regional, national, and international news sources. She then traced back to find older articles about cow protectionism in India. This helped her ascertain that there was a significant uptick in news coverage about cow protectionism since the 2015 beef ban, which intensified in the wake of lynching incidents. This data collection method provided us a sense of different facets of the beef ban: its impacts on Dalit and Muslim communities,<sup>12</sup> frequency and location of violent incidents, and responses of different stakeholders to this violence.

Identifying cross-cutting themes across an initial selection of thirty articles, Miller labeled each citation with a tag to better organize like sources. Within the broader set, we closely read seventy-nine articles which discussed beef detection kits and cattle unique identification numbers.<sup>13</sup> This close reading revealed how the sphere of policy and technology operated in tandem to curtail or condone cow protectionist violence.<sup>14</sup> Additionally, this reading helped us identify more codes to recognize

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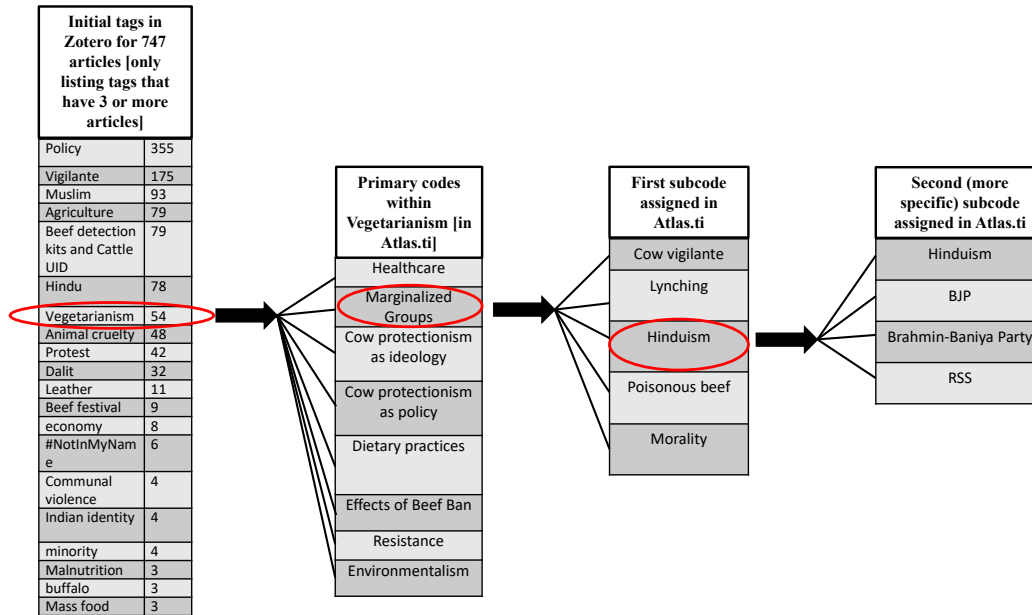
<sup>11</sup> Parikh used search terms of “beef or cow” and “gau rakshak,” to collect and archive media sources in the form of newspaper articles, blog posts, Twitter posts, and other sources focusing on the beef ban in India.

<sup>12</sup> Our coding revealed that the beef ban impacted various facets in people's lives in India, particularly those of Muslims and Dalits. Each article was then read one-by-one.

<sup>13</sup> This folder with seventy-nine articles was uploaded to Atlas.ti, a qualitative coding software. These articles were inductively and deductively analyzed to identify key themes related to beef detection kits and cattle unique-identification numbers. In keeping with findings from the earlier round of coding, we found Muslims and Dalits most prone to beef detection kits disseminated to police. In addition to coding for overarching themes, within Atlas.ti, Miller coded these articles paragraph-by-paragraph, and in some cases, sentence-by-sentence. In this process, we developed a hierarchal categorization of primary codes and secondary sub-codes to illustrate nuance differentiating like articles and relations between topics.

<sup>14</sup> For example, Miller tagged articles about beef detection kits with the tag “Beef Detection Kits” in Zotero. These articles were uploaded into Atlas.ti, where each paragraph was assigned a code based on its main idea. One paragraph of an article, for instance, might focus on how the Indian state of Maharashtra was asking for beef detection kits for their police force, and was thus coded as “kit users/enforcers.” Following this, other articles under the “Beef Detection Kits” tag in Zotero might also have a “kit users/enforcers” related code in Atlas.ti but primarily discussed a policy by the Modi government encouraging beef detection kit use. In Atlas.ti, these would both fall under the same primary parent code of “kit users/enforcers” but have different secondary sub-codes labeled as “Maharashtra” and “police,” and “Modi government” and “policy” respectively. This resulted in paragraphs and sentences receiving a primary and secondary code.

linkages and differences between articles, which Miller used to re-code all the articles.<sup>15</sup> In figure 2 below, we illustrate our coding flow between Zotero and Atlas.ti through the example of the tag group “vegetarianism.” We have also provided in-depth information in Appendix 2 regarding nested hierarchies for articles we coded in-depth tagged as “vegetarianism” or “beef detection kits/ cattle UIDs” in Zotero.



**Figure 2:** Diagram showing an example of our coding flow between Zotero and Atlas.ti and how codes were hierarchically assigned. Prepared by authors.

Through this system of coding, we identified technological facets entailed in enacting the beef ban, including beef detection kits, GIS tracking of farmers’ houses, cow ID numbers, and security cameras in slaughterhouses. Across these articles, we observed how scientific progress and expertise was leveraged to increase surveillance of predominantly Muslim and Dalit groups. We suggest that such surveillance occurs in response to and heightens suspicion towards groups. In turn, these groups have increased self-surveillance. This is particularly salient given that cow vigilantism is justified based on “suspicion” of illegal cow slaughter or trade. These measures bring to light the fraught place of Muslims and Dalits within the Indian nation, and complex ways Brahmanical supremacy is re-centered under the aegis of cow protectionism. We now turn to the theoretical framework that helped us analyze these findings.

<sup>15</sup> Using edited codes, Miller then re-coded previously assigned codes so each article sentence had a primary code and secondary sub-code. This was done for the tag groups “Vegetarianism,” “Beef detection kits,” and “Cow UID.” Miller then went over these articles a final time, condensing contiguous paragraphs with the same code into a single grouping.



## **Governmentality, political technology, and animal symbolism**

This paper analyzes how technologies emerging in tandem with India's contemporary beef ban surveil certain human and nonhuman groups, extending their already fraught place within the nation. We do so by placing in dialogue Foucauldian and critical animal geographic scholarship on governmentality, surveillance, and mutual avowal. We use Foucauldian conceptions of governmentality to situate the beef ban in formulating the Indian nation. In this vein, we posit the beef detection kits and cattle unique-identification numbers as technologies to govern and rationalize disciplining of "risky" groups. Muslims and Dalits, through their culinary and livelihood affiliations with cows are deemed risky. Such identification renders these groups vulnerable to surveillance, whose modus operandi we unmask in this paper. To do so, we turn to critical animal geographic insights that analyze animal subjectivity and their objectification in India and other contexts. Adopting a mutual avowal lens, we extend these analytic frames to consider continuation of violence and vulnerability across the human-nonhuman spectrum. We contend that such marginalization helps maintain Brahmanical supremacy as the linchpin of the Indian nation.

*Governmentality, surveillance, and political technology:* Michel Foucault contended that in modern democracies, nation-making entailed a shifting focus from territory to bodies. He argued that governmentality, or the "conduct of conducts" (Huxley 2007), involves a top-down management of populations and self-regulation (Brown and Knopp 2010). This approach has important scalar implications, signaling intrinsic links between political action and personal behavior (Burchell, Gordon, and Miller 1991). A governmentality analytic provides theoretical entry points to diagnose the rationalities of rule, the knowledge systems constructed thereof, and how such rationalities are operationalized (Hart 2004). Geographic studies have drawn on governmentality to examine enactment of colonial and post-colonial development projects, exposing how difference is construed in urban planning documents (Legg 2006), illustrating contrasts between rationalities of rule and their practice (Li 2007) and revealing the uneven spatialities of development projects (Ferguson and Gupta 2002).

This paradigm treats the behavior or attributes of individuals and groups as factors in determining risk (Robert 1991). These attributes are not limited to demographic categories, and also include "cultural, psychological, behavioral and moral dispositions" (Legg 2006 in Brown Knopp 2010, 393). India's contemporary beef ban is our entry point to examine a violent reworking of everyday activities of already marginal groups to conform with upper-caste Hindu beliefs of the sacred cow, inextricable from the formulation of the nation. These marginal groups, including Dalits and Muslims, are deemed dangerous because their consumption and livelihood practices signal a lack of adherence with the sacrality of the cow.

Such identification of Muslims and Dalits is consistent with broader findings that populations considered to be at-risk are infallibly those most marginalized within societal hierarchies (Castel 284). An identification of risk permits their surveillance. Surveillance, a changeable "mode of ordering" (Murakami Wood 2013, 317) includes a wide array of techniques used to gather information about and supervise populations (Murakami Wood 2013). Foucault identified Bentham's panopticon as one such apparatus (Foucault 1977). The design of the panoptic prison facilitates surveillance, where the guard tower functions as an omniscient center-point, with prisoners unsure whether they are being watched or who is watching them (Foucault 1977). Such uncertainty creates fear, leading prisoners to carefully monitor their actions, thereby disciplining themselves and fellow inmates. On the one hand, these technologies consolidate and expand state power, utilized most commonly by the police and fellow citizens. On the other hand, they render certain populations hyper visible and vulnerable to state and non-state interventions. Lastly, these very apparatuses are linked to economic or political growth. These conceptions are expanded and reworked in the age of digitization, where direct supervisory

control is often substituted by large-scale data extraction from people or contexts, significant for its rapidity and expansion of geographic reach (Graham and Wood 2003).

We focus on beef detection kits and cattle unique-identification numbers, which can efficiently document and track cows and – by extension – humans. Our analysis shows their panoptic nature; dispersing and internalizing surveillance, from the state and extra-legal entities to Dalit and Muslim individuals. Further, through the case of cattle unique-identification numbers, we also consider implications of newly-introduced digitized systems.

