

'New' Delhi

Fashioning an Urban Environment through Science and Law

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"Delhi"

In December 1985, almost to a year after the tragedy at Bhopal in which about 16,000 people died on account of inhaling methyl isocyanate gas that had leaked from a plant of Union Carbide, oleum gas leaked from a unit of the Shriram Foods and Fertilisers industry located in Delhi.¹ Coincidentally, earlier the same year the lawyer-activist M. C. Mehta had filed a writ petition before the Supreme Court of India arguing that the operations of the factory were hazardous for the communities that lived in the vicinity. The court responded in an urgent fashion, allowing the concerned unit to continue to operate after due safety precautions, and congratulating the petitioner for having rendered a valuable public service. The judges also observed on the relative priority of employment and environmental harm, the various concerns of workers and management and the strategies through which specialist knowledge regarding modern urban environments could be better incorporated within law.

In the same year, Mehta had filed two other petitions regarding industrial land use and vehicular pollution in Delhi (judgments regarding these came almost a decade later), that carried forward some of the concerns of the bench in the earlier case, but also elaborated further on the nature of environmental jurisprudence in India.² In the process, they altered more than the environment and reshaped not only the physical, but also the social and institutional landscape of the city.

This essay reflects on that reshaping, in three parts. The first section discusses the emergence of the 'public' petitioner seeking environmental good on the basis of constitutional guarantees. The second section explores the complex network of committees and experts that inform the judgments of the courts. The concluding section examines the significant aspects of these judgments and their implications for the city of Delhi.

Public/Petitioner

India's penal code contains an entire chapter relating to 'Offences affecting the public health, safety, convenience, decency and morals'. These are popularly referred to as 'nuisance' laws, a legal maxim derived from the European Middle Ages based on the idea that one ought to so use one's property as not to injure another.³ This is a legal provision that affords protection to individuals and communities against pollution, but it does so not from an environmental point of view but from the perspective of property.⁴

As stated by M.R. Anderson, in the colonial context of 19th-century India, the wide definition of 'nuisance' implied that the law often operated adversely against economically marginal groups by dispossessing them of common facilities that they had hitherto enjoyed. Achieving 'environmental good' cannot, and did not, have the same outcome for those who "relied upon rivers, streets, and waste-lands as key resources in the daily conduct of production and subsistence", and for those who "did not depend immediately upon common property resources for subsistence, but tended to look upon common property as the raw material from which public order and an aesthetically-gratifying quality of life could be built".⁵ Other serious limitations included the fact that while nuisance laws could provide remedies for past harms, their capacity to address future harms was more limited. Also, while these worked well with regard to two individuals, or an individual and a 'public' who

were proximate to each other, they could not cope with diffuse harms.

Two responses developed to address these limits. The first was within the domain of urban planning, and sought to anticipate, among other things, potential environmental harms, and provide for remedies through the practice of zoning. This was again environmentalism at a remove, the major concern being appropriate land planning. The governance of the city, modernist planners suggested, required the ability to comprehensively map the flows in and out of Delhi (of people, resources and waste) and then rationally manipulate them so that optimum balance (between available land and people; between people and jobs; between jobs and housing; between housing and environment) could be obtained. The idea of a comprehensive city plan thus emerged as a mechanism for effecting “progress without friction”; and through this emerged concerns about slum habitations and industrial location.⁶

In brief, the Plan which has been operational since 1962, proposed that noxious industries be moved to the margins of the city or even outside it, based both upon their infrastructural requirements and their polluting effects.⁷ Intriguingly, it also recommended a similar transfer of ‘rural industry’, being “not suitable for a well rationalised and modern manufacturing activity” within the limits of the city.⁸ Even more damning was another inflection of the category of the rural – through the people who lived in slums being described as “plague spots in any urban setting”; “concentrated areas of insanitation, crime and vice”; ignorant of “urban ways of life” and engaging in “obnoxious trades” all of which worsened the already chronic unsanitary conditions of the city.⁹ Nuisance and pollution, in other words, were always to be located elsewhere, and the discourse of planning expressed supreme confidence in managing these separations that were simultaneously spatial, material and social.

