

***Jugaad* and informality as drivers of India's cow slaughter economy**

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Abstract

India's status as the world's leading milk producer is significantly sustained by cow slaughter, a criminal act in most Indian states. The paper argues that *jugaad*, a complex Indian sociological phenomenon of corruption and innovation, is vital in enabling the illegal slaughter of cows on an industrial scale in the informal economy. *Jugaad* is enacted through ingenious alterations to social processes and material products in two 'grey' and informal spaces that are rendered exceptional to formal governance: (1) illicit transportation to slaughterhouses; and (2) intricate social contracts between stakeholders along this production line. Through these processes in informal spaces, the bovine body itself is transformed by way of *jugaad* from protected dairy cow to contraband beef cow.

Keywords

Cow slaughter, Hindu nationalism, India, informality, *jugaad*

Everybody is in this business, everybody!! Everybody uses the cow how they want, you think anyone cares what happens to the cow, arre, nobody cares! Hindu, Muslim, everybody is in the game. I hold Hindus most responsible, they are the ones to sell the cow when she stops giving milk, and then enter politics using *goraksha* [cow protection] as an excuse. Then they will make a big noise about *gaumata* [cow mother]. Muslims, what can I say, not a shred of mercy, when you see the animals in the trucks, you will not be able to stop weeping. If they have to break legs and bones to fit an animal into a car, they will do it. Cow is just a *jugaad* for everyone to get what they want. *Gai ka hi sab jugaad kar dete hein!* [*They make jugaad out of the cow itself!*]

(Sonu, independent Hindu cow vigilante, 2016, interview)

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Introduction

Most Indian states have legislation that fully or conditionally prohibits the slaughter of cows, bulls and calves, and/or criminalises beef sourced from them. In 2015, Maharashtra banned the sale and consumption of beef, an offence that could attract up to five years in jail. Later in the same year, Haryana enacted the *Haryana Gauvansh Sanrakshan and Gausamvardhan Act 2015*, which doubled the penalties for cow slaughter to Rs. 100,000 (approximately US\$1500) and up to 10 years' imprisonment. In Gujarat, cow slaughter can be punished with a life sentence under the *Gujarat Animal Preservation Act 1954*, as amended by the *Gujarat Animal Preservation (Amendment) Act (2017)*. Simultaneously, since 2014, India has also been one of the world's leading producers and exporters of beef. Although the state claims that Indian beef is sourced from buffalo, there is some evidence that cow beef also constitutes a significant part of production (Chilkoti and Crabtree, 2014; DAHD, 2002). How is this scale of cow slaughter possible in a country that ostensibly imposes stringent criminal penalties on the slaughter of cows, and possession, consumption and sale of beef?

India's cow protection laws and political discourses sidestep a critical fact: the dairy industry is a slaughter industry, no less than the beef industry, and India has the largest dairy herd in the world (FAO, 2015). The political economy of dairying worldwide is subsidised by the beef and veal sectors, which slaughters 'spent' female and unproductive males for meat (Torres, 2007). As Bazzoli et al. (2014: 1082) write, 'The sale of cull cows contributes to the overall profit of dairy herds'. The profits from selling 'unprofitable' bovines from dairying are used to buy more of these animals for the milk sector. In India, beef and leather are by-products of dairying.

To prevent cow slaughter, it is dairying that must be halted. However, Indian states provide incentives for breeding for dairy through artificial insemination schemes, while having no clear policy as to how the large numbers of 'spent' female and unproductive male cows should be sustained, especially by subsistence farmers (Hemme and Otte, 2010: 138), or for subsidising a plant-based dairy sector to save animals from being bred for milk, and then slaughtered. By continuing to subsidise the breeding of cows for dairy, and providing no adequate system for rehabilitating the unproductive animals – because there is no practical, profitable and sustainable way to do so – the state effectively creates a situation of non-compliance in which an industrial scale of cow slaughter simply goes underground.

This paper argues that *jugaad*, a complex, context-specific Indian sociological phenomenon that is a mix of social and material innovation, entrepreneurship and/or corruption is critical to scaffold the totality of the milk and beef economy that is located in the grey or informal economy. *Jugaad* is a malleable Hindi concept that variously refers to a low-cost creative idea, a 'trick' or a 'hack' (Kaur, 2016). *Jugaad* is 'both a process and a product' (Kaur, 2016: 314). In the informal economy, *jugaad* may constitute 'ingenious, critical alternative systems' (Godlewski, 2010: 8–9) through resourceful behaviours, innovations and social contracts between individuals and groups to 'make things happen'.

Jugaad, as a term, is used predominantly in North India; different phrases reference similar practices in the Southern languages (for instance, *thattikootu* (to 'put together') or *oppeeru* ('fixing' or 'getting') in Malayalam; or *mazhattu* (to distract) in Tamil). Borrowing from Sonu's quote, *jugaad* is used conceptually in this paper to theorise a broad set of complex practices, argumentation and innovations in concealments in the slaughter of cows throughout the country. *Jugaad* is a key resource for progress in obstructionist environments like slow, inefficient or corrupt bureaucracies and governance institutions, or

when the activity is illegal. Depending on context, intention and the informal political economy, *jugaad* can be legal, unauthorised or even criminal.

Informality, likewise, is a fluid conception of unplanned spatialisms and processes. Avni and Yiftachel (2013: 487) describe informality as ‘developments, populations, and transactions which do not comply with planning or legal regulations, and are denied planning approval or full membership in the urban community’. The activities and transactions of informality fall strategically outside the direct focus of formal governance, though they are not separate from it. Informal markets may sometimes rely upon political and religious volatility (Elbahnasawy et al., 2016). The hyper-politicisation and communalisation of beef, a by-product of milk in India, is rendered almost a market condition for Indian dairying that must be distanced from cow slaughter, even as it relies upon it.