We read these technologies within their context of production and how knowledge about them is disseminated (c.f. Goldman 2005), articulating their justification in being able to increase economic growth (cattle unique-identification numbers) and reduce cow vigilantism (beef detection kits). We also analyze how their production and use is influenced by and operates within societal norms (Jasanoff 2004). Additionally, we consider the role of scientific expertise in technology production, showing its contextual emergence (Mitchell 2002). Finally, we focus on scientific visions to illustrate contradictions between intention and effects. In lieu of intention, we contend these technologies be considered through their effect in exacerbating existing discord and fostering a Hindu nation.

*Animals, objectification, and mutual avowal:* We draw on critical animal geographic insights to interrogate the “sacred” cow pivotal to India’s beef ban and its ensuing political technologies. Animal geography has analyzed power dynamics between species (Gillespie and Collard 2015), especially attentive to questions of agency, embodied encounters and relational ethics (Srinivasan 2015, 3). We extend insights about objectification, surveillance, and mutual avowal to consider how the beef ban and its affiliated apparatus oppresses marginal humans and animals, including cows themselves. We argue that such marginality serves to re-center upper-caste Hindus within a Brahmanical supremacist paradigm.

In numerous geographic and historic contexts, animals have held symbolic affiliations with nation-making projects (Raento 2016; Gillespie 2018). This symbolism translates into surveillance (Gillespie 2014) and objectification (Narayanan 2018b), rendering species vulnerable. Surveillance is imbued with power hierarchy, where the act of looking can diminish dignity (Gillespie 2018). Watching occurs through performance or tracking devices (Gillespie 2018, 2014; Narayanan 2018b), with the latter salient in commodifying animals for economic benefits, translating them from active subjects to passive objects instrumentalized for human ends. In India, the native cow’s sacrality has long served to symbolize the Hindu nation (Narayanan 2018a; Govindrajan 2018; Arunima 2015; Dave 2017). The purity of native cows interweaves with that of Brahmins, stabilizing the upper-caste Hindu as intrinsically linked with the imagination of the nation (Narayanan 2018a; Govindrajan 2018). The rendering of (certain) cows as sacred is intertwined with caste hierarchies (Narayanan 2018a). A similar structure of ordering relegates buffaloes to the same status as lower-caste Hindus (Narayanan 2018b). While such associations arguably defy traditional animal-human binaries associated with Western enlightenment (Gillespie 2018), they do little to destabilize power hierarchies, failing to transformatively decenter human exceptionalism (Gillespie and Collard 2015).

Narayanan (2018a) argues that cows’ sacrality leads to their objectification, where they serve as tools for dairying, religiosity, and communal rifts. Their role in dairying, as explained earlier, serves an important economic objective. This objective is used to justify tracking devices and cattle unique-identification numbers, with surveillance implications on marginal human groups as we show in this paper. Such hierarchical associations also devalue other non-sacred lives and render them killable, including marginal human groups (especially Dalits and Muslims), a range of bovines, and other animals. We take seriously the provocation to consider a position of “mutual avowal” where all conflicting human positions are recognized and internalized, and where the animal subject also has a

significant interest represented in the conversation” (Kim 2015 in Gillespie and Collard 2015, 208–9). Within this framework, species are located within a taxonomy that reveals a complex hierarchical ordering, a synergistic analytic that can reveal the multidimensionality of power and entanglement between subject positions (Kim 2015). This multi-optic position helps recognize shared and disparate vulnerability across human and nonhuman groups (Narayanan 2018a), and reconstructively rethink the category of the human (Kim 2015). We build on scholarship which articulates the beef ban from a bovine perspective vis-a-vis casteised speciesism (Narayanan 2018a), objectification (Narayanan 2018b), subjectivity (Govindrajan 2018) and ethics (Dave 2017). We extend insights about nonhuman vulnerability to consider violence on marginal human groups. We suggest that a reading across these works on nonhuman and human perspectives can provide a lens of mutual avowal.

### **Enforcing the beef ban**

We now look at India’s cow protectionist tactics vis-à-vis beef detection kits and cattle unique-identification numbers. We bridge insights from Foucauldian concepts and critical animal geography to analyze how these technologies differentiate and surveil, serving to reinforce Brahmanical supremacy in nation-making.

#### ***Beef detection kits***

Beef detection kits (BDKs) act as a panoptic surveillance apparatus. By rationalizing the creation and spread of these technologies, state policing of citizens is facilitated through self-disciplining and policing of fellow citizens. Further, the beef ban serves to reinforce hierarchies between cows and certain humans, within bovines, and between bovines and non-bovines.

Dr. Bhanushali and his team at Amar Immunodiagnostics Private Limited based in Hyderabad, India, have developed an enzyme-linked immunosorbent assay (ELISA) test to serve as a BDK (Pavan 2017). ELISA kits are not new, and are commonly used in scientific laboratories as an antigen antibody test (Walker 1987). In these settings, ELISA kits are useful in pathogen detection in humans, such as HIV/AIDS, food safety detection, and plant pathology techniques (“ELISA: Purpose, Procedure, and Results” 2012; Samarajeewa et al. 2009; Fang and Ramasamy 2015). However, in response to cow vigilantism following India’s contemporary beef ban, Bhanushali and his team customized widely-used sets to create a discrete ELISA *beef* detection kit and *water buffalo* detection kit, the latter being a legal-to-consume beef alternative in India. The BDK has facilitated an efficient monitoring of certain populations.

The inspiration for ELISA *beef* detection kits stems from Bhanushali’s alarm at *gau rakshak* attacks, which he describes as a “menace,” stating that, “it is my response as a scientist to the social problem arising from the misconceptions about beef” (Pavan 2017). The ELISA BDK consists of two kits that simultaneously test meat samples. These tests give a positive or negative answer in the form of a color change, from clear to a dark yellow, indicating the presence or absence of certain antibodies. In one test, a dark yellow indicates that a sample is cow meat. Simultaneously, the other test helps distinguish cow from buffalo meat. After a ten-minute initial set up time, the kit takes thirty minutes and a 10g meat sample to attest whether it is beef or not (Pavan 2017). Bhanushali’s position as a scientific expert imparts objectivity to the technology and its ability to correctly distinguish cow from buffalo meat. This technology normalizes the state’s monitoring of “suspicious” populations, and implicitly justifies the killability of certain animals over others (cf Gillespie 2018).

The state relies on BDK’s portability, speed, and relative cheapness for efficient dispersal. With a weight of under 250g and lack of need for a power source or a battery, this kit is easily portable (Pavan 2017). The kits cost \$116.52 [₹8000] and can run ninety-six tests (F. Shaikh 2017), effectively amounting to \$1.21 per test. This is one-ninth the cost of previous DNA tests, which costed \$11.22

[₹750] per sample. These kits have begun to gain traction (indicated in figure 3), with the state of Maharashtra purchasing over a hundred ELISA kits that were passed out to all forty-five of its mobile Forensic Science Laboratory (FSL) vans (Vaktania 2017). Other state governments, including Uttar Pradesh and Madhya Pradesh, have also expressed an interest in purchasing kits (Fazal 2017).



**Figure 3:** Map of India with shading indicates states that have expressed an interest in or requested beef detection kits. Prepared by authors.

In Maharashtra, police with a science background are being recruited and trained to use BDKs, which will be housed in each FSL van. The state hopes that this quick test will cut down on meat samples being sent to FSL buildings, which usually receives 100-200 meat samples for testing each month (Vaktania 2017). These FSL vans will be stationed in every Maharashtrian district and test meat from people suspected of selling or consuming cow meat. As such, police will respond to tips and have the opportunity to accurately verify or debunk reports of vigilante activity (D. Sharma 2018).

In response to dissemination of BDKs to the police, meat sellers have asked for their own (Kotak 2018). Meat shop owners prefer to self-test meat to potentially avoid having the police confiscate their meat or accuse them of illegal sales. Measures to test one's own meat reflects self-policing and an entrenchment of self-disciplining.<sup>16</sup>

While the hope is that BDKs will diffuse tensions and decrease violence, their expected efficacy in curtailing vigilante violence is called into question, especially given that over half of vigilante attacks are inspired by rumors, making it fairly unrealistic to

hope that beef testing kits will be able to stop a marauding mob, baying for blood. If hearsay is sufficient incitement for a people to kill a fellow human being, it is unlikely that they would be willing to pause for half an hour, consider the merits of the result of a scientific test, before proceeding to carry out their mission or give up the hunt (as the case may be), in a situation already tense and rife with undercurrents of violence (Ghoshal 2017).

Even with BDKs, a police force responding to vigilante violence would need to calm the crowd for thirty minutes before receiving a result. Further, if after thirty minutes, the meat tested positive for beef, violence could ensue *because* of kit results.

While BDKs are developed to counter violent attacks by *gau rakshaks*, their existence indicates a normalization of networked surveillance activities, which includes tips about suspected beef trade. BDKs serve to disperse technology among state and non-state actors to surveil populations based on their presumed consumption or proximity to beef. Further, although the kit focuses on testing meat, it is also a test of the meat owner who is considered dangerous, and whose societal position is brought into question. The state relies on the detection kits' scientific objectivity and efficiency to set up a surveillance apparatus; through its dispersal among the police, and as a self-surveillance strategy for populations deemed suspicious. The kit exacerbates monitoring of already-vulnerable populations, while eliding ideological undercurrents pervading its very existence.

The BDK is treated as an objective figure; an apolitical agent removed from the religiously charged context giving rise to its creation and spread. In testing meat and determining its permissibility, these kits reinforce species hierarchies, with buffalo or mutton reduced to serve as a contrast and reify the sacrality of cow meat. Such tests further violence toward certain species and render their bodies disposable.

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<sup>16</sup> While we present a critique of self-discipline inflicted by the beef detection kit and the anxiety that follows, we acknowledge that subjectification is never a complete process, and it is entirely possible that various actors are ingeniously resisting these strategies or using them in ways advantageous to them. However, an examination of the latter was beyond the project's scope.

