COVID WASTE AND WASTE-WORK IN SMALL-TOWN INDIA

Throughout the world, the production of waste is one of the fastest growing economic sectors, though rarely labelled as such, particularly when the waste takes the form of gases. India is no exception. In India, 'peak waste' – beyond which material efficiencies will counterbalance the physical growth of waste – is thought to lie a century hence. Before then, it will do nothing but grow.

As a technical field, waste is captured by engineers and technologists whose cost-benefit analyses, biased towards metropolitan waste, tend to be blind to workers, especially unregistered ones. As a social problem, NGOs and SHGs dominate the literature, ignoring the potentials of frontier technology. But in India, waste is the most visible expression of caste relations in which upper castes are still entitled to throw waste into public space and in which a workforce still overwhelmingly made up of scheduled castes and tribes is expected to clean it up. The informal waste labour force is also the most visible expression of local tax evasion.

Since more urban Indians live outside than inside Metros, between 2015 and 2019 I studied the waste economy of a one-lakh town. As a local government responsibility and a major public-expenditure category, waste is not unique in being managed in several poorly co-ordinated territorial or networked administrative silos. With exceptions, upper-caste officials are ignorant about how the sector works, their estimates of waste generation differing by a factor of three, their contact with the urban workforce minimal.

Waste disposal is structured through a set of 'public private partnerships' which aren't found in textbooks but which may not be special to waste. Alongside the public service workforce which is paid directly by the municipality, is unionised, has work and social security rights and cleans most of the town, there is a differentiated private sector. The largest companies are subcontracted to the municipality and other state organisations such as colleges, hospitals and the railways. This public and private/corporate workforce gathers and segregates waste and transports unrecyclable waste-waste to the dump-yard. Private companies can only undercut the municipality at profit by reducing wages and ignoring work-related benefits - done by casualizing contracts to their dalit and tribal labour-force. Next in size are urban industrial and

service companies (eg. factories making liquor, rice and clothing accessories, private clinics, private colleges, transport companies, offices, etc). Their specialist waste – or 'housekeeping' - work-force is also disproportionately Dalit, casual and low paid… 'permanently temporary' said one. Then comes a barely-regulated hierarchy of 'scrap-capital' through which paper, card, metal, glass and plastic is gathered, segregated and bulked for recycling, populated by petty activity and capped by a joint-family portfolio including scrap yards, a lorry fleet, urban real estate and a labour force in four figures. Serving this hierarchy is a family-monopoly in control of gunnies, cement-bags and white plastic bags essential to waste-work. Operating separately are private fleets of septic tankers, owned by scheduled-caste and scheduled-tribal entrepreneurs, disposing of some of the town's completely untreated faecal waste in complicitous relations of police extortion.

For every one registered worker there must be 10-15 unregistered, rightless workers; local or migrant, some bonded as wage-labourers while others are self-employed.

Bolted into this public-private sector, the informal economy of waste is essential to the urban economy. Overdetermined both by tax evasion - starving local government of revenue and forcing it to seek-out the lowest-cost alternatives - and by theories of new public management, public waste-workers have been laid-off throughout the last decade and rehired by private companies and contractors on casual or 'semi-written' contracts. Immediately, their wages drop from say Rs 15,000 a month with work-related benefits to Rs 5-6,000 without benefits. To compensate for this catastrophic decline in incomes (not to mention job security), waste-workers add extra shifts to their long working day. 'After hours', they sift, grade and segregate, carry, drag and sell the recyclable elements in the detritus they collect - work previously done by self-employed informal collectors. The inexorable increase in waste means that there is still work for displaced self-employed labour – if you consider earnings of Rs 3-4,000 per month to count as work. Workers on poverty wages and incomes are heavily dependent on the public distribution system for their staple food – even if they also criticise it. They themselves can figure out that the state underwrites the reproduction of their household and its workers while it simultaneously enables employers to deprive them of income and security at work.

The worst waste-work, the disposal of human waste, is no longer the realm of female manual scavenging. After its abolition in 1993, households turned to septic tanks. Nearly 30 years later, about half the town's houses have them. Septic tanker owners regard these tanks as usually too small and not voided regularly. A municipal poster encourages waste ducts from such tanks to lead through compound walls into open drains – which is what the other half of the houses do anyway from their latrines. So consumption waste is mixed with human waste in the open drains of the town. Open-drain waste is 'wet waste': men's rather than women's work (as is dangerous sewer-work). So prior to recycling, drain-waste has to be cleaned and rejects for the dump-yard are greater than if consumption-waste were separated from human-waste. And, just like the irrigation tank and the river bed where septic tankers dump their untreated loads, the dump-yard is also a resting place for decomposing human waste.