This confidence has been much shaken over the last four decades or so. From the mid-1970s, we find a parallel set of developments that have brought the issue of (urban) environments more centrally into focus, this time through statutory laws relating to water and air pollution and through reinterpretations of the Indian Constitution, most notably by making the enjoyment of a healthy environment an aspect of fundamental rights, drawing upon Article 21 of the Constitution (Protection of Life and Personal Liberty).¹⁰ This right has further been operationalised through some other innovations, particularly those relating to the standing of the petitioner and the powers of the court to fashion new remedies. From the ‘80s onwards, the Supreme Court of India has expanded the understanding of *locus standi* to suggest that it is not necessary to have suffered a personal injury to seek remedy. The principle, as restated in the oleum gas leak case, is that in cases of violation of a fundamental or other legal right of socially and economically disadvantaged persons, “it would be open to any public spirited individual or social action group to bring an action for vindication” on their behalf. Justice P. N. Bhagwati observed that it was important to focus on the substance of law rather than the form of it. M. C. Mehta appeared as a pioneer on the scene in this context and filed close to a dozen writ petitions. The outcomes of three of these are considered here.

Committee Men and Contesting Experts

The rule of committees is almost always an aspect of the arts of governance, but paradoxically, they appear in our narrative as the second critical set of players acting in *public* interest, knowledgeable in their capacity to deal with environmental complexities and secure in their authority based on the mandate provided by the courts. Once again, the concern is justice; and the legal principle is an innovative one. The Supreme Court has observed that it is neither essential nor constitutionally mandated that the adversarial procedure be adopted in cases involving fundamental rights.¹¹ In fact, in instances where the two parties are totally unevenly matched in economic and social strength, such a stance could even lead to injustice, with the less privileged being unable to produce relevant information before the court. If fundamental rights are to be more than a 'teasing illusion' for the poor and the disadvantaged, it is necessary that the court fashion an alternative mechanism, which indeed it has through the appointing of commissions to gather facts.

This principle was restated in the various cases under review with a major new consideration that the persons being authorised to help establish the facts must bring to this task not only their integrity but also highly specialised knowledge. The Ministry of Environment and Forests of India observed in 1992 that earlier concerns with pollution that was visible and degradable are giving way to concerns about new types of pollution with very small quantities of synthetic chemicals that are not so visible and injurious to health and damage the environment because of widespread use, persistence and toxicity.¹² And law, as indeed the executive, had to respond to this new 'unknowability'. To assist the process, the Supreme Court turned to 'professionally competent and public spirited experts' who would provide 'reliable scientific and technical input'.

This is indeed a rather positivist view of science, but one which has enjoyed some respectability in many other legal contexts.¹³ In the Indian context, this implied a consistent recourse to a committee of specialists for helping to establish 'truth' in complex environmental domains. In the course of the proceedings against the Shriram unit, the Supreme Court appointed two expert committees of its own, and also relied on the testimony of the expert committees appointed by other bodies such as the Lt. Governor of Delhi, the Ministry of Labour, and the petitioner. Three basic issues were examined: the nature of the risk faced by the workers and the community around the unit; strategies for minimising these risks; and the steps that the company needed to take to effect such minimisation.

There was near-consensus between the experts on the safety measures required, as also the compliance of the Shriram group with these measures. But disagreements remained regarding the precise concentration of chlorine in the air (25 parts per million [PPM] or 40 PPM, with an exposure of around 30 minutes) that could be considered dangerous. The court temporarily papered over this disagreement, arguing that the differences notwithstanding, there was little doubt that chlorine, by its very nature, was a hazardous gas. But clearly there were always possibilities of more radical disagreements, and these came into public view about a decade later in the course of the controversy over the choice of an environmentally 'clean' fuel.

In this instance, the court was not merely reacting to an established body of knowledge. The health effects of the various categories of fuels were not evident; the knowledge regarding these had to be generated. The court relied for its judgments on the recommendations of the Environment Pollution (Prevention and Control) Authority for the National Capital Region (established in 1998), seeking its advice on a range of issues including augmentation of public transport, elimination of leaded petrol, use of pre-mix petrol for two-stroke engines, phasing out of older vehicles, etc.¹⁴ The most controversial of these recommendations was the absolute preference for Compressed Natural Gas (CNG) over diesel, the committee taking care to also list the adverse effects of critical pollutants such as sulphur dioxide, nitrogen dioxide, carbon monoxide, diesel and sulphur particulates, respirable suspended particulate matter and benzene.¹⁵

This was soon challenged by the report produced by the Mashelkar Committee, set up by the Government of India under the chairmanship of the Director General, Council of Scientific and Industrial Research (CSIR) and drawing upon the expertise of a wide range including specialists in environment, energy, vehicular technology, public finance etc., which recommended, instead, targeted vehicular emission standards for various categories of vehicles and allowed for different technologies and fuels that could meet the emission standards.¹⁶ The Supreme Court was far from satisfied. It not only suspected motives for the setting up of this committee but also observed that, notwithstanding the long list of specialists, there was no expert in public health and consequently the absence of “any serious concern with the health of the people” in the report of this committee.¹⁷ The ‘health first’ approach, in which adverse environmental effects are considered paramount, to the detriment of other repercussions, was elaborated further in other orders. What becomes interesting here is that the Court had more than a committee to reckon with in the form of science-based NGOs who put their own views on the table, and did so in a far more public setting.