As such, governmental tactics put in place through the “scientific” kit works to normalize surveillance of marginalized human populations, while obscuring violence to bovine and non-bovine animals’ bodies. We now turn to cattle unique-identification numbers to illustrate relational monitoring of cows and owners.

### *Cattle UID numbers*

In India, cattle unique-identification numbers (UIDs) were introduced by the federal government to the Supreme Court to reduce cow vigilante activity and violence (R. Sharma 2017). Subsequently, however, the state has widely discussed its benefits to curb cow smuggling and thereby increase safety (Scroll Staff 2017c), failing to attend to the broader context of violence. We analyze cattle UIDs and their deployment to reveal how a dispersal of surveillance occurs, where monitoring of cows extends to those who own and manage them.

We argue that the introduction of this political technology, in the form of 12-digit unique identification numbers for cattle, has to be read in close conjunction with India’s contemporary beef ban. Some state governments have begun assigning cattle UIDs in the form of ear tags (Haq 2018; Choudhury 2018), as shown in figure 4 below. Under this scheme, cattle owners are responsible for registering cows and maintaining registration proof, which they are to hand over to subsequent owners in case of a sale. These numbers are tied to the owner’s *Aadhaar* number, India’s recently enacted social security scheme (Haq 2018; Choudhury 2018).<sup>17</sup> Cow UIDs form a database with unique identifiable markings for each cow, and other statistics, such as breed, age, sex, height, color, artificial insemination record, lactation capacity, and name of owner (Haq 2018; Anand 2017). Notably, statistics collected by cattle UID numbers do not consider animals’ condition outside of economic (re)productivity, thereby obscuring violence to achieve these ends (Gillespie and Collard 2015).

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<sup>17</sup> Enacted in 2016, Aadhaar is a mandatory social security scheme for all Indian citizens. This card contains the individual’s biometric information and is linked to various financial undertakings. The efficacy and reliability of this scheme is still being challenged (Venkataramakrishnan 2017; Bhatia 2018).



**Figure 4:** Map of India with shading indicates states implementing programs for installing cow unique identification numbers. Prepared by Authors.

There are many explanations for introducing cattle UIDs (for example, see R. Sharma 2017; Cherian 2018; Press Trust of India 2018c). Primarily, cattle UIDs are linked with economic productivity of cows for dairy, which glosses over discrepancies between purported cow protectionism and violence cows face from the dairy industry. Further, despite a range of purported benefits, a constant advantage reported across media sites is the UIDs potential in preventing cow smuggling. Cow smuggling and a monitoring of populations affiliated with cow trade connects the closely timed introduction of cattle UIDs across states. Legislations accompanying the beef ban have made cow trade challenging, with increased cow smuggling incidents (Venkateswaran 2017; Kazmin 2017). We argue that the cow UID purports to solve a problem created at least partially by the beef ban itself.

Further, and as we show, the cow becomes an entry point to monitor populations closely affiliated with cows, largely targeting Dalit and Muslim groups. This linkage is made explicit in an early tagging instance of Muslim-owned cattle in 2012 under the aegis of national security (Govindrajan 2018, 67). Such monitoring reinforces the risk posed by certain groups, whose monitoring and emergent vulnerability exacerbates existing social divisions. We now provide reasons given for installing cow UIDs, their correlation with productivity, and underlying logics of attaining cow protectionism by monitoring owners.

At the national level, the government has assigned \$7.28 million [₹500 million] for cows UIDs, with each tamper-proof tag costing €12-15 [₹8-10] (Haq 2018). The government has explained cow tagging expenses through its presumed ability to help farmers by monitoring cattle breeds and boosting milk production by “upgrad[ing] the nation’s entire cattle population” (Haq 2018). The government has correlated this upgrade to a twenty per cent increase in milk production following the first phase of the scheme (Haq 2018). The government also explains this scheme as a means to prevent cattle smuggling and trafficking (Haq 2018).

In Madhya Pradesh, the government aims to tag its ninety million cattle in two phases. In 2018, under the first phase, 250,000 cattle were tagged (Choudhury 2018; Press Trust of India 2018c). Despite the scheme's ambitiousness and corresponding budget, there remains a paucity of explanation linking the installation of UIDs with increased milk productivity, and how this goal aligns with cow protectionism. The scheme is expected to increase productivity through greater supervision of those who own cows. Such enhanced supervision is achieved by linking cow UID numbers to farmers' *Aadhaar* numbers (Choudhury 2018), eliding the fact that cattle abandonment stems from rendering slaughter illegal under the beef ban.

Similar correlations between heightened supervision and increased productivity drive the installation of cow UIDs in other Indian states, including Telangana, where the government has assigned UID numbers to 8.5 million cattle and buffalo as part of a National Mission on Bovine Productivity Scheme (Engineer 2017). The state of Kerala has undertaken a different approach towards cattle, where houses and farms of one million livestock farmers are to be geotagged, and 1.1 million cows and buffaloes have already been given UID tags. The goal of this exercise is to gather livestock information and connect it with data about farmers' land, homes, and farms (Press Trust of India 2018b). Kerala's Animal Husbandry Department has a database of 800,000 farmers, 60,000 of whom have been geotagged (Press Trust of India 2018b). The database will include extensive information about associated farmers. This large-scale data collection is expected to assist financial planning and animal disease management (Press Trust of India 2018d).

Information tied to cow UID numbers is currently housed in agricultural ministry databases. However, future goals are to expand the database, making information about animals and herders readily available (Engineer 2017). While data-gathering and geographic mapping can be useful, we read the state's attempts at digitization and a disproportionate focus on cows across multiple schemes within the context of India's beef ban, and corresponding vigilante activities. Furthermore, even as this database objectifies cows, an advocacy for unique cattle UIDs deems other animal bodies unworthy of "protection," continuing hierarchical speciesist logic that some lives matter more than others (Gillespie 2018).

Cow UID tags exert social pressure by making farmers responsible for tagging and documenting cattle. UID registration requirements makes cattle trade challenging, with animal transport requiring a permit, preceded by veterinary approval (Anand 2017). Unlike beef detection kits, where pre-emptive fear causes self-policing, cow UID schemes require tagging. Untagged cows run the risk of being seen as non-compliant or undocumented, subsequently reflecting back on their owner's non-compliance. An "uncooperative" farmer can be fined for trading without a "fitness to move certificate" (Anand 2017). The fear of being considered non-compliant and suffering legal and social repercussions drives farmers to comply with the campaign. The challenges in obtaining a permit have resulted in increased cattle smuggling (Anand 2017). As such, there is a forced dispersal of surveillance mechanisms, with monitoring of cows extending to those who own them (Jacobsen 2012).

The monitoring of cows and farmers is facilitated by an intricate interweaving of cow UID and *Aadhaar* numbers. Given vigilante targeting of Muslim and Dalit farmers, releasing information about registered cows, their UID numbers, and owner's personal identifiable information could prove devastating if current cow UID databases were hacked, similar to *Aadhaar* databases (TA 2017; Scroll Staff 2018; IndiaTimes Staff 2018). Even if databases are secure, cow UID numbers, coupled with the beef ban and vigilante activities, have heightened vulnerability of Dalit and Muslim groups. Moreover, connections between cattle UID numbers and owner's *Aadhaar* number solidifies the idea of human exceptionalism, where an animal's worth is determined through ownership by humans and their owners' compliance is regulated through domination of livestock bodies (Govindraj 2018).



Cattle UIDs extend surveillance imposed on animals for economic benefits to certain human groups. We show differential logics at play: the surveillance of cows is justified through arguments about efficiency and economic development, and human surveillance is explained through identification of cow-eating bodies (Muslims and Dalits in particular) as posing a risk. We argue that despite differences in reasoning across the human-nonhuman spectrum, there is continuity in surveillance on these actors under the mantle of cow protectionism. We posit that technology such as cattle UID numbers, used under the guise of “progress” violates animal bodies and agency (Gillespie 2014) even as it exacerbates fear and uncertainty for Dalit and Muslim groups.

## Conclusion

We opened this paper with a vignette where a Muslim man was lynched by a mob of Hindu men in his village in northern India. His son, beaten by the same mob, underwent two brain surgeries. Subsequently, his family moved out of the village (Ali 2017). One of the police inspectors examining the case was relocated several times since the event, and in December 2018, he was attacked and killed by cow vigilantes in a different spate of violence that arose in response to cow carcasses (Web Desk 2018). Within this landscape of heightened nationalism, with legal and extra-legal repercussions for those deemed “suspect” through the beef ban, we treat political technologies as an entry point to analyze the confluence of animal symbolism, surveillance and nation-making. In particular, we show how surveillance and digitization enacted via beef detection kits and cattle UIDs mimic and exacerbate existing social hierarchies, reworking them under the framework of cow protectionism to advance Brahmanical supremacy. We focus on beef ban enforcement technologies to show how science and politics co-produce one another to reinforce caste and species hierarchies and to discipline those deemed outsiders. We use the lens of mutual avowal to examine how the beef ban marginalizes groups across the human-nonhuman spectrum, and to consider possibilities for ethical engagement across differential subject positions.

We elaborate on state-sponsored disciplining mechanisms to decipher the role of technologies in governing populations. For such governmentality, scientific knowledge and expertise are crucial. BDKs are heralded to improve efficiency, stem vigilante violence, and reduce sales, consumption, and smuggling of beef, while cattle unique-identification numbers are touted to increase dairy productivity and bolster the national economy. These technologies are presented as scientifically viable, objective, and efficient. However, as we show, science is neither apolitical nor unbiased, evident even in Bhanushali’s stated motive to create a BDK. Elaborating intent shows how emphasis on scientific origins of detection kits, and scientific justification for UID tagging in increasing dairy productivity obscures the political, social, and discriminatory basis of the ban on beef and its corporeal effect on animal populations it seeks to “protect.” Furthermore, while their stated intent runs counter to cow vigilantism, the development of these technologies normalizes the banning of beef in India, and extends the state’s ability to monitor certain groups, including cows the state aims to protect. By providing tools whose potential “success” entails policing of Muslims and Dalits and the digital objectification of cows, political technologies increase the vulnerability of parties across the human-nonhuman spectrum. We render visible the stakeholders and ideology involved in the creation and spread of new technology, showcasing the contextual development and deployment of scientific and technological expertise (Goldman 2005; Mitchell 2002), and expose linkages between science, politics and hierarchy in India’s beef ban. We show how scientific knowledge and expertise helps produce technologies that entrench Brahmanical supremacist ideas, thus operationalizing science to bolster the status quo.