Using primary research, the paper analyses how the interlinked spheres of milk production, animal transportation and animal slaughter are facilitated by unauthorised mobilities, transactions, space use and infrastructure, which, like many informal activities, ‘exist partially outside the gaze of state authorities’ (Yiftachel, 2012: 153). *Jugaad* enables the manipulation of these informal frameworks in at least two critical sites and ways: transportation to slaughterhouses; and a complex network of social contracts between stakeholders along this production line. Together, they facilitate an efficient countrywide informal network through which ex-dairy animals are moved to slaughter destinations, and achieve the crowning *jugaad* of transforming the protected dairy cow into a contraband beef cow.

Methods

The research was conducted between 2014 and 2017 in a socio-political climate where Hindutva narratives and practices of cow vigilantism were on the rise, often violently marginalising minorities who were depicted as killing cows. This paper is focussed at the point where the animal is moved down the production line of dairying (including their exit from kinship spaces of care that they might have had previously as a dairy resource; see Govindrajan, 2018), to become a slaughter resource. The paper reviews literature on *jugaad* and informality to theorise the ‘distance’ of formal institutions, and politics of concealment around animal slaughter (Pachirat, 2012), as necessary to the selective legitimisation of some animal production, and the criminalisation of others.

The paper also involves semi-structured interviews with stakeholders at the slaughter end of the production continuum of dairying: (a) the ‘protectionists’ comprising *gau-rakshaks* (cow vigilantes), and animal activists; and (b) the ‘productionists’ including butchers, handlers and transporters. These groups encounter each other in the grey zones of sale and transportation of ex-dairy cows from farms and animal markets, to slaughterhouses. More interviews were conducted with the protectionist cohort; given the risks associated with the cow trade during this time, fewer productionists were willing to speak. There is, as a result, an unintended imbalance in learning more about the socio-political economy of caste and livelihoods that forces humans of particular caste/ethnic groups into risky and precarious occupations. This has been analysed where possible through secondary literature. In all, 42 interviews were conducted with animal welfare organisation (AWO) activists, and 34 with *gau-rakshaks* in Delhi, Mumbai, Ahmedabad, Visakhapatnam, Hyderabad, Trivandrum and Chennai, which have animal markets in their peri-urban fringes, and may also serve as final destinations for these trucks. Twenty interviews were conducted with the ‘productionists’ in animal markets outside these cities.

The AWOs in each city were approached for interviews, initiating a snowballing technique for further introductions in the activists and the *gau-rakshak* cohort, who often work

together when vigilantes bring rescued animals to sanctuaries. The ‘productionists’ were interviewed at bovine markets, which epitomise grey spaces where selective aspects of the market are purportedly under the purview of formal regulation. One ‘transit’ hub in the peri-urban outskirts of Dindigul city was visited. Here, bovines were held overnight before being transported across the Tamil Nadu–Kerala border into Kerala state, where there are no cow slaughter prohibitions. The purpose of the interviews – to understand the market conditions associated with moving the animals along this transport spectrum – was explained candidly. This was a routine inquiry at the time for the productionists when media interest in cow transporting, and the halting of trucks by animal activists and cow vigilantes, was high (*DNA India*, 2015; *The Hindu*, 2013).

Interviews were conducted until the point of saturation was reached when major themes started to recur; these were identified using domain analysis where each transcript is closely scrutinised for key themes (Atkinson and El Haj, 1996). Interviewees from the ‘protectionist’ cohort who provided permission have been named; others have been anonymised using false first names, and their organisations are unnamed. ‘Productionists’ are anonymised throughout, as given the shadowy nature of their trade – these respondents are untraceable. More expressive interviewees with greater knowledge/interest became key respondents (Spradley, 1979). However, difference in opinions have been highlighted. A brief overview of the formal political economy of milk production in India, and the informal economy of slaughter, provides a contextual landscape to situate the primary research.

The political economy of milk and cow slaughter in India

Article 48 of the Constitution of India contains two recommendations relating to animal husbandry: to conduct scientific breeding programs to further the dairy industry, and to prevent the slaughter of cows and calves and other *milch* (milk) and draught cattle (*The Constitution of India*, 2015, art. 48). Article 48’s anti-slaughter clause has been criticised as an early victory of the Hindutva ultranationalists in independent India (Copland, 2017). However, milk was also important for secular democratic nationalisms when dairy engineer Verghese Kurien’s innovations with a dairy farmers’ cooperative in the 1950s transformed India into the world’s largest milk producer (Kurien, 2005). Though the cow was an object of ‘contention’ between Hindus and Muslims, it was clear that a slaughter ban could not meet the economic objectives of dairying and agriculture (De, 2013). Article 48 reflects an uneasy attempt to mediate Hindutva and secular democratic nationalisms by simultaneously recommending breeding bovines for dairying, and prohibiting their slaughter, an impossibility theorem. The two nationalisms cohere at the breeding end of the production spectrum of dairying, but not the slaughter end.

As per Constitutional mandates, India’s bovine breeding programs are designed for dairying. India has the world’s largest *dairying* herd, and since 1997, India has consistently been the world’s largest milk-producing country (USDA, 2017). In 2017, India’s milk production was almost double that of the US, the second largest producer (USDA, 2017). Unlike other major beef-producing countries, India rears no beef cows, or bovine breeds that are selectively bred for traits such as lean meat (King, 2013). Much of India’s beef exports is carabeef (buffalo beef), which is regarded as inferior to cow beef, and priced lower than beef from competitors like Australia and Brazil (Meat and Livestock Australia, 2016). While there is no moral difference between species, evidence suggests that cow beef is also exported. Based on increasing suspicion of contraband cow beef exports, the Indian Government directed the Agricultural and Processed Food Products Export Development

Authority in October 2015 to test meat at export ports to ensure it is not cow meat (*The Times of India*, 2015).

However, for ‘globalized value chain(s) relying on economies-of-scale production’ (Dutkiewicz, 2015: 5), what would logically seem a challenge for beef production is, in fact, India’s ‘competitive edge’. The disadvantageous pricing for low-quality beef from buffalo and ex-dairy cows becomes an advantage in the Southeast and West Asian markets who seek cheap beef (De, 2013). Indeed, the rapid upswing of India’s beef industry is notable *for a country that rears no beef cows*. Landes et al. (2016) note that in over a decade, between 2000 and 2013, ‘India increased its share of world beef exports from just 5 percent to about 21 percent’.

