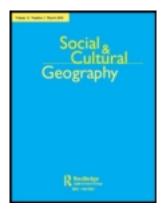
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Governmentality, congestion and calculation in colonial Delhi

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Governmentality, congestion and calculation in colonial Delhi

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This paper seeks to explore a different way of examining the 'difference' of European and colonial governments, showing how the Indian colonial state privileged investments in political, rather than civil, society. The former targeted the population and sought effects through policies that could be co-ordinated from a distance, at low cost. The latter targeted the social realm and necessarily involved the admission of the rights and privileges of liberal citizenship. Calculations in political society displayed: certain ways of visualizing a population, epistemological assumptions about what could be known, identity assumptions about how subjects should be conceived and an ethos that protected the state from heavy expense. This is illustrated practically through exploring the debate over congestion in colonial Delhi. Three texts that addressed the congestion debate are analysed in depth: an official government report; a publication by a member of the Delhi Improvement Trust; and a memorandum submitted to the government. These texts demonstrate a span of opinions regarding the methods by which congestion could be solved and the calculations about local subjects these solutions would presume.

Key words: Foucault, governmentality, colonialism, Delhi, biopolitics, calculation.

Introduction

This paper has two aims. The first is to show that political contestation can take place over the way people and territory are calculated, as much as it can take place in the realms of constitutional debate or the actual technology of rule. The case study will be that of Delhi, capital of British India from 1911 to 1947. The population expansion and geographical congestion that arose in the 1930s prompted a debate about the obligations of the government and the rights of the population. This debate was distinctly spatial in its emphasis on the

city, planning and congestion. A close reading of three documents will be used to survey the different perspectives in this debate as a window into the politics of colonial rule. While these documents should not be taken as paradigmatic, together they do draw attention to many of the wider debates that were central to the local regime of colonial governmentality.

The second aim of this paper is to explore the theoretical literature that has been inspired by Michel Foucault's writings on governmentality and biopolitics, especially as applied in the colonial setting. These new applications are questioning and extending what are by now

familiar Foucauldian concepts amongst the geographical discipline (for summaries see Elden 2001; Legg 2005; Philo 2004). The application of this literature to the colonial realm necessitates a substantial review, which will present geographers with a series of tools to analyse the spatial relations of colonialism, some of which will be deployed in the empirical investigation in the second half of this paper. A series of analytical questions have emerged from the Foucauldian literature that will be used to structure this investigation (Dean 1999; Dean and Hindess 1998; Rose 1996). In their most simplified form in the context of calculation, the questions are as follows:

- What is to be calculated? (Episteme)
- How are calculations envisaged and presented? (Visibility)
- Who is calculating and who is being calculated? (Identities)
- How are governmental calculations put into practice? (Techne)
- How are calculations thrown into question? (Problematizations)
- What sort of calculations distribute resources within a regime? (Ethos)

Rather than an over-wieldy and intrusive state, these questions will highlight a reluctant and self-limiting government. This comes about through viewing the colonial state not just in terms of discipline but also of biopower (Foucault 1978: 139; also see Elden 2002). Biopower refers to modern forms of power over life, that span the poles of discipline and government. The former targets and produces the anatomical body and seeks political docility, the latter targets and produces the population and seeks to regulate the conduct of population groups. While thoroughly biopolitical in its concerns with local population and territory, the Indian colonial administration will be

shown to have been reticent to invest in the wider civic and social programmes associated with liberal states. This reticence was criticized through arguments that insisted upon the obligation of the British 'liberal' Empire in India not only to regulate the population, but to care for the social and economic well-being of its citizens. The tools for analysing this debate emerge from the colonial governmentality literature, as explored below.

Population, statistics and colonial government

Episteme: from sovereignty to population

Foucault argued that the medieval sovereign's occasional intrusion into the life of the masses to organize the disposition of people and things was later complemented, and largely replaced, by the constant penetration of bureaucratic governments into the lives of the population (Gordon 1991); 'the right to make live and let die' (Foucault 2003 [1975/76]: 241). The political administration of life, referred to as 'biopolitics', envisaged these masses as the 'population' and devised governmental rationalities ('governmentalities') for regulating their processes at the abstract level. Alongside the 'economy' and 'society', the security of the population became the object of government. Interventions targeted fertility, the nature of endemic diseases, the prevalence of biological disability and the effects of the environment on human life (Foucault 2003 [1975/76]: 243-245). Such interventions fostered the rise of liberalism as a political ethic that sought to limit the state and preserve the rights of the individual, not just against the disciplinary police state, but also against governments that seek to conduct the conduct of their people (Dean 1999: 113). Such conduct was the burden of liberty, but simultaneously brought the benefits of a nurturing yet reassuringly distant state (Rose 1999).