New technologies like BDKs and cow UID numbers are being disseminated to address cow vigilantism within a political moment fueled by religious and caste discrimination. Within this realm,

scientific knowledge is used to keep intact close linkages between the nation and the sacred cow. Such associations reify the centering of upper-caste Hindus as ideal Indian citizens (c.f. Narayan 2018) whilst excluding Muslims and Dalits, who are rendered hyper-visible and face challenges to their already-fraught place within the nation. The symbolic value of cows becomes an entry point for a dispersed and atomized form of panoptic surveillance bolstered by state support. We analyze how the “sacred” cow facilitates the governance of populations and is a symbol for Hindu nationalism. In doing so, we argue, Foucauldian technologies are invoking the “sacred” cow to facilitate nation-making projects, disciplining populations and producing new means to entrench caste and species hierarchies. Such analysis extends geographic scholarship on the significance of the cow in helping analyze Indian politics (Narayanan 2018a; Robbins 1999), and how animal symbolism is operationalized to govern nation-states (Raento 2016).

The state uses political technologies to surveil groups across the human-nonhuman spectrum. For Muslims and Dalits predominantly affiliated with cow-related livelihoods and consumption, these technologies are used to monitor public actions, such as selling meat and trading cattle, and private boundaries, such as meat consumption, the individual handling of cows, and even GIS mapping of an individual's private land ownership. Within this realm, there is an expectation for cow owners to utilize new technologies (UID numbers) while simultaneously protecting themselves against others (BDKs). We show how disciplining is strengthened through dissemination of technologies, where people begin to self-police and entrench discipline mechanisms.

The use of surveillance technologies also regulates and disciplines cows. By emphasizing the sacrality of the cow, the cow loses its animal status, becoming a symbol of the nation and thus objectified. This obscures violence done to the cow throughout its life and in death. Such violence is exemplified through a close look at cattle UID numbers, which provides a digitized understanding of cow's reproductive ability in the dairy industry, turning a blind eye to violence emerging from exploiting the cow's economic capacity. The collecting of cattle statistics through cattle UID numbers works to conceal cows' health and well-being beyond reproductive potential. Furthermore, cow owners are threatened with legal or extra-legal repercussions for non-compliance. The cows' owners face increased scrutiny and surveillance through information gathering processes, simultaneously emphasizing self-surveillance and discipline through the process of virtual observation at the threat of violence in the form of lynching, beatings, legal fines, or prison sentences. By deeming the protection and management of cattle a public affair, the state is able to extensively police and monitor cows. Such acts serve – by extension – to surveil and police their owners, managers and users, who are often Muslim and Dalits. Deeming cows as being mishandled, out of line, or calling their meat illegal then calls into scrutiny the public status of Muslims and Dalits, as well as discredits their private actions of cow sales and ownership. Here, we argue that individuals belonging to these groups can be seen as sharing vulnerability with the cow due to their positionality; out of line, unacceptable, and illegal.

Furthermore, by sacralizing the cow, other non-bovine animals are labeled less-than and less worthy of protection. For example, the buffalo and the foreign Jersey cow are considered dispensable, solidifying the violence done to these and other animals through speciesist hierarchies (Narayanan 2018a). Technologies such as the beef detection kit emphasize this dispensability through discarding non-cow meat and by obfuscating the violence done to the animal from the seizure and testing of meat. Such testing further objectifies cow and non-cow meat through the rhetoric of “scientific impartiality,” working to police and punish Muslim and Dalit populations through enacting violence on the cow in death, as a means to target non-idealized Indian populations.

We show how a lens of mutual avowal is beneficial in recognizing shared vulnerability and considering ethical engagements across differentially marginalized subject positions. Despite seeming at odds, we contend that marginal human groups (Muslims and Dalits) share with non-human groups

(cows, other bovines, non-bovines) a vulnerability to violence through governmentality; bodily and through objectification, surveillance, and dispensability. We argue that analyzing shared vulnerability reveals the reification of Brahmanical supremacy and provides a starting point to challenge the status quo. A mutual avowal analytic exposes the conditional positioning of these groups within the nation-state; wherein cows belong by virtue of sacredness and dairy productivity, and Muslims and Dalits are contingently included through immense self-disciplining. The tentativeness inhered in such belonging entwines closely with dispensability such groups experience. In recognizing the conditionality of such belonging, we suggest a mutually avowed lens helps eschew a protectionist approach that continues to objectify and surveil subjects, instead allowing for engagements that recognize more fully the subjectivity of humans and non-humans.

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### References

- Abraham, Delna, and Ojaswi Rao. 2017. "Cow-Related Violence: 86% Dead Since 2010 Are Muslim; 97% Attacks Reported After 2014." *The Wire*, June 28, 2017. <https://thewire.in/152159/cow-related-violence/>.
- Ali, Mohammad. 2017. "Two Years on, Akhlaque Kin Wait for Justice." *The Hindu*, September 29, 2017. <http://www.thehindu.com/todays-paper/tp-national/two-years-on-akhlaque-kin-wait-for-justice/article19773026.ece>.
- Ambedkar, B. R. 1948. "Untouchability, the Dead Cow and the Brahmin." In *The Untouchables: Who Were They and Why They Became Untouchables. Reprint: Volume 7, Dr. Babasaheb Ambedkar Writings and Speeches*. Government of Maharashtra.
- Anand, Utkarsh. 2017. "Centre Wants UID for All Cows with Details of Horn, Tail, Breed, Age." *The Indian Express*, April 25, 2017. <http://indianexpress.com/article/india/centre-wants-uid-for-all-cows-with-details-of-horn-tail-breed-age-4626717/>.
- Arunima, G. 2015. "Of Cows, Muslims, and the Right to Religious Difference." *Economic & Political Weekly* 50 (40). <https://www.epw.in/journal/2015/40/web-exclusives/cows-muslims-and-right-religious-difference.html>.
- Ashraf, Ajaz. 2015a. "Beef Ban Is an Attempt to Impose Upper-Caste Culture on Other Hindus: Kancha Ilaiah." *Scroll.In*, March 19, 2015. <http://scroll.in/article/714661/beef-ban-is-an-attempt-to-impose-upper-caste-culture-on-other-hindus-kancha-ilaiah>.
- . 2015b. "History Is Proof Most Hindus Never Had Any Beef with Beef." *Quartz*, March 21, 2015. <https://qz.com/366659/history-says-most-hindus-never-had-any-beef-with-beef/>.
- . 2017. "Why Hindu Farmers and Cattle Traders in Rajasthan Are Angry with Gau Rakshaks." *Scroll.In*, 2017. <https://scroll.in/article/836477/why-hindu-farmers-and-cattle-traders-in-rajasthan-are-angry-with-gau-rakshaks>.
- Banerjee, Poulomi. 2015. "Meat of the Matter: How Beef Ban Affects Leather, Exports and Chemical Industry." *Hindustan Times*, March 22, 2015. <http://www.hindustantimes.com/india/meat-of-the>

matter-how-beef-ban-affects-leather-exports-and-chemical-industry/story-q6qLCPfV2hpijG0xSHQNGJ.html.

- Bhardwaj, Mayank. 2017. "Cattle Trade Ban Could Half Beef Exports, Lead to Job Losses." *LiveMint*, May 29, 2017. <http://www.livemint.com/Politics/2REzm02p1jsRhbG9uFLG3K/Cattle-trade-ban-could-half-beef-exports-lead-to-job-losses.html>.
- Bhatia, Rahul. 2018. "Critics of Aadhaar Say They Are Under Surveillance, Allege Government Harassment." *The Wire*, 2018. <https://thewire.in/economy/critics-aadhaar-say-surveillance-allege-government-harassment>.
- Brass, Paul R. 2011. *The Production of Hindu-Muslim Violence in Contemporary India*. University of Washington Press.
- Brown, Michael, and Larry Knopp. 2010. "Between Anato-mo-and Bio-Politics: Geographies of Sexual Health in Wartime Seattle." *Political Geography* 29 (7): 392–403.
- Burchell, Graham, Colin Gordon, and Peter Miller. 1991. *The Foucault Effect: Studies in Governmentality*. University of Chicago Press.
- Cherian, Viju. 2018. "Aadhaar-like Tags for Cows: Does Govt's Intent Match Ground Realities?" *Hindustan Times*, February 6, 2018. <https://www.hindustantimes.com/opinion/aadhaar-like-tags-for-cows-does-govt-s-intent-match-ground-realities/story-mTIYDI1sd0NFGDFf0HAcYP.html>.
- Chigateri, Shraddha. 2008. "'Glory to the Cow': Cultural Difference and Social Justice in the Food Hierarchy in India." *South Asia: Journal of South Asian Studies* 31 (1): 10–35.
- Choudhury, Rabindra Nath. 2018. "MP Completes UID Tagging of 2.5 Lakh Cattle." *Asian Age*, March 26, 2018. <http://www.asianage.com/india/all-india/260318/mp-completes-uid-tagging-of-25-lakh-cattle.html>.
- Daniyal, Shoaib. 2015a. "Between Banned Beef and Expensive Dal, How Are Poor Indians Supposed to Get Enough Protein?" Text. Scroll.In. 2015. <http://scroll.in/article/765001/between-banned-beef-and-expensive-dal-how-are-poor-indians-supposed-to-get-enough-protein>.
- . 2015b. "Gosht Busters: Five Examples of India's Tragi-Comic Obsession with Vegetarianism." *Scroll.In*, September 13, 2015. <http://scroll.in/article/755126/gosht-busters-five-examples-of-indias-tragi-comic-obsession-with-vegetarianism>.
- Das, Kalyan. 2015. "To Eat or Not To Eat Beef." *Economic & Political Weekly* 50 (44). <https://www.epw.in/journal/2015/44/special-articles/eat-or-not-eat-beef.html>.
- Dave, Naisargi N. 2017. "Something, Everything, Nothing; or, Cows, Dogs, and Maggots." *Social Text* 35 (1 (130)): 37–57.
- Dube, Mukul. 2015. "Why Do We Insist on Calling India a Vegetarian Country When Two-Thirds of Us Eat Meat?" *Scroll.In*, June 15, 2015. <https://scroll.in/article/734242/why-do-we-insist-on-calling-india-a-vegetarian-country-when-two-thirds-of-us-eat-meat>.
- "ELISA: Purpose, Procedure, and Results." 2012. Healthline. July 19, 2012. <https://www.healthline.com/health/elisa>.
- Engineer, Rayomond. 2017. "India Has Tagged Lakhs of Sheep & Cows. Here's Why It Is a Good Move." *The Better India*, December 18, 2017. <https://www.thebetterindia.com/124759/tagging-animals-india-monitoring/>.