To be a competitive beef country – that is, to make as much money from its exports as its competitors despite lower pricing – India has to slaughter *more* bovines. As early as 1999, when India opened its doors to foreign investment (including in animal production/slaughtering), animal rights advocate and Union Minister Maneka Gandhi (1999: 93) had noted, ‘Indian meat is priced far lower than that from any other country – at only 40 per cent of the world market prices – so we have to kill two to three times the number of animals to earn the same from meat export as any other nation’. As per USDA Foreign Agricultural Service estimates (2018) for 2017, India is the third largest bovine slaughtering country after China and Brazil.

To enable the transportation of cows to their slaughter in India, the conditions of ‘political instability, social polarization along ethnic and religious lines, and an autocratic authority pattern...associated with a larger informal economy’ (Elbahnasawy et al., 2016: 31) become important. Cows change hands, ethnoscaping and meaning as they are moved and ‘consumed’ first as milk producers, and subsequently as by-products like beef and leather. The cow as a symbol of Hindutva nationalism invokes violence against Muslims and Dalits as their ostensible butchers. However, Hindu farmers who sell their ex-dairy animals who they may have cared for as ‘mothers’, and move them down the milk production line, implicitly as a slaughter resource (Govindrajan, 2018), are not targeted.

India’s interlinked milk and cow slaughter economies may also depend, to a significant extent, on the state’s incapacity or unwillingness to address communal conflict between Hindus and Muslims, and the inequalities experienced by ‘low caste’ Muslims and Hindus. Muslims are spatially and often violently marginalised in Indian cities, leading to the formation of ghettos (Gayer and Jaffrelot, 2012). Specialised activities like animal slaughtering, a recognised industrial activity in India’s formal economy (Central Statistical Organisation, 2008: 38), often take place in informal spaces (Bremman, 1999: 452). The Sachar Committee, which investigated the status of Muslims in India in 2005, reported that Muslims in India form the poorest group, even below lower-caste Hindus (SCR, 2006). In the US, poor ethnic minorities typically work in slaughterhouses (Pachirat, 2012). So, too, in India, workers in these trades are ‘mostly recruited from the lowest ranks of the social hierarchy...[from the] tribal and *dalit* communities’ (Bremman, 1999: 456). Pasmenda or Bahujana (former ‘untouchable’) caste Muslims of working-class backgrounds are particularly enmeshed in these risky livelihoods (Ansari, 2018).

Beef production can thrive in an informal, illegal economy because dairying, the source industry for cows, is also substantially located in the informal, albeit legal, economy in peri-urban and rural regions (Jitendra, 2016). Cow slaughter is possible when there are no formal records of individual cow births, though in 2017, the central government established a committee that has recommended the introduction of a unique 12-digit identification system to be assigned to each cow (*The Times of India*, 2017).¹ Illegal animal killing, like many informal industries, can be industrial in scale. The Dharavi slum in Mumbai contains

over 20,000 small-scale manufacturing units (Assainar, 2014), and is a major hub of abattoirs and tanneries. In 2016, the Mumbai police seized over 6500 kg of beef from an unlicensed slaughterhouse in Dharavi (*Deccan Chronicle*, 2016).

Cow slaughter must be sufficiently undercover, so that government institutions can remain formally ‘distant’ from it. The state thus finds itself concealing, not eradicating, cow slaughter. The combination of legal restrictions on slaughter and transport create informal political economies of cow killing that depends on *jugaad*, a concept and practice that ‘carries multiple meanings ranging from *skilful reasoning, argumentation, trick, cunning device, adaptability, adjustment, being inventive, dexterous, and clever*’ (Kaur, 2016: 314, emphasis added). The loopholes in India’s animal transport laws provide the first opportunities for *jugaad* in the undercover transportation of cows to their slaughter.

Concealments in transportation

It is during transportation that the ‘white’ cow of the legal dairy economy is first blurred into grey as she is transitioned into the ‘black’ end of the production line to become a beef cow. Once an ex-dairy animal is sold by their farmer, and enters a market as a slaughter resource, it is rarely the case that they will go through only one transaction in one market. Permissions are often required from animal husbandry and revenue departments to transport bovines outside of the state (Maulekhi, 2017). Most states also prohibit cow slaughter. To circumvent these restrictions, the bovines are made to enter and exit a number of markets across several state borders, with no clear purpose of sale, until their point of origin and destination become untraceable. ‘Protectionists’ and ‘productionists’ meet during this stretch of the production line, when bovine bodies become sites of inter-caste/religious violence.

In May 2017, in an attempt to ensure a simpler line of traceability of these animals, the Ministry of Environment issued the *Prevention of Cruelty to Animals (Regulation of Livestock Markets) Rules 2017* (India), which prohibited the bringing of bulls, cows, buffalo, calves and camels as slaughter resources in markets (*The Indian Express*, 2017). Rule 2(b), which defined ‘a market or sale yard [where] animals are exposed to sale or auction’, including animals fairs, pounds and ‘lairage’ where animals are kept prior to slaughter in abattoirs, was particularly controversial. An immediate outrage erupted against the *Rules* that they were, in effect, a Hindutva ploy to effect a nationwide ban on cow slaughter (Sebastian, 2017). The *Rules* were withdrawn and a watered-down version was reissued in 2018 that prohibits the sale of only unfit/young animals, removes the clause prohibiting sale of the animals for slaughter and makes no mention of inter-state transportation of bovines, prohibiting only the crossing of international borders (Sharma, 2018).