A growing literature has been examining the applicability of Foucault's work on governmental rationalities to the colonial context, especially that of India (Hindess 2001; Howell 2004; Rabinow 1989; Scott 1995; Valverde 1996; Yeoh 1996; on India see Chakrabarty 2002; Chatterjee 2004; Kalpagam 2000; Prakash 1999). This is despite Foucault's almost total silence on issues of colonialism (for brief comments see Foucault 1972: 210; 1977: 29, 314; 2003 [1973/74]: 110, 127; 2003 [1975/76]: 103; also see Legg, forthcoming 2007). The colonial governmentality literature has shown how biopower was exercised differently in the colonies. For example, excesses of violence (Mbembe 2001, 2003) and discipline (Arnold 1994; Hussain 2003; Mehta 1999) were tolerated as preparatory stages in liberating the population from the burden of tradition. Partha Chatterjee (1993) has stressed the role of race in organizing the colonial rule of difference in India, while Meghan Vaughan (1991: 9-11) has explored the complexity of racial differences between colonial Africa and the Europe of Foucault's historical writings. She suggested that the colonial state was never modern, medical, capitalist and subjectivizing in the European sense, given the emphasis on repression, othering, underdevelopment and 'unitization'. The latter led to aggregation, by which colonial people were conceived as groups or communities, not individuals. Derek Gregory (1998) confirmed that colonial governments were less individualizing with regards to the native population, which was often considered as a body of objects rather than subjects. While the colonial state regularly deployed the violence of the sovereign, the swarming of disciplinary institutions to protect the elite was much more confined in the colonial context, although the construction and destruction of colonial space did seek to alter the conduct of the population.

One way of reconciling these views is through the distinction between civil and political society. While civil, elite, society addressed citizens with rights and obligations, political society dealt more broadly and less intensely with members of the population who could be targeted by governmental policy calculations (Chatterjee 2000: 44; 2004). These calculations allowed the government to know its people yet to rule at a distance, avoiding the expense of establishing a deep and broad civil society (Prakash 1999: 127). Contemporary political society is a space of negotiations, bartering and battles for survival in marginalized and underfunded fragments of society. Chatterjee suggested these tactics emerged in the 1980s, despite also hinting at their origins in nationalist tactics of political mobilization (Chatterjee 2005: 92) and in the colonial techne (Chatterjee 2001: 165). Colonial technologies had targeted the population through policies that constructed the social surface through which future negotiations would take place. Yet these surfaces were more akin to spaces of visualization and calculation from a distance. This distance was tentatively bridged through spaces of sanitary regulation, epidemic controls, statistical management and organization of the population that formed political society (Prakash 1999: 144).

As such, while the colonial government was biopolitical, it did not extend the full range of liberal governmental tactics into the alien Indian population. While, in Europe, political society incorporated a mainly working-class population, this form of governance was more general in the colonial context. Without the full apparatus of a liberal government, the focus still lay on the *disposition* of people and

subjects rather than on the *processes* of society, economy and population, which were deemed to be too unstable in the colonial realm (for comments on the similarities between colonial North America and dispositional, 'police' models of government, see Joyce 2003: 241).

We must be attentive, as Philip Howell (2004) has stressed, to the self-limiting and pragmatic nature of colonial governments. However, we must simultaneously be aware that a limited bureaucratic state often concealed an expanded epistemic concern with population trends observed from a distance, which would only be regularized should they threaten national productivity. Concerns over expenditure and upsetting 'native opinion' often constrained the interventionist urge or welfarist obligations of the colonial state. However, resources were invested in making territories and populations visible.

Visibility: statistics, abstraction and mapping

The emergence of sophisticated statistical techniques in nineteenth-century Europe allowed the detection of seemingly causal social relationships that were concealed from the individual (Porter 1986: 5). Such statistics facilitated a re-visioning of territory through a spatial geometry that allowed comparable measurement and comparison independent of regional difference (Poovey 1995: 9, 29). From this grid, observations could be made, extracted from context, reified, and thus given a life of their own. This cognitive abstraction was cartographically expressed in the population flows, graduated circles of population, and census maps of social mapping; 'perhaps the clearest example of the map in the service of a liberal form of governmentality' (Joyce 2003: 51; also see Crampton 2004). Such maps were used not only to discipline deviant communities but also to regulate public space in the name of free movement, hygiene and sexual restraint (Foucault 2003 [1975/76]: 251; Joyce 2003: 11). Such maps influenced physical infrastructures, that made people biologically safe, but also geographical imaginations, which framed the thoughts and imaginations of city improvers. This physical and ocular regulation of space in the nineteenth century targeted not only the lack of sanitation but also the concentration of people in the inner cities (Otter 2002).