- Express Web Desk. 2017. "Cow Dung Can Be Used to Make Bunkers: RSS Leader Indresh Kumar." *The Indian Express*, August 2, 2017. <http://indianexpress.com/article/india/rss-leader-indresh-kumar-calls-cow-meat-as-poison-says-dung-can-be-used-to-make-bunkers-4779363/>.
- Fang, Yi, and Ramaraja P. Ramasamy. 2015. "Current and Prospective Methods for Plant Disease Detection." *Biosensors* 5 (3): 537. <https://doi.org/10.3390/bios5030537>.
- Fazal, Imran. 2017. "UP, MP May Buy Maha's Instant Beef-Testing Kits." *Daily News and Analysis*, August 16, 2017. <http://www.dnaindia.com/mumbai/report-up-mp-may-buy-maha-s-instant-beef-testing-kits-2531209>.
- Ferguson, James, and Akhil Gupta. 2002. "Spatializing States: Toward an Ethnography of Neoliberal Governmentality." *American Ethnologist* 29 (4): 981–1002.
- First Post Staff. 2017. "Life Imprisonment for Cow Slaughter, Makes Gujarat the State with Harshes Laws on Beef Ban." *Firstpost*, March 31, 2017. <https://www.firstpost.com/politics/life-imprisonment-for-cow-slaughter-makes-gujarat-the-state-with-harshes-laws-on-beef-ban-3361958.html>.
- Foucault, Michel. 1977. "Discipline and Punish: The Birth of the Prison." *Trans. Sheridan A. Penguin Books. London*.
- Ganguly, Sumit. 2003. "The Crisis of Indian Secularism." *Journal of Democracy* 14 (4): 11–25. <https://doi.org/10.1353/jod.2003.0076>.
- Ghoshal, Somak. 2017. "Beef Detection Kits May Save Time And Funds But Are Unlikely To Save Lives." *Huffington Post India*, July 10, 2017. [http://www.huffingtonpost.in/2017/07/10/beef-detection-kits\\_a\\_23023245/](http://www.huffingtonpost.in/2017/07/10/beef-detection-kits_a_23023245/).
- Gillespie, Kathryn. 2014. "Sexualized Violence and the Gendered Commodification of the Animal Body in Pacific Northwest US Dairy Production." *Gender, Place & Culture* 21 (10): 1321–1337.
- . 2018. "Placing Angola: Racialisation, Anthropocentrism, and Settler Colonialism at the Louisiana State Penitentiary's Angola Rodeo." *Antipode*.
- Gillespie, Kathryn, and Rosemary-Claire Collard. 2015. *Critical Animal Geographies: Politics, Intersections and Hierarchies in a Multispecies World*. Routledge.
- Goldman, Michael. 2005. *Imperial Nature: The World Bank and Struggles for Social Justice in the Age of Globalization*. Yale University Press.
- Govindrajan, Radhika. 2018. *Animal Intimacies: Interspecies Relatedness in India's Central Himalayas*. University of Chicago Press.
- Graham, Stephen, and David Wood. 2003. "Digitizing Surveillance: Categorization, Space, Inequality." *Critical Social Policy* 23 (2): 227–248.
- Haq, Zia. 2018. "40 Million Cows to Get Aadhaar-like Number at Cost of Rs 50 Crore in 1st Phase." *Hindustan Times*, February 3, 2018. <https://www.hindustantimes.com/india-news/40-million-cows-to-get-aadhaar-like-number-at-cost-of-rs-50-crore-in-1st-phase/story-9f50M1CkgBoCSym5SR1VzL.html>.
- Hart, Gillian. 2004. "Geography and Development: Critical Ethnographies." *Progress in Human Geography* 28 (1): 91–100.
- Huxley, Margo. 2007. "Geographies of Governmentality." *Space, Knowledge and Power: Foucault and Geography* 191.

- Ilaiah, Kancha. 1996. "Beef, BJP and Food Rights of People." *Economic & Political Weekly* 31 (24). <https://www.epw.in/journal/1996/24/commentary/beef-bjp-and-food-rights-people.html>.
- "IndiaSpend | Hate-Crime Database." n.d. Accessed February 22, 2019a. <http://data.indiaspend.com/hate-crime>.
- — —. "IndiaSpend | Hate-Crime Database." n.d. Accessed February 22, 2019b. <http://lynch.factchecker.in/>.
- IndiaSpend Staff. 2017. "26 Cases Of Cow-Related Violence In 7 Months Of 2017, Equalling 2016 As Worst Year." *IndiaSpend*, July 28, 2017. <http://www.indiaspend.com/cover-story/26-cases-of-cow-related-violence-in-7-months-of-2017-equalling-2016-as-worst-year-21119>.
- IndiaTimes Staff. 2017. "Six Muslim Men Beaten Up By Vigilantes, Arrested In Bihar On Suspicion Of Cow Slaughter." *IndiaTimes*, August 19, 2017. <http://www.indiatimes.com/news/india/six-muslim-men-beaten-up-by-vigilantes-arrested-in-bihar-on-suspicion-of-cow-slaughter-328111.html>.
- — —. 2018. "An Online Researcher Hacked Into Aadhaar's Official Android App To Show How Poorly It's Secured." *Indiatimes*, January 11, 2018. <https://www.indiatimes.com/technology/news/an-online-researcher-hacked-into-aadhaar-s-official-android-app-to-show-how-poorly-it-s-secured-337425.html>.
- Jacobsen, Elida K. U. 2012. "Unique Identification: Inclusion and Surveillance in the Indian Biometric Assemblage." Edited by Jana Hönke and Markus-Michael Müller. *Security Dialogue* 43 (5): 457–74. <https://doi.org/10.1177/0967010612458336>.
- Jaffrelot, Christophe. 2017. "India's Democracy at 70: Toward a Hindu State?" *Journal of Democracy* 28 (3): 52–63. <https://doi.org/10.1353/jod.2017.0044>.
- Jain, Shruti. 2017. "Jaipur's Meat Sellers Living in Fear After Intimidation, Licence Crackdown." *The Wire*, May 20, 2017. <https://thewire.in/137877/jaipur-meat-sellers-crackdown/>.
- Jaiswal, Anuja. 2017. "Now, Slaughterhouses in UP Told to Install Ultrasound Machines, CCTV Cameras." *The Times of India*, 2017. <https://timesofindia.indiatimes.com/city/agra/now-slaughterhouses-in-up-told-to-install-ultrasound-machines-cctv-cameras/articleshow/61632487.cms>.
- Jasanoff, Sheila. 2004. "The Idiom of Co-Production." *States of Knowledge: The Co-Production of Science and Social Order*, 1–12.
- Johari, Aarefa. 2014. "Liberal 'Hindu' Newspaper Reiterates No-Meat Policy in Office, Sparks Debate on Vegetarian Fundamentalism." *Scroll.In*, 2014. <http://scroll.in/article/662132/liberal-hindu-newspaper-reiterates-no-meat-policy-in-office-sparks-debate-on-vegetarian-fundamentalism>.
- — —. 2015. "Fearing Loss of Livelihood, Maharashtra's Meat Traders Prepare to Protest Beef Ban." *Scroll.In*, March 4, 2015. <http://scroll.in/article/711220/fearing-loss-of-livelihood-maharashtras-meat-traders-prepare-to-protest-beef-ban>.
- Kazmin, Amy. 2017. "Modi's India: The High Cost of Protecting Holy Cows." *Financial Times*, November 22, 2017. <https://www.ft.com/content/63522f50-caf3-11e7-ab18-7a9fb7d6163e>.
- Khan, Aamir. 2017. "What the Bombay High Court Verdict on Beef Ban Means." *The Indian Express*, 2017. <http://indianexpress.com/article/india/india-news-india/decoded-what-the-bombay-hc-verdict-on-beef-ban-means-2788254/>.
- Kim, Claire Jean. 2015. *Dangerous Crossings*. Cambridge University Press.