Ironically, these restrictions can contribute to conditions of concealment when animals are repeatedly ‘packed’, loaded, transported and unloaded in shadowy zones where even minimal welfare standards cease to apply. In India, according to Rule 56(c) of the Transport of Animal Rules 1978 under Section 38 of the *Prevention of Cruelty to Animals Act 1960*, only six cows may be transported in a single ‘goods vehicle’. However, the contraband nature of the ‘goods’, combined with cost-efficiency, determines the number of animals ‘packed’ within a single vehicle. Jayasimha Nuggehalli, lawyer and managing director of Humane Society International, India, describes the economic rationale behind non-compliance:

If I load six-and-a-half animals, I am still breaking the law, and I have to bribe multiple law enforcement agencies across the route. And if I have to bribe, I would much rather put 60

instead of putting six-and-a-half...because it makes economic sense to do so. (Nuggehalli, 2017, interview)

The animals also travel the length of one state in a registered vehicle of that state, cross the border on foot to endure 'the death march', as animal activists call it, and be reloaded in a vehicle registered in the next state. Nuggehalli says,

[The] Motor Vehicles is a state Act, and we don't want to cross state borders. In Tamil Nadu, you see an Odiya registered truck, the chance of the police stopping you is much higher. So what they do is that they bring to the border, unload these animals, make them walk across [the state border], the death march, and then they bring them on to another state and load them on again on a vehicle registered to that particular state. (Nuggehalli, 2017, interview)

Jugaad is employed to manipulate or disguise vehicles so animals can be crushed, overcrowded and forced into spaces unsuitable for bovine bodies. Trucks are sectioned into two horizontal halves. The roof of the vehicle is stacked with vegetables and fruit. The lower section, covered with tarpaulins, conceals cows, bulls or calves tied tightly together (Nuggehalli, 2017, interview; Sonu, 2016, interview). These vehicles ply India's roads, indistinguishable from other trucks. Amit Chaudhery (2014), president of the AWO People for Animals, Gurgaon, describes the loading and packing of animals in markets:

These trucks are packed tighter than sardine cans. One atop the other, legs broken and tied, groaning from internal and external injuries sustained in loading them. Now that trucks are a giveaway, the traffickers use dumpers and containers. The suffocation, heat and darkness multiply in the new mode of transport. It takes days, weeks really, for the cows to reach from point A to point B. Upon reaching destination, they languish for up to three days in the carriers before the live meat tumbles out (mostly dead or dying) from the vehicles...I have commonly found male calves with legs precisely broken at the joints (they cannot be mended) and rendered immobile so that in the wee hours butchers can lift them into cattle trucks.

Pradeep Nath, the founder of the Visakha Society for the Protection and Care of Animals (VSPCA) in Visakhapatnam, explained that the cruelties in the markets during the loading and unloading of animals can be so traumatising that pregnant animals sometimes experience spontaneous miscarriages (2017, interview). Germany-based AWO Animals' Angels works with the VSPCA to address the cruelties at the bovine markets. In a 2014 report, they note,

Horrendous loading practices and transport conditions: heavy beating; sticks pushed into animal genitalia; unfit animals are pulled on the trucks with ropes; cows are forced to the ground and tied up; lying on top of each other; unable to move; horns being sawn off. (Animals' Angels, 2014)

When I visited the Tuni *chandy*, a major animal market in the conurbation of Visakhapatnam, I saw thick ropes threaded through the nostrils of the buffaloes closest to the walls of the truck, and tied to the upper rims of the truck walls, so their heads would be raised throughout the long ride. While bumpy rides lead to broken nostrils, it discourages them from moving, reducing the risk of alerting anyone on the roads that the truck contains live animals. The truck owner had 15 vehicles in the market to transport the animals undercover to slaughterhouses in Hyderabad. He told me (2015, interview), 'I have to pay for petrol, these men, these animals, and then bribe in every checkpost. This is my job. If I don't

fill the truck, none of us will be making any money'. He had incurred debts to purchase trucks for his livelihood, and the cost of having injured or dead animals is outweighed by the sheer number of animals packed in the trucks. Activists often find animals with their eyes stuffed with chillies to force severely injured or downed animals to get off the trucks or walk to the kill floor (Nath, 2017, interview; Sonu, 2016, interview; *The Times of India*, 2013).

While it is possible to witness the loading of buffaloes in 'grey' market spaces, loading and unloading of cows increasingly occurs in concealed 'black' spatial zones. A middleman in a live market outside Chennai gave me the number of his 'uncle', a politely spoken man who agreed to meet me in Dindigul city, the last halt for loading/unloading the animals in Tamil Nadu before the trucks crossed the state border into Kerala. He got on his motorbike, and asked my car driver to follow him through agricultural land. Through a thicket of trees, we came to an open space where cows and buffaloes were tied in two rows. Several trucks were parked to one side, and small groups of transporters and handlers smoked or chatted around the area. 'What you see here, we didn't have this place before', the man told me. 'But now we cannot think of doing the trade openly'. They would cross the border early the next morning.

This transporter belonged to the Vanniyar caste, a sub-section of the Scheduled Castes (or the former 'untouchables'), which was distinct, he emphasised, from the even 'lower' Malaivalmakkal or 'mountain' castes of Tamil Nadu, who worked as pig butchers. He started our conversation talking about the recent capture of his trucks by the AWO People for Cattle India, causing him financial loss. When asked about the conditions of overloading that had featured in news reports, he said,

I agree what we did was not good. I have been doing this trade since I was 16 years old. I am 40 now. I have myself picked up and flung thousands of animals into trucks. Three or four of us will pick a cow or a bull [with their legs tied] from the ground and throw them inside. I have seen my uncles do it, my father do it, it is what we did. When they [activists] took photos and put it on Facebook and the newspaper, I literally covered my face in shame like this [he pulled a towel over his head as he spoke]. They made us 'see' things differently. We don't tie so tight now, don't put so many animals in. And you can see how thickly we have laid the hay [pointing to the truck floors]. (2016, Interview)

The 'measures' that he described are an attempt to introduce a degree of 'grey' or a form of 'legitimacy' through some attempts at informal animal welfare reforms, at a stage of production that was at the 'black' end of the dairy economy. However, he felt compelled to continue this precarious livelihood, as there was no alternative:

I would really like to give up this trade, it is nothing but stress now but what can we do? We have no other skills, no education! You tell us what we can do! We are becoming poorer every day. Today I will leave this if you can get me a job. But let me tell you, even then this trade will not stop. There are thousands and thousands of us in this, you cannot even count. (2016, Interview)