Abstraction, statistics and mapping as forms of visualizing populations were each important in India, but in translated and inflected ways (although see Sengoopta 2003 for counterflows of innovation to Europe). Enumeration and classification affected not only the military and taxation, but also selfrepresentations and identities (for a discussion in relation to the USA, see Hannah 2000). Such data led to the illusion of bureaucratic control and the sense of a controllable indigenous identity (Appadurai 1993: 317). Huge amounts of money were spent on those censuses and land assessments that constituted political society, though less money was reserved for local investment. The internal and external tensions of census taking in India have been extensively commented upon (Pant 1987; Peabody 2001; Saumarez Smith 1985). Yet the abstracting and homogenizing tendencies of the census and statistics were also challenged by revolts, writings, domestic formations and religious practices (for comments on how villagers in contemporary India negotiate and visualize the state, see Corbridge, Williams, Srivastava and Véron 2005).

As in Europe, the rise of statistics was analogous to, and compatible with, the rise of mapping. Matthew Edney (1997) and John Keay (2000) have charted the monumental

effort to survey and map the Indian subcontinent. These projects produced seemingly objective and rational diagrams that obfuscated the history of local struggles, conflicts and compromises that were necessary to gain the trigonometric coordinates on which the maps were based. Elsewhere, Timothy Mitchell (2002) has shown how the calculations about, and mapping of, colonial Egypt reorganized territory into a storehouse of powerful information and a contained space in which accurate experiments could be carried out. In addition, Ian Barrow (2003) has focused attention on the Indian maps themselves, examining how cartography could create the illusion of rule as well as utilitarian practical information. Mapping thus preceded, accompanied and succeeded territorial conquest, as new forms of possession were required, and imposed, and new forms of identity were presumed and created.

Identity: duties of the governed

Both the disciplining of the body and the regulation of the population relies upon 'norms' to which people should train themselves, or be trained (Foucault 2003 [1975/76]: 252). People can either aspire to a norm, or be encouraged to abhor the conduct of 'abnormals' such as the criminal, the lunatic, the prostitute or the undeserving poor. The UK's Chadwick Report of 1842 institutionalized the belief that moral stature and social worthiness could be read off from the environment. Besides the lack of sanitary infrastructure, working-class districts were shown to be 'overcrowded'. This term relied on its converse, the uncrowded bourgeois district (Poovey 1995: 119). Reports then paradoxically criticized these working-class conditions, while asserting that the working and middle classes were fundamentally different. This pairing of condemnation with difference was even more pronounced in the colonies, though still linked to the social and physical environment.

This condemnation—difference paradox played out in the colonies through asserting the difference of the colonized people, yet insisting also that they adhere to certain norms of government that would make them calculable. The former practices centred on the well-known process of 'othering'. Said (1978) showed that prior to experience in the colonies, many Europeans had inculcated stereotypes of the colonial abnormal which fortified the European sense of Self. The colonized were variously depicted as weak, superstitious, disloyal, in need of greater discipline, and lacking in the mental capacities for self-regulation and, thus, the burden of liberty.

In India this 'othering' took on several dimensions. Indians were portrayed as people without agency (Inden 1990) or masculinity (Sinha 1996). In other cases, they were depicted as irrationally devoted to religious traditions such as caste (Dirks 2001) or community (Pandey 1990), which belied the ways in which these categories varied by district and were used in everyday life (Bayly 1999: 189). Such subjects were not deemed capable of guaranteeing the processes of the population, economy or society, which justified further colonial rule. This at times restrained colonial programmes of intervention in social or religion domains (Kalpagam 2002: 50).

Yet while colonial governmentalities contributed to the construction of otherness, they also put in motion programmes that undercut this othering. This was because the rationalities at play were colonial, in that they needed to rule racial difference, but they were also modern, in that they had to deploy means of calculation and functional equivalence. These two could

work in tandem, as in the colonial census, land allocation or the nomination of democratic representatives from communal groupings. Yet these rationalities could also work in opposition. For instance, tensions could arise between a hereditary model of social status and a meritocratic model of modern society, or in town planning debates between models of racial segregation versus plans of functional zoning.

Thomas Blom Hansen (1999: 32) has suggested that some models of colonial governmentality established a double discourse, which separated the irrational subaltern, in need of strict governance, from the educated middle classes who were amenable to government. Yet even this double difference came to be undermined in the early 1900s. Benjamin Zachariah (1999: 168) has shown that by the twentieth century the difference of the native came to be considered in socio-economic, not anthropological terms. Indians were not intrinsically different, but were backward in terms of civilization and thus could, ideally, be improved (also see Kearns 1997: 453).

As such, some modernist programmes aimed not to 'other' populations, but to make them countable, calculable and equivalent. In the Indian context, this could actually lead to a *neglect* of considerations such as caste, community, language or custom. Rather, individuals were made to take up the duties of the governed, making themselves calculable, opening their homes to enumeration, taxation and land registration. People had to know their family name, their address and their individual identity.

This tension captured the paradox of an illiberal Empire that preached enlightened, modern reason yet practised a bureaucratized, colonial despotism. This can be considered a tenet of the 'ideology of the Raj' after the 'Mutiny' of 1857, which fortified belief in the difference of the Indian people (Metcalf 1994).