So, much waste--work is low status, menial work with poor control over work-conditions. The highest status workers directly paid by local government, have no access to lavatories or bathing facilities. Apart from the irony of public-sector workers having to relieve themselves on the very verges that they clean, the absence of 'facilities' requires a tight control over bodily metabolism. Over decades, occupation-related diseases such as kidney failure and liver disorders are reported – over and above diseases attributable to dangerous work environments, such as skin infections, allergies, joint pain and URT disease. The municipal sanitation workers (MSWs) know of the Human Rights Watch finding that 90% of India's sanitation workers die before retirement age. The entire informal waste sector is stigmatised but more oppressively so for women. Women work harder for longer hours, lower pay and fewer social entitlements. Yet, both literally and figuratively, while their waste-work is low-paid, dirty and low status – as a sector it is not a barrier to accumulation. The state has had few difficulties subcontracting this work to private and corporate capital.

Over the 5 years prior to covid, work-conditions were deteriorating.The municipal labour-force was being casualised. Cheaper contracts replaced permanent ones and limited, arbitrary (and delayed) benefits replaced theoretically decent work-rights. New electric trucks succeeding old tractor-trailers are inappropriately designed for the labour-teams;

their lower capacity requires more dump-yard journeys and informally lengthen work shifts. A woman MSW explained, ‘apart from the explosion in plastic waste, more and more waste is complicated and mixed in drains. Diapers, sanitary napkins, tampons and incontinence pads are muddled with recyclables and food-waste. That’s not to mention syringes and other infectious medical waste which is not always segregated’.

Enter covid.

While India’s biomedical waste amounts to about 600 tonnes per day, even before the tragic 2021 wave, daily covid waste added anywhere between 101 and 230 tonnes to this total. Note that this range does not vary with the pandemic surge. It is the range of official daily estimates for a given month in 2020. A hospital patient with covid generates between 2 to 15 times the medical waste of a general patient.

‘Covid waste’ has emerged as a sub-field in public health and engineering directed at themes like the logistics of yellow-bag segregation, the hazards and cleaning of infected surfaces and the management of infectious sludge, disinfection and autoclave sterilization as alternatives to compromised incineration infrastructure, the need for education and training, in sites such as clinical institutions, quarantine centres, labs and Pollution Control Boards. If labour is mentioned at all, it is in media op eds deploring the lack of safety gear and social security and warning of transmission risks in housing where isolation is impossible. The discovery of roadside ‘disposals’ of PPE, masks, covid-related human tissues and body fluids is blamed on ‘lack of awareness’. Covid waste is seen as a burden on the environment rather on waste labour - on the life-worlds from which the research literature is far removed.

Indeed lockdowns made field-work impossible. We know that in the rush for vaccination, the waste workforce was not classified as essential, and waste workers had to weigh up the inordinate time spent waiting for free vaccines at public hospitals against the deterrent cost of private vaccines relative to their earnings. Phone interviews with MSWs revealed that they were handling ever more waste and more non-biodegradable waste. Covid-related used masks, gloves and swabs added both to the consumption waste they collected and to their risk of exposure to the

virus. Increasingly, the 'dry waste' that it falls to women to collect combined general waste with infectious 'medical' waste. Meanwhile the revenue-starved municipality diverted expenditure towards its public health response to covid at the expense of support to the invisible waste labour-force that is essential to public health. The municipality provided the subset of its 'elite' labour force still on permanent contracts with two surgical masks per day but failed to supply soap, sanitizer or gloves - let alone hazard benefits, check-ups or tests. For waste-collectors, covid was, and remains, not a crisis in the sense of an unexpected extreme event, nor a crisis in the sense of a turning point, but simply the marking of a serious exacerbation of the hazards of their daily work.

In 2019, with an exasperation rising months before covid arrived, a woman union leader suggested to me that the only reform worthy of the conditions in which they work needed to be radical - waste needs a workforce organised and equipped like the Indian army. '*Waste disposal should be organised by the Government of India like the police and army and not through arbitrary schemes like Swachch Bharat, or cash-starved municipalities, let alone scattered self-help groups'* she said.

But the state, embodying upper-caste, waste-throwing interests, is part of the problem. India's waste economy is a cultural artefact as well as a physical hazard. Only when the practices of waste are disengaged from patriarchy and caste, and waste management is adequately publicly funded and organised, is the waste economy likely to be technologically transformed, are work conditions likely to approach decency and towns cleaned with less damage to the environment and to human health. Meanwhile, waste will become one of India's most obtrusive development paradoxes, with low-caste and tribal men and women toiling everywhere at their indispensable waste-work and stigmatised for their essential contributions.

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