- Kotak, Yesha. 2018. "Mumbai Meat Shop Owners Demand Use of Portable Kits to Detect Meat Type." *Hindustan Times*, 2018. <https://www.hindustantimes.com/mumbai-news/mumbai-meat-shop-owners-demand-use-of-portable-kits-to-detect-meat-type/story-edMSLnXPddJTmCMkBWtxmN.html>.
- Krishnan, Murali. 2017. "In Pehlu Khan's Village, Fear, Dismay and Anger Linger." *The Wire*, 2017. <https://thewire.in/134774/pehlu-khan-cattle-vigilante/>.
- Kulkarni, Prachee. 2017. "After Beef Ban, Meat-Seller Takes to Vending Vegetables." *The Times of India*, 2017. <http://timesofindia.indiatimes.com/city/pune/after-beef-ban-meat-seller-takes-to-vending-vegetables/articleshow/59722486.cms>.
- Legg, Stephen. 2006. "Governmentality, Congestion and Calculation in Colonial Delhi." *Social & Cultural Geography* 7 (5): 709–29. <https://doi.org/10.1080/13698240600974721>.
- Li, Tania Murray. 2007. *The Will to Improve: Governmentality, Development, and the Practice of Politics*. Duke University Press.
- Mandal, Bankim Chandra. 2010. "Caste Discrimination, Deprivation and the Socio-Economic Development of Dalits." *Contemporary Voice of Dalit*, July. <https://doi.org/10.1177/0974354520100203>.
- Minhaz, Ayesha. 2015. "Beyond Beef and Pork Festivals: The Fight for Public Space in the Osmania University Campus." *Scroll.In*, 2015. <http://scroll.in/article/774629/beyond-beef-and-pork-festivals-the-fight-for-public-space-in-the-osmania-university-campus>.
- Mitchell, Timothy. 2002. *Rule of Experts: Egypt, Techno-Politics, Modernity*. University of California Press.
- Mohanty, Abhijit. 2017. "Photo Essay: India's Silent Emergency – Malnutrition." *The Wire*, 2017. <https://thewire.in/187910/photo-essay-indias-silent-emergency-malnutrition/>.
- Murakami Wood, David. 2013. "What Is Global Surveillance? Towards a Relational Political Economy of the Global Surveillant Assemblage." *Geoforum* 49 (October): 317–26. <https://doi.org/10.1016/j.geoforum.2013.07.001>.
- Nair, Gayatri. 2016. "The Bitter Aftertaste of Beef Ban." *Economic & Political Weekly*. <https://www.epw.in/journal/2016/10/commentary/bitter-aftertaste-beef-ban.html>.
- Narayanan, Yamini. 2018a. "Cow Protection as 'Casteised Speciesism': Sacralisation, Commercialisation and Politicisation." *South Asia: Journal of South Asian Studies* 41 (2): 331–351.
- . 2018b. "Cow Protectionism and Bovine Frozen-Semen Farms in India: Analyzing Cruelty, Speciesism, and Climate Change." *Society & Animals* 26 (1): 13–33.
- Natrajan, Balmurli, and Suraj Jacob. 2018. "'Provincialising' Vegetarianism." *Economic & Political Weekly* 53 (9). <https://www.epw.in/journal/2018/9/special-articles/provincialising-vegetarianism.html>.
- Pavan, P. 2017. "Meet the Vegetarian Scientist Who Devised the Maharashtra Government's Cow-Meat Detection Kit." *Bangalore Mirror*, 2017. <http://bangaloremirror.indiatimes.com/columns/sunday-read/meet-the-vegetarian-scientist-who-devised-the-maharashtra-governments-cow-meat-detection-kit/articleshow/59716738.cms>.
- Pokharel, Sugam, and James Griffiths. 2018. "India WhatsApp Rumors: Mob Kills Man in Latest Attack, 30 Arrested." *CNN*, July 16, 2018. <https://www.cnn.com/2018/07/16/asia/india-whatsapp-lynching-intl/index.html>.

- Press Trust of India. 2017. "Cops to Get 'Beef Detection Kits.'" *The Hindu*, 2017. <http://www.thehindu.com/news/cities/mumbai/cops-to-get-beef-detection-kits/article19244149.ece>.
- — —. 2018a. "250,000 Cattle in MP Stamped with Unique 12-Digit Aadhaar-like Number." *Business Standard India*, 2018. [http://www.business-standard.com/article/economy-policy/250-000-cattle-in-mp-stamped-with-unique-12-digit-aadhaar-like-number-118032500336\\_1.html](http://www.business-standard.com/article/economy-policy/250-000-cattle-in-mp-stamped-with-unique-12-digit-aadhaar-like-number-118032500336_1.html).
- — —. 2018b. "Kerala Govt to Geotag 10 Lakh Livestock Farmer Houses." *India Today*, 2018. <https://www.indiatoday.in/pti-feed/story/ker-govt-to-geotag-10-lakh-livestock-farmer-houses-1172212-2018-02-18>.
- — —. 2018c. "Madhya Pradesh Completes UID Tagging of 2.5 Lakh Cattle." *Hindustan Times*, 2018. <https://www.hindustantimes.com/india-news/madhya-pradesh-completes-uid-tagging-of-2-5-lakh-cattle/story-L4LFwVF04IAq61Gi2qJvaN.html>.
- — —. 2018d. "Digitisation Drive: Kerala Govt to Geotag 10 Lakh Livestock Farmer Houses." *The Indian Express* (blog). February 18, 2018. <http://indianexpress.com/article/india/kerala-govt-to-geotag-10-lakh-livestock-farmer-houses-5068679/>.
- "Protest Diaries: Not in My Name, Break the Silence and More." 2017. *Economic and Political Weekly* 52 (25–26). <https://www.epw.in/journal/2017/25-26/web-exclusives/not-my-name-protests-against-mob-lynching-cow-slaughter.html>.
- Raento, Pauliina. 2016. "A Geopolitics of the Horse in Finland." *Geopolitics* 21 (4): 945–968.
- Rather, Shaiba. 2016. "Student Voices: Beef Bans in India." *Harvard South Asia Institute Blog* (blog). 2016. <http://harvardsai.tumblr.com/post/153007075070/student-voices-beef-bans-in-india>.
- Robbins, Paul. 1999. "Meat Matters: Cultural Politics along the Commodity Chain in India." *Ecumene* 6 (4): 399–423. <https://doi.org/10.1177/096746089900600402>.
- Robert, Castel. 1991. "From Dangerousness to Risk." *Burchell, Graham, Colin*.
- Roberts, Nathaniel. 2016. *To Be Cared for: The Power of Conversion and Foreignness of Belonging in an Indian Slum*. Vol. 20. University of California Press.
- Samarajeewa, U., C. I. Wei, T. S. Huang, and M. R. Marshall. 2009. "Application of Immunoassay in the Food Industry." *Critical Reviews in Food Science & Nutrition*, September. <https://doi.org/10.1080/10408399109527535>.
- Scroll Staff. 2017a. "Pregnant Women Should Avoid Eating Meat, Not Have Sex, Says Ayush Ministry: Report." *Scroll.In*, 2017. <https://scroll.in/latest/840529/pregnant-women-should-avoid-eating-meat-not-have-sex-says-ayush-ministry-report>.
- — —. 2017b. "IIT Madras PhD Scholar Beaten up by Students for Participating in Beef Fest." *Scroll.In*, March 30, 2017. <https://scroll.in/latest/839161/iit-madras-phd-scholar-beaten-up-by-students-for-participating-in-beef-fest>.
- — —. 2017c. "Every Cow Should Get a Unique Identification Number for Tracking, Suggests Centre." *Scroll.In*, April 24, 2017. <https://scroll.in/latest/835479/every-cow-should-get-a-unique-identification-number-for-tracking-suggests-centre>.
- — —. 2018. "French Researcher Uses Simple Hack to Access Telangana Government Site with Lakhs of Aadhaar Details." *Scroll.In*, 2018. <https://scroll.in/latest/870154/french-researcher-uses-simple-hack-to-access-telangana-government-site-with-lakhs-of-aadhaar-details>.
- Shaikh, Farhan. 2017. "Beef Ban: Maharashtra to Get 'Detection Kits' to Identify Meat within 30 Minutes." *Hindustan Times*, July 7, 2017. <http://www.hindustantimes.com/mumbai-news/beef-ban->



maharashtra-to-get-detection-kits-to-identify-meat-within-30-minutes/story-1tOo6eWkQRdsyeCT05tgZJ.html.

- Shaikh, Zeeshan. 2017. "Maharashtra Bans Beef, 5 Years Jail, Rs 10,000 Fine for Possession or Sale." *The Indian Express*, January 27, 2017. <http://indianexpress.com/article/india/india-others/beef-banned-in-maharashtra-5-yrs-jail-rs10000-fine-for-possession-or-sale/>.
- Sharma, Diwakar. 2018. "Mumbai: Forensic Scientists Will Conduct Beef Tests in Mobile Vans Stationed in Every District." *Free Press Journal*, February 23, 2018. <http://www.freepressjournal.in/mumbai/mumbai-forensic-scientists-will-conduct-beef-tests-in-mobile-vans-stationed-in-every-district/1226084>.
- Sharma, Rini. 2017. "Aadhaar-like Number for Cows? Cattle Should Get Unique Identification Number, Centre Tells SC." *India.Com*, April 24, 2017. <http://www.india.com/news/india/aadhaar-like-number-for-cows-cattle-should-get-unique-identification-number-centre-tells-sc-2061643/>.
- Shepherd, Kancha Ilaiah. 2018. "Opinion: Repealing Cow Protection Laws Should Be an Election Issue in 2019." *Scroll.In*, 2018. <https://scroll.in/article/868067/opinion-the-opposition-must-make-repealing-cow-protection-laws-an-election-issue-in-2019>.
- Srinivasan, Krithika. 2015. "Towards a Political Animal Geography?" *Political Geography* 50 (10).
- Sukumar, N. 2015. "Why Beef Was Banished From My Kitchen." *Economic & Political Weekly* 50 (17). <https://www.epw.in/journal/2015/17/web-exclusives/why-beef-was-banished-my-kitchen.html>.
- Svärd, Per-Anders. 2014. "Slaughter and Animal Welfarism in Sweden 1900–1944." In *Political Animals and Animal Politics*, 135–149. Springer.
- TA, Johnson. 2017. "IIT Kharagpur Graduate Hacked Aadhaar Data through Digital India App: Police." *The Indian Express*, August 4, 2017. <http://indianexpress.com/article/india/iit-grad-hacked-aadhaar-data-through-digital-india-app-cops-4781447/>.
- The Editorial Board. 2017. "India's Turn Toward Intolerance." *The New York Times*, July 17, 2017. <https://www.nytimes.com/2017/07/17/opinion/indias-turn-toward-intolerance.html?nytmobile=0>.
- Thorat, Sukhadeo, and Paul Attewell. 2007. "The Legacy of Social Exclusion: A Correspondence Study of Job Discrimination in India." *Economic and Political Weekly* 42 (41): 4141–45.
- Thorat, Sukhadeo, Anuradha Banerjee, Vinod K. Mishra, and Firdaus Rizvi. 2015. "Urban Rental Housing Market." *Economic & Political Weekly* 27: 47–53.
- TNN. 2017. "Two Dalit Youths Lynched to Death in Bihar." *The Times of India*, June 30, 2017. <http://timesofindia.indiatimes.com/city/patna/two-dalit-youths-lynched-to-death-in-bihar/articleshow/59379199.cms>.
- Vaktania, Saurabh. 2017. "Maharashtra FSL Develops Mobile Kit for Cow Meat Testing." *India Today*, July 10, 2017. <https://www.indiatoday.in/india/story/maharashtra-fsl-elisa-kit-cow-meat-beef-testing-1023450-2017-07-10>.
- Vatsa, Aditi. 2015. "Dadri: Mob Kills Man, Injures Son over 'Rumours' That They Ate Beef | India News, The Indian Express." *Indian Express*, December 25, 2015. <https://indianexpress.com/article/india/india-others/next-door-to-delhi-mob-kills-50-year-old-injures-son-over-rumours-they-ate-beef/>.
- Venkataramakrishnan, Rohan. 2017. "The Daily Fix: The Airtel-Aadhaar Mess-up Shows Why Criticism of the UID Must Be Taken Seriously." *Scroll.In*, 2017.