Yet this is not to suggest that an unfettered modernism would have led to a fairer identity politics. The insensitivity to difference of modern calculation led to an anonymity and dismissal of difference that could be as dehumanizing as the objectification and aggregation of colonial regimes (Holston 1989; Scott 1998). What was often demanded of colonial regimes was that the benefits of modern government be combined with a sensitivity to local needs and wants. The satisfaction of such demands was, however, as much dependent on available technologies as it was on political will.

Techne: creating and claiming the state

Poovey (1995: 4) acknowledged the dependency of the concept of 'population' on technologies of representation such as the census, cheap transportation and publications, statistics and museums. While technological advances in Europe did inspire work in the colonies, the embedded nature of technologies justifies geographically specific discussion beyond the general technologies described so far. Prakash has placed science and technology, as physical structures and administrative regulations, firmly at the heart of rule in colonial India (Prakash 1999: 3; also see Kumar 1995). The census, surveys, encyclopaedias and other forms of classificatory information depicted India as a unified and knowable space. After the Revolt of 1857, irrigation, telegraph and rail networks were cast across the subcontinent to tighten rule. Later there came industrial transformations, legal restructuring and the introduction through insurance policies of conceptions of risk (Legg 2006). As such, modern institutions, knowledge, and practices assembled the Indian nation as a coherent idea and space. The state was thus inseparable from the technological configuration of the territory and the modern India it was engineering into existence (Prakash 1999: 160).

Yet, beyond basic infrastructure, colonial states were often, as Prakash stated, underfunded and over-extended laboratories of modernity, operating under the sign of minimum expense and maximum ambition. The fear of a literate and politicized middle class kept the government from investing in civil institutions or education beyond what was necessary to facilitate a hybrid, ruling elite. Partha Chatterjee has suggested that nationalists divided the Indian world into inner and outer realms, the former of which would be defended as the spiritual homeland, while the latter would be modernized, industrialized and impersonal (Chatterjee 1993). Yet Prakash challenged this division by showing how claims were made on the technology of the state, indivisible as this was from the modern India it created (for further criticism of Chatterjee's geographies in relation to the domestic, see Legg 2003). These claims severely problematized the colonial regime of government, and forced the ethos of calculation, in its local and national character, to be justified.

Problematization and ethos: the polyvocality of numbers

Much of our knowledge about regimes of government arises from moments when their ethos is called into question and either modified, discarded or defended. Such moments prompt us to look at the effects of policies, the ways in which they are received, the impacts of their implementation and the personal affects they provoke. These problematizations can be the product of residual, former rationalities (Poovey 1995: 14–15).

However, governmental statistics themselves can be resisted, and used to resist. They can be shown to be merely descriptive and ignorant of the subjects of government (Porter 1986: 152). Yet numbers (counting, accounting, registering and taxing) are also used to create citizens who can calculate in ways that may not be compliant with a dominant governmentality (Rose 1991: 682). It can be shown that statistics must always be political due to the way in which they make some things visible while consigning others to obscurity, if only temporarily. As with mapping, certain visions of the world are held forth that, while influential, never attain total coverage or fixity. Their accuracy, adequacy, use and abuse, relationship to privacy, and their ethos need constant scrutiny, and this can be achieved statistically. As Rose (1991: 684) stated, '[i]n modern democratic discourse, numbers are thus not univocal tools of domination, but mobile and polyvocal resources'.

Indian nationalists criticized the government in political society, in the very space created by the Government of India itself. Nationalists acknowledged the technological order as the space of the nation: 'The demand for the national development of the territory quickly and imperceptibly became the demand for state power, which was seen as nothing but an extension of the space constituted by technics' (Prakash 1999: 11). Nationalists criticized the over-exploitation of resources and the living conditions of Indian workers, making claims on the techno-political form of modern India, while simultaneously critiquing the colonial ethos that had diverted resources and profits away from the indigenous population.

However, Prakash does not draw sufficient attention to the attendant forms of seeing and visualizing that was implicated in techne. It carried assumptions about the identities and capacities of the subjects of technology, but it also entailed a way of calculating and thinking about space and people. These means of calculation and vision could be critically appropriated to highlight the failings of colonial administrations. These failings included an ethos that directed resources towards the knowledge of society, but not always towards the means to improve it.

These criticisms prised apart some of the tensions between governmental rationalities. Biopolitical and educative investments could be economically costly, while democratized notions of sovereignty can problematize treating individuals like a population (Dean 1999: 101). These tensions were exploited in the Delhi congestion debate. Three documents will be used to give an insight into this debate, utilizing the six categories described above to plot the relationship of each document to the colonial governmental context, as summarized in Table 1.