In contrast to the cases that dealt with planning issues, where the courts were (sometimes) pitted against trade unions regarding job loss, at stake here was not only the moral issue – i.e., in whose interest – but also the intellectual basis of making judgments: on what evidence do we judge; who produces these evidence; how certain can we be? Amongst those who sought to provide the answer to these questions outside the committee framework, the most prominent have been the Centre for Science and Environment (CSE), whose Director, Anil Aggarwal also served as a member of the Bhure Lal Committee, and the Tata Energy Research Institute (TERI). Both have consistently involved themselves in public campaigns through which a significant set of studies pertaining to fuel choices have been brought into the public domain, even as these very studies have become grounds for contestations.

The CSE began its campaign for clean air first through the publication of its 1996 report *Slow Murder*, an in-house study that highlighted the need to simultaneously address the entire gamut of issues that affect air quality. However, the debate became more technical; and lacking in-house expertise, CSE set up an international committee of technical experts to undertake an evaluative study of CNG and diesel in order to arrive at an ‘independent evaluation’, which committee also favoured the CNG option. TERI used data

from the Expert Reference Group Study in Australia (conducted in 1998) to argue in favour of diesel, which was contested by CSE on the basis of a more recent study undertaken by the Australian Government's Council for Scientific and Industrial Research Organisation. Further on, TERI cited the approach taken by the European Programme on Emission, Fuels and Engine Technologies as providing a more comprehensive framework than that on offer by the Bhure Lal Committee and the courts; or in another context, World Bank studies on Mexico City and Santiago on the inadequacy of what it calls this 'technical fix' to reduce air pollution.

Both published Q & A booklets, issued press notes and lobbied hard at seminars and conferences. This is a public contest around evidence for environmental impact that had not been characteristic of court/government-appointed committees and added an entirely new dimension to environmental jurisprudence.

Notwithstanding, it is instructive to underline the continuity of the scientific view, endorsed as much by CSE and TERI as by the various committees before them. If there are disputes, these views suggest, these are in the nature of science itself; or of bad practice in which partial, selective, deliberately misleading or genuinely ill-informed knowledge is presented in the public to obfuscate issues. The answers must therefore lie in better science, clearer and more voluminous data.

In contrast, what we observe is far too much uncertainty on the matter, and the arena of dispute is far too wide for generating even a rough consensus as had been in the oleum gas leak case. Clearly, an entirely different basis for closure would have to be found, drawn not from scientific consensus but from other ways of thinking about how to organise the society and economy, addressing not only the immediate context but also distant futures.

Judgments and Critics

Committees may help to establish the 'truth', but justice must yet be dispensed by law. Having achieved a rough consensus on the harmful effects of chlorine, but also realising that the Shriram group had complied with the recommended safety regulations, the court had now to decide whether to let the unit continue operation. The concerns before the court were various. These units were located in densely populated parts of the city; risks to workers and the community could be minimised, but never fully eliminated; close to 4,000 workers stood to lose their job if the factory was to close; and there was the distinct possibility of the Delhi water supply losing its supply of chlorine and having to source it from a fair distance. Together, these posed a rather delicate choice before the court, which had to 'weigh and balance' and eventually ruled, rather hesitantly: "We have...reflected over the various aspects of this rather difficult and complex question with great anxiety and care and taking an overall view of the diverse considerations, we have, with considerable hesitation, bordering almost on trepidation reached the conclusion that, pending consideration of the issue whether the caustic chlorine plant should be directed to be shifted and relocated at some other place, it should be allowed to be restarted...subject to certain stringent considerations".¹⁸

In other words, despite the increasing technical nature of the issue on hand, the Supreme Court had made it clear that expert evidence was not the determining point of

view, but instead its own sense of balance between competing goals and justice, a point that is sometimes lost when the clamour for information obscures the principles of which justice is to be debated. This was a balance rather delicately poised at this moment in time, but within a decade it clearly tipped further to one side – in favour of environment – and at some cost to other constituencies.