<https://scroll.in/article/862222/the-daily-fix-the-airtel-aadhaar-mess-up-shows-why-criticism-of-the-uid-must-be-taken-seriously>.

Venkateswaran, Vikram. 2017. "Decoded: Cattle Market Rules, 'Beef Ban.'" *The Quint*, June 13, 2017. <https://www.thequint.com/explainers/2017/06/13/cattle-market-rules-are-farmers-bane-but-its-more-complicated-than-that-detailed-q-and-a>.

Walker, John M. 1987. "The Enzyme Linked Immunosorbent Assay (ELISA)." *Techniques in Molecular Biology*, 82–97. [https://doi.org/10.1007/978-1-4615-9799-5\\_4](https://doi.org/10.1007/978-1-4615-9799-5_4).

Web Desk. 2018. "Bulandshahr Violence: Martyred Cop's Sister Says He Was Killed for Probing Akhlaq Lynching." *India Today*, December 4, 2018. <https://www.indiatoday.in/india/story/bulandshahr-violence-subodh-kumar-singh-sister-akhlaq-lynching-1402021-2018-12-04>.

## Appendix 1:

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
1 ANDHRA PRADESH	THE ANDHRA PRADESH PROHIBITION OF COW SLAUGHTER AND ANIMAL PRESERVATION ACT, 1977	“Cow”- includes heifer, or a calf, whether male or female of a cow.  “Calf”- age not defined.	Slaughter of bull, bullock allowed on ‘fit-for-slaughter’ certificate, to be given only if the animal is not economical or is not likely to become economical for the purpose of breeding or draught/agricultural operations.		Cognisable
2 ARUNACHAL PRADESH	NO LEGISLATION				
3 ASSAM	THE ASSAM CATTLE PRESERVATION ACT, 1950	“Cattle” means `Bulls, bullocks, cows, calves, male and female buffaloes and buffalo calves.	Slaughter of <b>all cattle allowed</b> on ‘fit-for-slaughter’ certificate, to be given if cattle is over 14 years of age or has become permanently incapacitated for work or breeding due to injury, deformity or any incurable disease.	Imprisonment up to maximum of 6 months or fine of up to Rs 1,000 or both.	Cognisable only
4 BIHAR	THE BIHAR PRESERVATION AND IIMPROVEMENT OF ANIMALS ACT, 1955	Bull – uncastrated male of above 3 years.	Slaughter of cow and calf totally prohibited	Imprisonment up to maximum of 6 months or fine of up to Rs 1,000 or both.	Cognisable only

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
		Bullock - castrated male of above 3 years.	Slaughter of bull or bullock of over <b>15 years</b> of age or has become permanently incapacitated for work or breeding due to injury, deformity or any incurable disease.		
		Calf - male or female below 3 years.	Export of cows, calves, bulls and bullocks from Bihar is not allowed for any purpose.		
		Cow - female above 3 years.			
5	CHATTISGARH		Slaughter of cow, buffalo, bull, bullock, calf, and possession of their meat banned.	Imprisonment of 7 years, fine up to Rs 50,000	
			Transport, export to other states for slaughter also banned.	Claims to introduce capital punishment for cattle slaughter	
6	DELHI	THE DELHI AGRICULTURAL CATTLE PRESERVATION ACT, 1994	Agricultural Cattle- cows of all ages, calves of cows of all ages, bulls and bullocks.	Slaughter of all agricultural cattle is totally prohibited.	Imprisonment upto five years and fine upto Rs. 10,000, provided that normally imprisonment should not be less than 6 months and fine not less than Rs 1,000.
			Ban on Transport or Export for slaughter is also prohibited.	Burden of proof is on the accused.	Both cognisable and non-bailable

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
			Export for other purposes permitted on declaration that cattle will not be slaughtered.  Export to a State where slaughter is not banned by law will not be permitted.		
7 GOA	THE GOA, DAMAN & DIU PREVENTION OF COW SLAUGHTER ACT, 1978.	Cow includes cow, heifer or calf.  Age of calf not defined.	Total ban on slaughter of cow except when cow is suffering pain or contagious disease or for medical research.  Prohibition of sale of beef or beef products in any form.	Imprisonment up to 2 years or fine up to Rs 1,000 or both.	Both cognisable and non-bailable
	THE GOA ANIMAL PRESERVATION ACT, 1995	Applicable to bulls, bullocks, male calves and buffaloes of all ages.	All the animals can be slaughtered on 'fit-for-slaughter' certificate which is not given if the animal is likely to become economical for draught, breeding or milk (for she/buffaloes) purposes  Prohibition of sale of beef obtained in contravention of above provisions, except beef imported from other States.	Imprisonment up to maximum of 6 months or fine of up to Rs 1,000 or both.	Cognisable only
8 GUJARAT	THE BOMBAY ANIMAL PRESERVATION ACT, 1954 (APPLIED TO GUJARAT)	Applicable to bulls, bullocks, cows, calves and male/female buffalo calves.	Slaughter of cow, calf, bull or bullock totally prohibited.	Life sentence	Cognisable only

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
			Slaughter of buffaloes permitted on certain conditions.		
9 HARYANA	THE PUNJAB PROHIBITION OF COW SLAUGHTER ACT, 1955 (APPLICABLE TO HARYANA)		Provisions same as for Punjab except penal provisions	Rigorous imprisonment up to 5 years or fine up to Rs 5,000 or both.	
10 HIMACHAL PRADESH	THE PUNJAB PROHIBITION OF COW SLAUGHTER ACT, 1955	(All provisions same as for Punjab)			
11 JAMMU & KASHMIR	THE RANBIR PENAL CODE, 1932		Voluntary slaughter of any bovine animal such as ox, bull, cow or calf shall be punished with imprisonment of either description which may extend to 10 years and shall also be liable to fine.  Fine may extend to five times the price of the animals slaughtered as determined by the Court.  Possession of flesh of killed or slaughtered animals is also an offence punishable with imprisonment up to 1 year and fine up to Rs500.		
12 JHARKHAND			Slaughter of cows and oxen; possession, consumption of their meat, banned.	Violators face up to 10 years' jail and/or Rs 10,000 fine.	

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
13 KARNATAKA	THE KARNATAKA PREVENTION OF COW SLAUGHTER AND CATTLE PRESERVATION ACT, 1964	Animal - means bull, bullock, and all buffaloes.  Cow – includes calf of a cow, male or female.	Slaughter of cow, calf of a cow or calf of a she-buffalo totally prohibited.  Slaughter of bulls, bullocks and adult buffaloes permitted on 'fit-for-slaughter' certificate provided cattle is over <b>12 years</b> of age or is permanently incapacitated for breeding, draught or milk due to injury, deformity or any other cause.  Transport for slaughter to a place outside a state not permitted.  Sale purchase or disposal of cow or calf for slaughter not permitted.	Imprisonment up to maximum of 6 months or fine of up to Rs 1,000 or both.	Cognisable only

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
14 KERALA	No state legislation - only Panchayat Act/Rules  Kerala Panchayat (Slaughter Houses and Meat Stalls) Rules, 1964		Panchayat laws provide for prohibition of slaughter of useful animals in Panchayat areas in the State. Under the Kerala Panchayat (Slaughter Houses and Meat Stalls) Rules, 1964, no certificate shall be granted under Rule 8 in respect of a bull, bullock, cow calf, he-buffalo or she-buffalo or buffalo calf unless the animal is over 10 years of age and is unfit for work or breeding or the animal has become permanently incapacitated for work or breeding due to injury or deformity.		
15 MADHYA PRADESH	THE MADHYA PRADESH AGRICULTURAL CATTLE PRESERVATION ACT, 1959.	Agricultural cattle means cows of all ages, calves of cows, bull, bullocks and all buffaloes.	Slaughter of cow, calf of cow, bull, bullock and buffalo calf prohibited.	Imprisonment up to 3 years and fine of Rs.5,000.	Cognisable only



STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
			However, bulls and bullocks are being slaughtered in the light of Supreme Court judgement, provided the cattle is over <b>15 years</b> or has become unfit for work or breeding.	Normally imprisonment shall not be less than 6 months and fine not less than Rs 1,000.	
			Transport or export for slaughter not permitted.	Burden of proof is on the accused.	
			Export for any purpose to another State where cow slaughter is not banned by law is not permitted.		
			Sale, purchase, disposal of cow and its progeny and possession of flesh of cattle is prohibited.		
16	MAHARASHTRA	THE MAHARASHTRA ANIMAL PRESERVATION ACT, 1976	'Cow' includes a heifer or male or female calf of a cow.	Slaughter of cow totally prohibited.	Imprisonment up to maximum of 6 months and fine of up to Rs1,000. Cognisable only
			Slaughter of bulls, bullocks and buffaloes allowed on fit-for-slaughter certificate, if it is not likely to become economical for draught, breeding or milk (in the case of she-buffaloes) purposes.	Burden of proof is on the accused.	