Congestion, over-crowding and urban calculation

Problematization: comprehending Delhi's population

Delhi Province, in central north India, had been focused around the walled city previously known as Shahjahanabad until 1911. In December of this year it was announced that a new city would be built to the south of 'Old Delhi' to house the capital, which would be transferred from Calcutta (Irving 1981; Volwahsen 2002). As the new capital was constructed people flocked to the province, yet found insufficient new accommodation awaiting them. As such, most of the population growth took place within Delhi Municipality Committee limits, which took in the old city and the surrounding suburbs. As such, while the municipal population had grown by roughly 20,000 per decade since the 1880s, in the 1920s alone it rose by 99,000 people. The river Jamuna to the east, New Delhi to the south, the suburbs to the west and the Civil Lines to the north hemmed in the old city, thus the expansion caused chronic congestion. This led to various unsuccessful municipal programmes to expand the city outside its walls (Chatterjee and Kenny 1999; Hosagrahar 2005).

By the mid-1930s the central government was under pressure to act from, local protest groups and newspapers, the Delhi Administration itself; and nationalist anti-colonial political groups. As such, a Special Officer was appointed to investigate the problem and recommend a solution. The following debate showed that both governmental and nongovernmental sources would use means of calculation, whether to calculate a solution or to critique the government, utilizing the decaying urban health of Delhi as a medium. The following three accounts represent responses to the problems that Delhi's congestion raised,

Table 1 A governmental analysis of perspectives on congestion in Delhi

	Hume (1936)	Prakash (1945)	Memorandum and Appendix (1936)
Episteme	Population	Social community	Society, economy, population
Visibility	Intensity map	Population statistics	Comparative statistics
Identity	Living space	The home	Citizenship
Techne	Delhi Improvement Trust	Master Plan	Re-housing
Problematization	Congestion	Congestion	Mortality, civil liberties
Ethos	Re-distribution	Fostering urban life	Health, efficiency, civic life

each with their own means of calculation and assumptions about the people who were to benefit from the proposed schemes.

Relief of congestion in Delhi: the Hume report

Having accepted the post of Special Officer in September 1935, A. P. Hume issued his *Report* on the Relief of Congestion in Delhi in June 1936 (also see Legg, forthcoming). The report began by tracing the history of population expansion in Delhi, noting how vacant Government (Nazul) lands had been mismanaged by the municipality, allowing slums to arise and health standards to fall. The epistemological assumptions about the nature of the problem were clear. There would be little investigation into the geography of the regional economy, examining where people worked and under what conditions. Nor would there be much attention on the medical aspects of prevalent diseases and their means of transmission. Rather, the object of identification was clearly taken to be that of population and the conditions in which the population were housed (Hume 1936: Vol. I, 16). As such, Hume's observations provide a clear example of a policy intervention into political society, rather than policies targeted at individuals or civil society.

In order to comprehend the problem, Hume initiated an ambitious project to map over-crowding throughout the city. While some reports of physical inspections were included, the unquestioned assumption was that statistical calculation would reveal the true nature of the problem. The task was to measure over-crowding, which involved assumptions about individual *identities*. The first step was to establish the norm against which standards would be compared. Hume and his team conducted an international investigation into

what level of living space humans were thought to require. In so doing, Hume conformed to the emergent western, modernist tradition of urban planning in which functional analysis of biological requirements gained precedence over cultural considerations of form or dwelling potential. Hume was to an extent constrained by the nature of his commission. The Government had dictated that population statistics be compiled in relation to local 'class' distinctions. The 1930s were a period in which the central Government had been increasingly accused of stoking religious tensions, so it steered clear of communal or caste categorization. As such, the report contained no consideration of the social and religious geography of the city, which was fundamental to its organization. Rather, the report dwelt on 'class' statistics, which Hume himself insisted were only approximate and did not take into account the subtleties of local social strata (Hume 1936: Vol. I, 15).

While insensitive to local social distinctions, the report did go beyond a universal biological standard to imply a colonial difference regarding individual needs between the colonial 'core' and 'periphery'. From the UK, Hume showed that the Housing Act of 1935 established 110 sq. feet as the minimum for two people, thus making 55 sq. feet the minimum for one (Hume 1936: Vol. II, 9). However, the Delhi Municipal Committee used 50 sq. feet, the Madras Housing Committee of 1935 had used 40 sq. feet while the Colombo Ordinance of 1915 recommended only 36 sq. feet. In selecting his 'measuring stick' Hume bore in mind the lack of air and sunlight in the walled city, deciding that 50 sq. feet would be the minimum space in these conditions that could be deemed healthy. This figure also slotted neatly above the majority of Indian examples, but below that of Europe.