As the transporter predicted, the undercover trade continues unabated, and in the face of heightened vigilantism, concealments take on new forms of *jugaad*. The informal economy is characterised by 'the minute scale of the work unit, often no more than a single household or even a sole individual' (Bremen, 1999: 452). Private cars with a cow and a calf forced in, the small mini-truck Tata Ace and even the 4WD Tata Qualis are all popular means of transport (Dawn William, Blue Cross of India, Chennai, 2016, interview). Nath explains that he has caught three-wheeler autos, each carrying one or two male calves who might be

only days or weeks old, folded onto the tiny cramped floor or the backseat. An activist from the Sanjay Gandhi Animal Hospital in Delhi describes his raids on single-purpose vehicles like milk containers, oil tankers or tourist buses with darkened tinted windows: 'They were taking live bulls inside refrigerated containers meant for milk. Once we even caught a bus, a tourist bus where they had removed the seats and forced 56 bulls there' (Ramesh, 2016, interview).

This scale of trafficking can occur if formal state institutions cooperate by sufficiently distancing themselves from these acts. The complex dimensions of these 'dysfunctional social contracts' that rely on cooperative relations between different stakeholders – Hindu and Muslim, productionists and protectionists, police and the transporters and handlers – becomes clear.

Social contracts

To facilitate the transportation of dairy cows to slaughter – or, conversely, to halt the transport trucks – the cow transporters/butchers, and the cow vigilantes/activists rely on their 'informers'. The informers alert transporters to police/activist presence on the route, or forewarn vigilantes and activists of cow trucks expected to pass through particular routes. My respondents explained that the 'informers' of the Hindu cow vigilantes are recruited from the Muslim butchering community. Conversely, the informers of the butchers and transporters are sourced from the Hindu vigilante-activist cohort. At the heart of these networks is an investment in bovines as politically and commercially lucrative animals, whose lives *and* deaths are profitable.

Cow vigilantes Reema and her team patrol the highways between Baroda and Ahmedabad cities to halt trucks (2016, interview). Reema says that her 'informers' from the adjoining Godhra city are Muslim, who are either former butchers or live close to backyard slaughterhouses. These Muslims, she says, are anxious about the continued butchery of cows in a volatile political environment where lynch mobs may react by murdering suspected killers of cows. To buy protection from the dominant Hindu community, they 'inform' on the illegal activities of their own Muslim community, and provide information about the make of the vehicle, its registration number, the number of animals it is carrying and its expected route. The cow vigilantes wait at strategic points along this route, usually on bridges or atop tall structures, so they have a vantage point to keep watch.

Informers are also recruited through the *jugaad* of social manipulation and coercion. Mohan, a *gau-rakshak* in Hyderabad claims to work independently but is supported informally by a Hindu charitable organisation. Mohan describes how he employs a 'divide and rule' strategy to cultivate an informer network among the Muslim butchers, creating a situation where each is pressured to 'inform' on the others to protect his business:

I have some twenty-five informers, they tell me [about the illegal bovine trucks expected to pass certain routes]. The informers come from their own community. Let's say you are a Muslim [butcher], I catch your vehicle, you will know that one of your own has given this information about you. You and them would have had a disagreement, this is their revenge. All the informers are Muslim, I have two to three Hindu informers but the rest are all Muslims. And we take the opportunity to create more tensions between them. If I catch someone's vehicles, I will say, 'xx told me about you' and he will automatically get incensed. I only have one goal, create divisions within them, and save my *gaumatas*. How do I achieve this? Say I catch Salim's *gadi* [vehicle], and I will tell him, 'arre Asim told me about you', and then he immediately gets angry, 'Asim told you!', and I say, 'yes, Asim told me you are taking a vehicle full of cows'. Then I catch

Asim's truck and blame it on Salim. Then if these two are out of the picture, I take Madar's name. To Madar I tell him, Aslam told me. To Aslam, I take Irfan's name. To Irfan, I take Qureshi's name. So we create distrust within them, and then do our work. . . . This is how I work, create divisions with them, and make each an informer against the other. (Mohan, 2017, interview)

Correspondingly, the truckers and butchers also have extensive networks of informers from within the community of 'fake' gau-rakshaks, and even the police. In an article in *The Indian Express*, Pati (2015) writes,

A cow smuggler, on condition of anonymity, admitted, 'We take the help of police for the business. During day, we inform the police stations concerned about the number of trucks or vehicles carrying the animals which would pass through [the highways]. As per our plan, a pilot van leads a fleet of 10 to 15 cow-laden trucks. It is entrusted to bribe the police officials on their way. About Rs 800 to Rs 1,500 is paid per truck to each police station depending on the number of cattle head'.

There has been a 'widespread dissemination of affordable mobile phones' among 'Indians of every status' (Doron and Jeffrey, 2013: 2–3). Mobile technology and social media has helped expose the plight of animals, and has contributed to a spike in advocacy (Nath, 2015, interview). Mobile phones are also to enable crime in India (Doron and Jeffrey, 2013), and are used by transporters to circulate information about trucks carrying contraband load (Ram, 2016, interview). Nuggehalli explained, 'Earlier, the trucks would simply pass. It was difficult to have a way of knowing about it right at the time. Now it is become more difficult and more easy, for us and them' (2017, interview). Both the truckers and the vigilantes have 'pilot' vehicles that run ahead of the trucks, or activists, to assess the high-way ahead. If deemed clear of police or activist presence, the driver of the pilot vehicle will send a message on the social media platform WhatsApp. Alternatively, if activists are sighted, or if a truck is seized, messages are sent via WhatsApp instructing the other drivers to immediately change routes. A volunteer from the People for Cattle, Chennai, says that this disadvantages activists who usually reside in cities, and are unfamiliar with the peri-urban regions:

These truckers are all on WhatsApp group – as soon as we catch one truck, the onslaught of trucks stops altogether and that too immediately. One of these guys must send everyone in the group a message saying we are on the highway, or in this location. After that, the trucks just stop coming immediately, and take different routes, right in the interior areas, we will never be able to guess and chase after them. We don't know these areas, they know them too well. (Ram, 2016, interview)

Police play a complex role in facilitating the *jugaad* of transportation/slaughter and protection. They are accused of taking bribes from both butchers/transporters (Mohan, 2016, interview; Sonu, 2016, interview) and cow vigilantes (anonymous transporter, 2015, interview; Nath, 2015, interview), depending on the local political economy, personal relationships and their own capacity to realistically address trafficking. Police constables' work is classified as 'semi-skilled labour' on the government pay scales, with low wages (Burke, 2011). The illegal bovine trade is worth millions of rupees, meaning butchers and transporters can offer persuasive sums. Senior members of the police keep a 'distance' from non-compliant activities, leaving the clerical constabulary staff to enable the crimes.