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
17 MANIPUR	ROYAL EDICT BY MAHARAJA - DARBAR RESOLUTION OF 1936	"According to Hindu religion the killing of cow is a sinful act. It is also against Manipur Custom. I cannot allowed such things to be committed in my State. So if any one is seen killing a cow in the State he should be prosecuted."			
18 MEGHALAYA	NO LEGISLATION				
19 MIZORAM	NO LEGISLATION				
20 NAGALAND	NO LEGISLATION				
21 ORISSA	THE ORISSA PREVENTION OF COW SLAUGHTER ACT, 1960	'Cow' includes heifer or calf.	Slaughter of cow totally prohibited.  Slaughter of bull, bullock on fit-for-slaughter certificate if cattle is over <b>14 years</b> of age or has become permanently unfit for breeding, draught.	Imprisonment up to maximum of 2 years or fine up to Rs 1,000 or both.	Cognisable only
22 PUNJAB	THE PUNJAB PROHIBITION OF COW SLAUGHTER ACT, 1955	"Cow" includes bull, bullock, ox, heifer or calf.	Slaughter of cow (and its progeny) totally prohibited.  Export for slaughter not permitted.	Imprisonment up to maximum of 2 years or fine up to Rs 1,000 or both.  Burden of proof is on the accused.	Cognisable and non-bailable.

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
23 RAJASTHAN	THE RAJASTHAN BOVINE ANIMAL (PROHIBITION OF SLAUGHTER AND REGULATION OF TEMPORARY MIGRATION OR EXPORT) ACT, 1995	<p>'Bovine' - means and includes cow, calf, heifer, bull or bullocks.</p> <p>'Bull' - means uncastrated male above 3 years</p> <p>'Bullock' - means castrated male above 3 years</p> <p>'Calf' - means castrated or uncastrated male of 3 years and below.</p> <p>'Cow' - means female above 3 years; 'Heifer' is female of 3 years or below.</p>	<p>Slaughter of all bovine animals prohibited.</p> <p>Possession sale, transport of beef and beef products is prohibited. Export of bovine animal for slaughter is prohibited.</p> <p>Custody of seized animals to be given to any recognized voluntary animal welfare agency failing which to any Goshala, Gosadan or a suitable person who volunteers to maintain the animal.</p>	<p>Rigorous imprisonment of not less than 1 year and up to maximum of 2 years and fine up to Rs 10,000.</p> <p>Burden of proof is on the accused.</p>	
24 SIKKIM	2008 SIKKIM POLICE ACT		<p>Cow slaughter prohibited only in public spaces</p> <p>Monetary penalty only for unsanitary slaughter</p>		

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
25 TAMIL NADU	THE TAMIL NADU ANIMAL PRESERVATION ACT, 1958  Government orders banning cow slaughter dt. 30 <sup>th</sup> August, 1976	'Animal' means bulls, bullocks, cows, calves; also, buffaloes of all ages.	All Animals can be slaughtered on 'fit-for-slaughter' certificate  Certificate given if animal is over <b>10 years</b> of age and is unfit for work and breeding or has become permanently incapacitated for work and breeding due to injury deformity or any incurable disease.  Slaughter of cows and heifers (cow) is banned in all slaughterhouses in Tamil Nadu.	Imprisonment of up to 3 years or fine up to Rs 1,000 or both.	
26 TELANGANA	same as Andhra Pradesh		Slaughter of "Cow" prohibited	Imprisonment up to maximum of 6 months or fine of up to Rs 1,000 or both.	
27 TRIPURA	NO LEGISLATION				
28 UTTAR PRADESH	THE UTTAR PRADESH PREVENTION OF COW SLAUGHTER ACT, 1955	'Beef' means flesh of cow and of such bull or bullock whose slaughter is prohibited under the Act, but does not include such flesh contained in sealed containers and imported into U.P.	Slaughter of cow totally prohibited.	Rigorous imprisonment up to 2 years or fine up to Rs 1,000 or both.	Cognisable and non-bailable

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
		'Cow' includes a heifer and calf.	<p>Slaughter of bull or bullock permitted on 'fit-for-slaughter' certificate provided it is over the age of <b>15 years</b> or has become permanently unfit for breeding, draught and any agricultural operations.</p> <p>Transport of cow outside the State not permitted for slaughter.</p> <p>Prohibition on sale of beef.</p>		
29	<b>UTTARAKH- AND</b>	same as Uttar Pradesh	<p>Slaughter of cow totally prohibited.</p> <p>Slaughter of bull or bullock permitted on 'fit-for-slaughter' certificate provided it is over the age of <b>15 years</b> or has become permanently unfit for breeding, draught and any agricultural operations.</p> <p>Transport of cow outside the State not permitted for slaughter.</p> <p>Prohibition on sale of beef.</p>	<p>Rigorous imprisonment up to 2 years or fine up to Rs 1,000 or both.</p>	Cognisable and non-bailable

STATE	TITLE OF LEGISLATION	CATTLE DEFINITION	STATUS OF BAN ON SLAUGHTER	PENAL PROVISION	OFFENCES
30 WEST BENGAL	THE WEST BENGAL ANIMAL SLAUGHTER ACT, 1950	Scheduled animals – bulls, bullocks, cows, calves and buffaloes of all types/ages.	Slaughter of <b>all animals</b> permitted on 'fit-for-slaughter' certificate  Certificate given if animal is over <b>14 years</b> of age and unfit for work or breeding or has become permanently incapacitated for work and breeding due to age, injury, deformity, or any incurable disease.	Imprisonment up to maximum of 6 months or fine up to Rs 1,000 or both.	Cognisable only

**Appendix 2:**

**Atlas.ti coding for ten randomly selected articles with tag "beef detection kits"**

Kit Users/Enforcers	Code Groups with Secondary Subcodes Listed				
	Claimed benefits	Consequences for Violators	Doubt/Criticism	Kit Development	
Maharashtra	30 Time efficient	20 Seized meat samples	9 Misplaced priorities	5 Science	15
Police	29 Cost	12 Arrest or seizure	7 Minority communities	1 Meat detection kits	11
Forensic Science Laboratory	19 Efficiency	8 Beef possession/consumption	4	Kit developer	9
Mumbai	11 Vigilante	6 Punishment	3	ELISA test	4
Forensic Vehicles	10 Quantity efficiency	6 Cattle traders	2	Buffalo meat	3
Policy	9 Ease	5 Minority communities	1	Scientific responsibility	1
Modi government	7 Lynching prevention	4 Innocence	1		
Nagpur	2 Mobility of kit	4			
Nashik	2 Illegal transport/trade of beef prevention	4			
Cow protectionism	2 Hinduism	3			
Aurangabad	2 Cow slaughter prevention	2			
Pune	2 Illegal cow slaughter prevention	2			
Anti-beef unit	1 Diffuse tension	1			
BJP	1 Legitimate beef export trade	1			
Muslim	1 Expensive	1			
<b>TOTAL FREQUENCY</b>	<b>128</b>	<b>79</b>	<b>27</b>	<b>6</b>	<b>43</b>

**Atlas.ti coding for ten randomly selected articles with tag "cow UID"**

Claimed Benefits	Code Groups with Secondary Subcodes Listed						
	Cattle features and statistics	Cattle Owners	Doubt/Criticism	Enforcers	Tagging and tracking cows/Project plan	Technology	
Cow smuggling prevention	15 Cow health	8 Cow owner's income	6 Cost	14 Modi government	16 Aadhaar number	23 Online database	6
Breed enhancement	7 Age	7 Owner responsibilities	5 Doubt	6 Animal husbandry	7 Ear tags	16 Technology	4
Cow protection	11 Breed	7 Cow abandonment	4 Resources	3 Madhya Pradesh	6 Care for older cows	6 Census	2
Increase milk production	13 Cow features and statistics	7 Registration proof	3 Lashing out	1 National Dairy Board	4 Cow shelter home	4	
Curbing illegal sale and purchase	11 Lactation	4 Cow owner's Aadhaar number	2 Muslim	1 Animal Productivity & Health	2 Tagging and tracking of cattle	4	
Gau Rakshaks	3 Indigenous cattle	2 Cow escape	1	1 Information Technology Application	1 Buffaloes	3	
Economy	3 Vaccination	2 Insurance	1	Jharkhand	1 Dairy industry	3	
Cow slaughter	2	2 Cow owner's location	1	BJP	1 Legitimate sale and transfer	2	
Cow vigilantes	2	2 Fitness to move certificate	1	Gujarat	1 National Institute for Transforming India	1 Prohibit livestock markets	1
Healthier milk	1						
Monitor disease spread	1					1 Second phase	1
Lynching	1						
Abattoir	1						
Marginalized farmers	1						
<b>TOTAL FREQUENCY</b>	<b>72</b>	<b>37</b>	<b>24</b>	<b>25</b>	<b>40</b>	<b>64</b>	<b>12</b>

**Atlas.ti coding for all articles within tag group 'Vegetarianism'**

**Code Groups with Secondary Subcodes Listed**

Marginalized Groups	Cow protectionism as ideology	Cow protectionism as policy	Dietary Practices	Impact of Beef Ban	Resistance	Environmentalism	
Muslim	25 Cow vigilante	73 Policy	71 Non-vegetarianism	110 Healthcare	63 Protest	11 Environmentalism	13
Cultural minority	24 Hinduism	70 Beef detection kit	8 Beef eaters	35 Cattle industry	53 Beef festival	8 Animal Rights	13
Dalit	21 Lynching	10 Cow meat	8 Eggs/Dairy	27 Economy	17 Celebrity #notinmyname	7 Climate Change	2
Castes	19 Morality	7 Politics	7 Protein	23 Meat seller	11 e	1	
Class difference	14 Poisonous beef	4 Police Science education	4 Food habits	21 Beef sales	7		
Identity Politics	9		3 Cow milk	8 Leather	5		
Christians	3		Genetics	4 Office jobs	5		
Article 29*	3			Rental housing	3		
Buddhism	1						
<b>TOTAL FREQUENCY</b>							<b>28</b>
	<b>119</b>	<b>164</b>	<b>101</b>	<b>228</b>	<b>164</b>	<b>27</b>	

\*Article 29 of The Constitution of India 1949, protects the interests of minorities for both cultural and educational rights.