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Having identified what overcrowding was, Hume had to devise a means of *visualizing* it. This vision focused on two factors: people in houses, and houses on land. While personal inspections of the city were carried out, it was an unquestioned truism that statistics and abstraction were the best means to unearth the proper extent of overcrowding in the city. This conveniently complied with a model of colonial government that was more willing to observe and regulate from a distance than become involved in the complex geographies of local existence. However, there was neither the time nor money to assess every house in the city for the living space of the occupants. As such, this living space quotient was transformed into a population per acre figure, although this attempted to retain a focus on 'people in houses'. The calculation thus aimed to combine abstract space and the cluttered and busy places of Old Delhi.

For a double-storeyed house, Hume assumed, without justification, that living space would constitute three-eighths of the total area of the house. If this three-eighths was 50 sq. feet, then the total size of the house would be 133.3 sq. feet $[(50/3) \times 8]$. Each such housing area would require lanes, roads and open spaces of 45 per cent of the total area. Thus, if 133.3 represented 55 per cent of the total area required per person, the full total would be approximately 242.4 sq. feet $[(133.3/55) \times 100]$. This converted into 180 people per acre $[(4840 \times 9)/242.4]$, with 50 sq. feet of living space. A similar calculation was made for three-storeyed houses, as follows:

- living space of 7/16 total area;
- area per person of 114.3 (50 \times 16/7);
- 45% for roads etc. [(114.3/55) × 100] = 208 sq. feet per person;
- per acre $[(4840 \times 9)/208] = 210$ people per acre.

Delhi was thought to exist of partly two- and partly three-storeyed houses, thus the two figures of 180 and 210 people per acre were averaged into a citywide norm of 200 people per acre, which would indicate people living in a space of 50 sq. feet. Therefore, while the census statistics were still analysed at a level of abstraction, the norm used was (in theory) one which took into account the local urban environment and housing traditions, not a universal value in Euclidean, empty space. This norm was then applied to the census statistics to assess the degree of over-crowding. The total excess population for the Delhi Municipality was estimated at 88,169 people, although this was revised to 100,000 to compensate for population increases since the census of 1931.

This statistical visualization of 'people in houses' was not just tabular, but also cartographic. The population intensity, not excess, was presented in diagrammatic form, mapping the city at the abstract level of city wards and census circles (see Figure 1). It was this visualization 'on a concrete basis' of the problem which previously, due its indefiniteness, 'has harassed the public and official mind for over a quarter of a century' (Hume 1936: Vol. I, 16). While showing that overcrowding was prevalent in most wards throughout the city, Hume defined the main task of any Improvement Trust to be to that of 'levelling out the intensity map' (Hume 1936: Vol. I, 27). This effectively meant moving people out of the walled city.

The *technological* means of achieving this feat, which Hume proposed, were taken up by the Government of India in 1937 with the formation of the Delhi Improvement Trust (DIT). The focus on calculation here does not permit a detailed examination of the working of the DIT or the reaction of the local population, but the framework was that of proposing Schemes that would be vetted by the

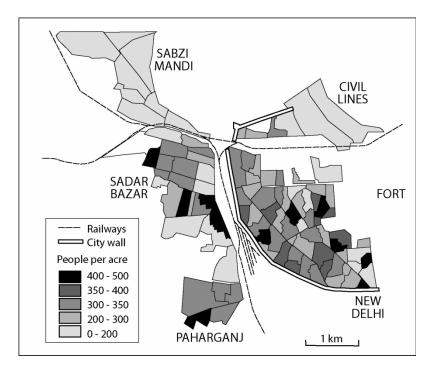


Figure 1 Reproduction of the 'intensity map'. Reproduced from the Report on the Relief of Congestion in Delhi (Hume, 1936).

Government of India (for comments on the architecture of the DIT, see Hosagrahar 2005: 156–180). Although some municipal byelaws were adopted, this was largely done without the aid of the Delhi Municipal Commission that, despite its local knowledge, came to be viewed as a non-expert, and thus unreliable, body. In its attempted works, the DIT exposed the population as entrenched, embodied and resistant human beings, rather than abstract calculable objects. People petitioned, protested and simply refused to move out of the city in which they and their families had grown up. The DIT was committed to levelling out the intensity map, dealing almost entirely with the biopolitical task of decongesting the city centre. This focus solely on the built environment was challenged not only on the ground, but also by two alternative visions that emerged in the same period.

The art and science of town improvement: Rai Sahib Om Prakash Aggarawala

The second vision of improvement emerged directly from experiences in Delhi, but did not relate directly to it. From the beginning of the Trust's functioning the Lands Officer, known as Om Prakash, was of vital importance in framing estimates and reports and pushing through the approved schemes. In 1945 he published a book entitled *Town Improvement Trusts in India*, spelling out many of his assumptions and concerns (Prakash 1945).

While Hume was obviously informed by a European-developed system of statistics and abstraction, Om Prakash's writings are astounding for their fully fledged liberalism and roundly governmental approach. The work is peppered with references to western

theories on urban modernity, from Catherine Bauer (1934) to Louis Mumford (1940), Thomas Sharp (1940), the *Encyclopaedia of the Social Sciences* (Seligman 1930–35) and Louis Wirth (1938). In terms of the latter, although he wrote on America, Om Prakash insisted these ideas were 'generally applicable' and that India should strive towards them. These views entailed certain identity assumptions and ways of seeing, but also more general assumptions about the nature of society.