The issue of location acquired a momentous presence in the life of the city from the mid-1990s through the judgments offered in the land use scenario where we find this shift well marked. “We are conscious”, Justice Kuldip Singh ruled in a case involving stone crushing, “that environmental changes are the inevitable consequence of industrial development in our country”. But the important consideration for him (and his fellow judges) was that “the quality of environment cannot be permitted to be damaged by polluting the air, water and land to such an extent that it becomes a health hazard for the residents of the area”.¹⁹ This view found amplification in the two sets of judgments that were passed, the first in 1996 and the second in 2000, that concerned themselves with the provisions of the second Master Plan. Implemented since 1990, the second Master Plan classified various industries in Delhi into nine categories and laid down clear guidelines with respect to those industries that needed to be relocated. First among these were the Hazardous and Noxious Industries [category H (a)] which, the Plan said, were not permitted in the city; existing units would have to shift out within a period of three years. The second major category [H (b)] was that of heavy and large industries, of which no new units would be permitted and the existing ones shifted to the Delhi Metropolitan Region and the National Capital Region. With respect to other non-conforming industries, similar recommendations were made, though with more lenient time periods for shutdown or relocation.

The question that the court framed for itself was a rather restrictive one: of legality. Who had complied and who had not, and those who hadn't (the overwhelming majority), it ruled, must shut operations. It was open to the court to have used this opportunity to debate on the wider processes of planning, such critiques being available both in the Indian and the global context. But it chose the narrower path instead. The ironic consequence is that the Supreme Court, which had been so innovative in fashioning environmental good into a Fundamental Right, has utterly failed to secure safe working conditions and habitation for the workers of the city, within the city. It could only precipitate their movement outwards, on the assumption that because they are migrants, they are also infinitely mobile. In the process, it has also created a peculiar bind where all terms of engagement for creating a better environment are seemingly exhausted through the binary of ‘safe/clean’ city and ‘dirty/necessary’ work.

The Supreme Court has not, however, been oblivious of broader critiques in other domains of intervention. In fact, with regard to the larger global debate on environment, it has kept pace with significant developments elsewhere. Therefore, in the vehicular pollution case we find the articulation of principles that allow for preventive intervention even under conditions of great uncertainty, there being little unanimity on which fuel was most environmentally appropriate. Quite clearly this posed a major problem for the executive. Those obliged to convert their fleet from diesel to CNG were conscious of the financial investment required and demonstrated displeasure in no uncertain terms, besides

considerable foot-dragging. Equally, the Chief Minister of Delhi went on record that she did not want chaos on the streets of Delhi through a proactive approach on an unproven technology. “I do not know what is the truth”, she said. Under the circumstances, it was hardly likely that she could convince others.

This argument no longer cut ice, for the court not only marshalled the weight of scientific evidence in its favour, but more significantly, it firmly established a new principle of governance, wherein doubts were allowed but could not become an impediment to action. This is the notion of sustainable development, containing within it both the ‘precautionary principle’ and the ‘polluter pays’ principle. It necessitated, in the court’s view, that the executive act even on the basis of limited knowledge, and in the specific case of fuel choice, that all efforts be made to ‘anticipate, prevent and attack’, giving priority to environment over economy.²⁰ There was no option but to act; and the court had little hesitation in saying that its order with regard to conversion of the entire city bus fleet to CNG “does not require any modification or change”.

The twists and turns that lie at the interface of science and law leave our urban futures still uncertain. In the case of land use, critics have inferred a ‘middle-class bias’, an important factor, though not the sole one.²¹ What is at stake in all these situations is a relationship to living environments that a science-based, expert-driven, data-reliant environmentalism does not necessarily promise to help cultivate. The principles for achieving consensus on ‘acceptable risks’ also urgently require further discussion. Those principles cannot be arrived at through law or science alone. In a democratic polity, they must, of necessity, be societal.²²