The cow vigilantes described experiences of police brutality when they sought to report the transporters. Mohan and his team caught a truck outside Hyderabad at 12:30 a.m., and reached the police station with the transporters, and the truck filled with animals by 2 a.m. Until 11 a.m., the police refused to book a case against the truckers, even as calls from senior officials, politicians and activists started to fly across the country. Instead, they shifted Mohan and his team to another police station. Mohan said,

They don't even beat dogs so badly, they beat me worse than a dog. But I will not leave *gauraksha*, not until I die. They were Hindu police who beat me. They kept saying, 'How dare you catch the trucks, what authority do you have?' I only replied, 'I am a Hindu, I have to catch'. (Mohan, 2017, interview)

The police have also been complicit in abetting violence against minorities suspected of cow slaughter. The People's Union for Democratic Rights (2009: 152) describe the Haryana state police as 'highly culpable' in the killing of five Dalit men suspected of cow slaughter in Jhajjar district in 2002.

However, the police are also forced to turn a blind eye due to their incapacity to adequately deal with cow smuggling. A police superintendent at a checkpoint outside Lucknow city explained a real problem was the lack of space, funds and resources to rehome the thousands of ex-dairy animals who were being moved, and were often also in need of veterinary treatment by the time they were unloaded: 'Yes, yes, the police do take bribes in the checkpoints along the way. But as I told you, the main problem facing the police is, where do we keep the animals? So the police tends to ignore the issue a little' (personal communication, 2016).

A deputy commissioner of Road Transport Authority in Kerala explained that the trade is also believed to involve mafia networks because of its underground nature. 'We need cattle terra force dedicated to this' he said. The Lucknow superintendent echoed these views. At the time of my interview in 2016, the Lucknow police was preparing for Prime Minister Modi's visit to the city. The official explained that the entire police force of the city would be diverted for Prime Ministerial security duty. During this time, they were aware that the trucks would pass unchallenged, ironically taking advantage of Modi's publicly cow-revering presence in the city:

Tomorrow and day after the PM is coming to Lucknow. The whole force is going for PM duty. So the trucks that want to go through will do so – there is nobody to stop them on these days. There is a shortage of police personnel, there is no training for this specific task. The truckers are ruthless, they can force their own truck on to our vehicles, they can cause accidents deliberately. We may have two constables for this, they will have 10-plus people. We don't even have jeeps, we use motorcycles. (2016, Interview)

Thus, slaughter transportation can continue largely unchecked through the night and even the day. Heavy vehicles are not allowed within metropolitan city limits after 6 a.m. as they cause congestion, and up to 70 per cent of fatal road accidents (Mohan, 2002). However, truckers and the police set up an agreement for drivers to pay a nominal 'fine' once the truck enters the city limits. Once the driver has paid his 'fine', Sonu explains, he has free run of the city to take his contraband load to slaughterhouses (2016, interview).

The money exorted as bribes by the police has deeper utility than merely private gains for individual constables and officers. Bribes supplement insufficiently-funded police budgets, and finance official supplies, petrol for police vehicles and payments to police informers,

particularly in Uttar Pradesh (Jauregui, 2014). Bribe resources move both ‘vertically’ and ‘horizontally’, and also fund campaigns of powerful politicians (Jauregui, 2016). These ‘dysfunctional social contracts’ between the formal state and informal economy in grey spaces are mutually constitutive, and only possible between unequal partners, to maintain the ‘equilibrium’ of illegality, violence and precarity.

Jugaad and informality: the politics of enablement and concealment

The business of even legal, authorised animal slaughtering is largely spatially isolated and invisibilised in most countries. However, public concealments of such killing are even more imperative in a country that explicitly prohibits the slaughter of a particular animal. In his book on the politics of concealment in industrial slaughter – *Every Twelve Seconds* – Timothy Pachirat (2012) argues that

power operates through the creation of distance and concealment and that our understandings of ‘progress’ and ‘civilization’ are inseparable from, and perhaps even synonymous with, the concealment (but not elimination) of what is increasingly rendered physically and morally repugnant. Its alternative counters that power operates by collapsing distance, by making visible what is concealed. (p.14)

In India, both secular and Hindu nationalist ideas of civilizational progress are linked to dairy production. However, while bovine *breeding* for dairy is a constitutionally approved activity, the entirety of the production process involved in dairying – that is, slaughter – must be obscured to preserve the idea of a *Hindu* India as a cow-revering civilisation. In *India's Agony Over Religion*, Gerald Larson (1995) analyses religious–political crises like the 1992 demolition of the Babri Masjid (mosque) in Ayodhya by Hindu fanatics, to demonstrate the real struggles of a *secular* Indian state whose only option to act wittingly or unwittingly in the interests of a religious group, rather than remain neutral. Political analyst Shivam Vij (2016) regards cow protectionism to be one of most polarising tools of political segregation between Hindus and Muslims, even above the destruction of the Babri mosque. In simultaneously advocating cow breeding and prohibiting cow slaughter, Article 48 of the Constitution epitomises India’s ‘agony’ to achieve a middle ground in polarising sectarian issues.