Om Prakash firmly believed in the epistemological existence of both the individual and the 'community'. Beyond individual needs such as a healthy home, education and transport facilities, the 'collective citizens' also had particular needs. The health of one individual could not come at the cost of another, while the physical form of the city should not hinder the development of the community which, 'as well as an individual has an organic life of its own' (Prakash 1945: 45). Civilized life required beauty and order, as much as health and convenience, thus justifying town planning. This sense of the 'community' was not that of Hindu or Muslim, or of the walled mohalla communities in the city. This community was the civic and the social, one in which 'family life is the basis of existence' (Prakash 1945), yet the health and existence of the family and community were shown to need governmental security.

The government's role was not just one of intervening at places of intense overcrowding, or in cases of illness. The liberal art of governing, in Foucault's terms, entailed 'the right to make live and let die' (Foucault 1975/76 [2003]: 241), and in Om Prakash's terms, 'Health does not mean "not being ill". It means being glad to be alive. It means growing up to a state of maximum development'. England, he claimed, had long since realized the effect of slum conditions on 'the

vitality of the race'; the link between the biopolitical domains of 'bad dwelling conditions' and maternity cases, early deaths, pale faces, enlargened livers and low vitality was clear (Prakash 1945: 7). The extension of purpose, from relieving *congestion* to regulating the *population*, had clear effects on Om Prakash's policy recommendations.

Om Prakash also went beyond Hume in his emphasis on the nature of human-environment relations on individual *identity*. The concern with 'community' meant that the wider impacts of the landscape had to be considered. Mumford was quoted, stressing that the city is not just the symbol, but the form of social relationships: as such, 'Man is the creature the environment has made him'. While poverty and ignorance played their part, overcrowding and bad sanitation were said to cause diseases. Yet there were also thought to be social effects of poor dwelling conditions. Housing had to provide a pleasant 'mental life', contributing eventually to 'civic life' (Prakash 1945: 9). Many Indian houses let down not only a healthy body, in terms of light, space and air, but also a healthy mind, in terms of comradeship, security and recreation.

Thus while overcrowding was associated with various diseases, from tuberculosis to scabies, smallpox and measles, it also had a bad 'social effect'. When people of the same sex shared a room the lack of privacy dragged 'everyone down to the same level of squalor', degrading children and adolescents (Prakash 1945: 17). Slums acted on the health and habits of the people and encouraged a lassitude of mind that reacted upon the body, which hit people's 'resisting power', and thus encouraged immorality, intemperance, gambling and other rampant vices. As such, the need for intervention in slums was not just biopolitical, in terms of health, but governmental, in terms of conduct and moral self-regulation.

Om Prakash's means of visualizing the population was almost identical to Hume's, having performed much of that analysis himself. However, the technology and plans he envisaged differed from Hume's simple facilitation of levelling the intensity map. Om Prakash claimed, quoting directly from the Encyclopaedia of the Social Sciences (Adams 1932: 486), that 'As a science city planning purports to discover the truth about the city in respect to its economic, social and physical conditions. As an art city planning seeks to obtain an economically and socially wholesome arrangement of the ways of communication of land uses and of buildings and other structures' (Prakash 1945: 43). Thus the aims of planning, its underwriting ethos, were the physical development of urban communities, the health, safe living and working conditions of the people, and general welfare. Each town, therefore, needed a 'MASTER PLAN' to be followed by 'EVERY BUILDING' (Prakash 1945: 23, original emphases). In making wider claims, both of investigation and planning, Om Prakash was extending the privileges and duties of liberal society into the Indian context, while colonial government had previously shown a reluctance to invest in wide-scale social development. However, Om Prakash only considered the social as a realm in which the effects of population mismanagement were felt. Causes in the social or economic realm were not sufficiently addressed. These issues were considered in more depth in the memorandum to Hume of 1936.

Self-government and sanitary statistics: the 1936 memorandum

On 20 June 1936 a memorandum was submitted to A. P. Hume. Although this was eight days after Hume submitted his report to the Chief Commissioner, the report itself was not made public until March 1937.² The memorandum came from the residents of Katra Kushal Rai, an urban community near Chandni Chowk in the heart of Old Delhi.³ The participants were part of Delhi's intelligentsia, the previous location of St Stephen's High School and College, one of the most prestigious bases of western education in Delhi. The memorandum was addressed personally to Hume and sought to advise him in his investigations into how to make the city safe for 'HEALTH, EFFICIENCY AND CITIZENSHIP.' This immediately marks out their separate approaches, for while Hume was investigating congestion and political society, the memorandum addressed the wider issues of health and civil society. Like Om Prakash's report, this was concerned with biopolitics and with self-conduct, but its emphasis on citizenship pointed to a more political emphasis on individual rights and economic pragmatism (also see Hazareesingh 2000).