NOTES

1. About 15,000 people are estimated to have died in Bhopal on account of inhaling methyl isocyanate gas that leaked from a plant of Union Carbide. Inhaling oleum gas, which is largely composed of sulphuric acid, may be equally harmful, especially in the form of severe eye and skin burns, and in extreme cases, even fatal.
2. The three cases under consideration are:
M .C. Mehta v. Union of India WP 12739/ 1985 (Oleum Gas Leak Case)
M .C. Mehta v. Union of India WP 4677/ 1985 (Delhi Land Use Case)
M .C. Mehta v. Union of India WP 13029/ 1985 (Vehicular Pollution Case)
3. See Divan, Shyam, and Armin Rosencranz, *Environmental Law and Policy in India: Cases, Material and Statutes* (Oxford University Press, 2001, Delhi) p. 91.
4. In addition to possession, property is a constellation of many other rights, including occupation, use, sale and enjoyment. Just as laws of trespass protect occupation, similarly nuisance laws allow for enjoyment of property. See Hoban, Thomas and Richard Brooks, *Green Justice: The Environment and the Courts*, 2nd edn (Westview Press, 1996).
5. M. R. Anderson, “Public Nuisance and Private Purpose”, SOAS Law Department Working Paper 1, pp. 24-25 (1992).
6. This was hardly a new idea. A number of scholars have suggested that versions of it have been around since at least the late 19th century. What was distinctive about the post-World War II period was the capacity of the state to undertake this massive task of social engineering. In the case of newly independent countries such as India,

there was the desire to forge a new civilisation. So urban planning was not about physical manipulation of elements alone, but instead a triangulation linking people, habitations and production processes.

7. The Master Plan describes noxious/nuisance industries as “any industry whose by-products or manufacturing procedures are associated with undesirable features such as smoke, stench, unpleasant fumes, pollution of water and similar hazards to general health and well-being of the neighbourhood”.
8. Delhi Master Plan, 1962 (DMP-62), Ch. 8, pp. 7-8. Nuisance laws being particularly harsh against traditional industries has also been noted in other contexts. For instance, in the US, Rosen notes that courts were quite willing to act against “traditional” industries and trades such as slaughterhouses and bone melting, but the bar for the “provability” of damage was raised much higher with regard to modern, steam power driven factories, mines, smelters, etc. See Christine Rosen, “Knowing Industrial Pollution: Nuisance Law and the Power of Tradition in a Time of Rapid Economic Change, 1840-1864”, *Environmental History*, Vol. 8, No. 3, pp. 565-97
9. MPD – 62, Ch. 10, p. 3.
10. A consultation paper circulated by the National Commission to review the Working of the Constitution on the theme of “The Enlargement of Fundamental Rights” points out that as a result of judicial decisions certain rights which are not explicitly mentioned in Part III of the Constitution (dealing with Fundamental Rights) have been inferred or deduced from the specified guaranteed fundamental rights. These are what it refers to as the judicially deduced fundamental rights, which include the freedom of press; freedom of information; prohibition of torture; right to travel abroad and return; remedy for violation of Article 21; right to privacy; right to free elementary education upto the age of 14; right to a clean and healthy environment; right to have access to courts and right to legal aid. It also suggests that other than South Africa, India is the only other major developing country that has moved in this direction. The consultation paper is dated 11 May 2001. http://lawmin.nic.in/ncrwc/finalreport/v2b1-3.htm#_ftn26; accessed 27 May 2004.
11. *Bandhua Mukti Morcha vs Union of India*, AIR 1984 SC 802.
12. Government of India, MoEF, 1992. Policy Statement for Abatement of Pollution, p. 2.
13. The literature on the sociology of science is too vast to be explored in this essay, but for a good introduction to the manner in which such constructed knowledge plays itself out in the legal context, see Sheila Jasanoff, *Science at the Bar: Law, Science and Technology in America* (Harvard University Press, 1995, Cambridge).
14. For a detailed list, see the order dated 28 July 1998. This committee is popularly referred to as the Bhure Lal Committee after the name of its chairperson, and is referred to as such in the rest of this essay.
15. Environment Pollution (Prevention & Control) Authority for the National Capital Region, “Report on Clean Fuels”, July 2001.
16. Mashelkar et al., “Interim Report of the Expert Committee on Auto Fuel Policy”, Government of India, 2002.
17. Order dated 5 April 2002.
18. Among the stringent considerations were not only technical matters relating to safety but also the involvement of workers’ organisations, the need for training of workers, and detailed charts in English and Hindi explaining the effects of chlorine gas on the human body and what precautions workers should take in the case of an emergency.
19. Judgment dated 15 May 1992.
20. Order dated 5 April 2002.
21. For the middle-class environmental thesis, see for instance Dunu Roy, “From Home to Estate”, *Seminar* 533 (2004); and Amita Baviskar, “The Politics of the City”, *Seminar* 516 (2002).
22. For a critique in this vein, see Ravi Agarwal, “Questions of Standards”, *Sarai.txt* 1.2, 15 December 2004-15 February 2005, and in this volume.