In its incapacity to deliver its own mandates, Article 48 has, in effect, unwittingly contributed to creating and sustaining sophisticated networks of informal, underground cow slaughter. Informality reflects the state’s inability or reluctance to ‘uphold rule of the law’, and it crystallises in a dysfunctional ‘social contract’ (Perry et al., 2007: 216) between different stakeholders. The highly local socio-political environment influences informality. In Kerala, where cow slaughter is not criminalised, beef can be easily purchased as it is consumed even by high castes/communities like the Hindu Nayers and the Syrian Christians, unlike in north India where it may be rejected by the ‘upper’ castes (Staples, 2017: 234). Often, sectarian discord is ‘directly related to the informal economy’ (Elbahnasawy et al., 2016: 38). To especially sustain dairying, a sector which relies on cow slaughter, in Hindu-majoritarian India, Muslims and ‘low’ caste Hindus are framed as cow butchers (Narayanan, 2019). The Pasmanda Muslims (Ansari, 2018) are particularly vulnerable to Hindutva violence. Perhaps unsurprisingly, therefore, the Pasmanda Muslim Samaj, a Muslim political party, cooperated in 2017 with the Hindu nationalist party Rashtriya Swayamsevak Sangh (RSS) to host a ‘milk’ iftar, and break the Eid fast with a glass of cow milk and sweets made of cow ghee (*The Asian Age*, 2017) (rather than dates, as per

tradition). The irony of fostering consumption of the very products that contribute to cow slaughter in India, and are also sacred capital to Hindus, went unremarked.

The violence to vulnerable Dalits and Muslims accused of cow slaughter has received rightful condemnation (Chigateri, 2008). The human domination of non-human animals, however, remains significantly unscrutinised in analyses of hierarchies, oppressions and violence (Kim, 2015) though animal bodies are mobilised as landscapes and political symbols for power. When animals have symbolic and cultural cachet, it is difficult to even conceptualise the violence of commodification, and the scale of their individual and collective suffering. In *Animal Capital*, Nicole Shukin elaborates on the commodification attached to the cultural value of animals:

animal signs and metaphors are also key symbolic resources of capital's reproduction. Given the soaring speculation in animal signs as a semiotic currency of market culture at the same time that animals are reproductively managed as protein and gene breeders under chilling conditions of control, an interrogation of animal capital in this double sense—as simultaneously sign and substance of market life—emerges as a pressing task. ... (Shukin, 2009: 13)

The imposition of unviable rules, such as cow slaughter bans in a nation that invests in dairy production, results in innovations in non-compliance and subversive behaviour wherein the scaffolding activities and materialities of the slaughter industry are simply shifted into the informal, or even 'black', economy. The informal and unauthorised economy of cow slaughtering is not separate from the semi-informal – and legal – economy of dairying; rather, like other informal economies, they function together as a 'continuum' (Guha-Khasnobis et al., 2006: 7). However, the necessity of slaughter in dairy production is concealed by highlighting slaughter as the cruel and malicious act of 'other' communities whose values are incompatible with those of the Hindu Indian nation. The state's imposition of draconian rules often leads to 'non-compliance' and subversive behaviour that is shaped by the local socio-political context; as Adriaenssens et al. (2015: 75) note, 'There is no empty set of underground activities in any given modern society...'.

How may we understand the role of *jugaad* in mediating the relationship between white and black markets of dairy and beef production in India? The social and material innovations of *jugaad* in informal spaces demonstrate that rather than operating as binaries, formality/informality and legality/illegality work *together*, creating spaces of innovation (Holston and Caldeira, 2008), as well as criminality (Kudva, 2009). Like *jugaad*, informality is not necessarily illegal/black; it often refers to processes and developments that have not been formalised or regulated (Roy, 2011). As economist Arun Kumar (2016: 40) writes, 'Black income generation requires committing an illegality in a legal activity'. This 'greyness' is vital to sustain a network of socio-political, and economic practices that sustain the interlinked dairy/cow slaughter economies in India by blurring the purpose and method of animal transport, and the repeated sale of cows in markets.

The *jugaad* of cow slaughter constitutes, like any other informal economy, a 'dense exchange of protection, favours, information, and money that often dictates how state policies are implemented or not implemented' (Gandhi, 2011: 52). While the *jugaad* may be in defiance of legislation, it is also concerned with ensuring that activities occur within an ambit of social consensus about 'what is contextually reasonable and necessary within the nexus of their social relationships' (Jauregui, 2014: 80). Formal scrutiny of unauthorised activities is replaced by 'some degree of societal consensus over basic aspects of the operation and role of the state relative to the private sector and among citizens' (Perry et al., 2007: 216). *Jugaad* relies on 'cultivating and maintaining social and political relationships

that may or may not lead to material gains' (Jauregui, 2014: 77), but are essential to conduct unauthorised or illegal activities. These unofficial 'contracts' help maintain 'key aspects of a social equilibrium, including beliefs and actions of citizens, organized groups, and state actors' (Perry et al., 2007: 216).

The response of formal governance to transgressions in grey spaces typically occurs through a politically motivated combination of correction and coercion in four stages (Avni and Yiftachel, 2013: 490): turning a blind eye; underdevelopment of spaces/vulnerable communities; violent containment of illegal activities; and their gradual/selective 'whitening'. Depending on a complex configuration of context, time, persons and political backing, laws are selectively enforced (or not) against traffickers. Contraventions of formal regulations depend on the rules mandated by the polity. The formal economy 'create[s] the opportunities to transgress', and, to that extent, produces its own specific sort of informality (Adriaenssens et al., 2015: 79).

The prolonged enablement of the social and material processes of unauthorised, if not illegal, *jugaad*, and the underdevelopment of the spaces and actors involved, becomes pivotal to sustaining the cow trafficking and slaughter economy in India. The inventiveness of *jugaad* that Kaur describes is also the fount from which highly imaginative 'hacks' and creative social contracts emerge to sustain the slaughter economy. Examples of *jugaad* include 'simple tractors turned into large-capacity passenger vehicles, bicycles that are modified to enable them to float on water, improvised pulleys attached to two-wheeler scooters that carry heavy load in the absence of industrial cranes, and portable smokeless stoves' (Kaur, 2016: 314). *Jugaad* is also manifest in the redesign of trucks, heavy containers, cars, three-wheelers and, indeed, even the cows, for their undercover transport to illegal slaughter.

Through non-compliant activities and contracts, the cow is physically and conceptually transformed from a revered dairying 'mother' to a contraband product. Cows are moved from the white/grey 'dairy' economy, through grey spaces like the animal markets, to abattoirs, the 'black'/illegal end of dairy production. As animals are legally 'property', and not persons, it is possible to enact *jugaad* even upon their bodies, starting with the state-sanctioned 'innovations' to breed for dairy, and, consequently, by manoeuvring, crushing and concealing their bodies as slaughter goods. In an elaboration of Dutkiewicz's (2015) 'market logics' that thrive on seeming 'disadvantage', dead or injured/crippled/downer animals during transport do not necessarily lower profits of the slaughter trade. In fact, the underground transport in India often *needs* to cause injury/break legs to fit in, and conceal as many animals as possible in vehicles. Thus, 'a thriving international trade in beef and leather means the continued legacy of starvation, thirst, beatings, broken bones and cruel slaughter for the hundreds of thousands of cattle' (Samanta, 2006: 2005), all of whom are sourced from the dairy sector in India.

Violence is certainly not characteristic of all *jugaad*; however, it plays a central role in the *jugaad* of the cow slaughter economy. Akin to the 'breakup' of tasks/specialisations between workers in an industrial slaughterhouse (Pachirat, 2012), the large informal complex of India's cow slaughter economy also works as per specialisations. Specific productionists (handlers, transporters, butchers) perform particular activities, and are responsible for keeping the conveyor belt of tasks, so to speak, moving. When sold animals from different parts of the country congregate in markets amid other strange/unfamiliar humans/animals, relations of care are often replaced by relations of violence to keep the production line moving efficiently, from one productionist to another, from one production space to another.

Illegal slaughter is also sustained through the underdevelopment of social groups who rely on informal economies for their livelihoods. The informal economy consists of large numbers of ‘one-man firms, micro-entrepreneurs’ (Bremar, 1999: 452). While informality is perceived as ‘disorganised’, it is, in fact, highly organised to the extent that even a single unit, like an individual or a family, is linked to the larger economy. These individuals form structured networks of middlemen who may provide capital (cows, cash, transportation), raw material (cows, milk, rawhide, beef, bones), half-finished products (salted skins, meat, dairy products) and/or services (animal handling, butchery, transportation, liaising with other ‘stakeholders’ like the police), and to whom tasks are contracted and sub-contracted in seemingly convoluted lines of exchange (Bremar, 1999: 455).

When these illicit collaborations become untenable, their violent containment through assault, rape and even murder of minorities by Hindu fanatics becomes evident. In turn, minorities may also strike back with violence. As Boettke (2014) notes, markets generally function on the Smithian inclination to barter and trade, but equally upon the Hobbesian tendency to pillage and plunder, and this depends on the political economy of the market. Boettke (2014: 114) explains, ‘If the costs of raping, pillaging and plundering are less than the benefits, then the “society” under examination will indeed resemble the Hobbesian jungle’.

States may attempt to ‘whiten’/legalise or formally (re)structure the informal economy. However, as Guha-Khasnobis et al. (2006, 13) warn, governments imposing rules on informal practices without understanding the political economy can lead to outcomes, ‘which may be entirely contrary to what policymakers prefer’. The unravelling of the *Livestock Market Rules* 2017 challenges the assumption that government institutions are the only policymakers. The ‘soft law’ of informal spaces, negotiated between its ethnically and economically diverse constituents, also shapes policy (Guha-Khasnobis et al., 2006: 12).

Conclusions: *Jugaad*, informality and dairying in India

This paper has argued that cow slaughter, a criminal act in most Indian states, is sustained by *jugaad*, a complex practice of corruption and/or innovation in India, and the spaces and processes of informality such as unauthorised use of space and infrastructure, mobilities, transactions and social and material exchanges. India’s global status as a leading beef producer is linked to its status as a leading milk producer. In India, as elsewhere, dairying is sustained by the beef/veal industries, which slaughter ‘unproductive’ dairy animals. Cow milk is widely consumed as ‘food’, and is regarded as sacred by Hindus. Article 48 of India’s Constitution encourages the breeding of bovines for dairy, but prohibits their slaughter, leading to non-compliance wherein the slaughter end of dairy production operates underground.

Selectively authorising one product sourced from cows, and criminalising the other, allows the sale and transport logistics of the bovine industry to be ‘grey-washed’. This ambivalence in the transactions, mobilities and market spaces of the interconnected informal economies of dairying and beef, conceals the slaughter end of the production continuum of dairying. As informal economies take their specific form from the larger political economies in which they are located, the slaughter end of dairying in India is sequestered by Hindutva fundamentalism wherein Muslims and ‘low-caste’ Hindus are framed as slaughterers of the sacred cow. Together, *jugaad* and informality become crucial resources for state and non-state actors to enable dairying in India, where cow slaughter must occur but also be concealed.

Complex as this prospect is, the politicisation of beef in India must be countered by politicising *milk* as harmful for animals enmeshed in dairying (Kasturirangan et al., 2014). Any intent to prevent cruelty to animals, including their slaughter, must begin with reflections that arise out of an animal ethics framework that addresses the inherent vulnerability that arises from being ‘property’ of humans (Deckha, 2018), regardless of the purpose for which they are bred. This must be accompanied by institutional efforts and democratic policy reforms to address communal tensions and inequalities (Elbahnasawy et al., 2016) so that casteised and racialised minorities are not forced into livelihoods that rely on risky *jugaad*, or the politically and climatically precarious economy of animal agriculture.

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Note

1. The cow’s ID will be registered with her owner’s own *Aadhaar* card (social security identification), which will be transferred to the next owner if the cow is sold (*The Financial Express*, 2018). The technological surveillance has been criticised as a thinly veiled attempt to monitor the activities of Muslim and Dalit owners (Ghoshal, 2017). Different states have commenced the first phase of registering the cows (Engineer, 2017).

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