In terms of its *epistemological* approach, the memorandum admitted that the chief problem was that of over-crowding and congestion. However, it also understood that there were causes beyond the surface distribution of population that could help to explain, rather than describe, the problem. It claimed that attempts made by the Municipal Corporation to develop land in the north-west had failed because development schemes could not be run as profit-making enterprises, especially in terms of the urban poor. Rather, their aim should be to protect the de-housed. Secondly, speculation had to be halted by preventing large landowners buying up land where it was obvious development was going to take place. The laissez-faire policy adopted was not claimed to be actually helping those who needed aid, thus articulating the tension between an interventionist biopolitical rationality and a non-regulationist economic policy. The memorandum not only located the problem in the realm of the economic, but also of the social, criticizing the lack of attempts to raise civic pride, a fact that was linked directly to local government, as shall be seen.

In *visualizing* the problem the memorandum appropriated and deployed the government's own polyvalent statistics. From the censuses they showed that, as Hume also pointed out in his report, up until 1911 Delhi's population had been increasing by roughly 18,000 a year. Yet 1911-21 saw a 22,000 increase, followed by 99,000 between 1921 and 1931, with an accompanying rise in the tuberculosis death rate from 282 per year in 1920 to 876 in 1934. This information came from the government's own Health Reports, whose criticisms were seized upon and repeated against the government. Death and infant mortality rates per 1,000 were reproduced in tabular form. As Figure 2 shows, from 1920, there was little improvement in the mortality rates.⁴

The Health Report of 1934 said that child and infant mortality was still too high. Tax revenues were climbing but sanitary spending stayed low. While taxation in the period 1911–34 increased by Rs. 887,897 and the population increased by over 100,000, expenditure on sanitation rose by only Rs. 73,630. The problem had thus to be visualized not just as one of population density, but also as one of under-investment.

The memorandum also insisted on visualizing Delhi as a space with regional insanitation that could not be understood solely as congestion, thus stepping outside the language of abstraction. It was stressed that certain areas should be cleared, especially those containing heavy industry, large ovens, cows and buffaloes. While Hume had emphasized the unsanitary nature of the urban form, this had been presented as due to congestion of

houses on land and lack of infrastructure, not to the actual use of the land.

In terms of individual needs and requirements, the report began on similar lines to Hume. It was recommended that, like the British Housing Act, a minimum living space be adopted and enforced by a municipal byelaw. However, the comparison with the UK was taken even further. It was claimed that 100,000 replacement houses had been provided by the British Government, and that the Government of India should establish cooperative societies such that the poor could come to own their houses. This would increase not only health, but also 'add to their selfrespect and enhance their civic senses'. Here we see the abstract calculations regarding living space being tempered by the need to see individuals as people, with legitimate needs and wants. As such, the memorandum demanded action not just in political society, but in civil society as well.

It was this principle that underwrote the *technological* means that were advocated. Any re-housing programme would have to be large scale and completed before slum clearance could begin. Action would need to be taken to stop existing houses being subdivided. Public Work Department contractors, rail authorities and industries had to be directed to provide their workers with housing. The Municipality needed to improve urban infrastructure. All of this would require significant investment.

The memorandum's biggest statement, integrating all of the above views into a contestational *ethos*, came in a supplementary memorandum on 'Sanitation and Municipal Education'. This dealt with the following question: 'Is the removal of congestion an end in itself, OR, is it a means towards better and healthier life, better sanitation, better sense of civic liberties and responsibilities?' While the

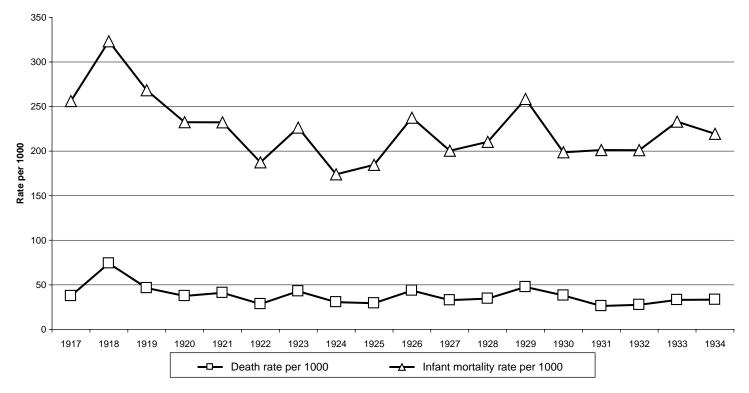


Figure 2 Death and infant mortality rates per 1,000 in Delhi 1917–34.

obvious reason for removing congestion was the high mortality, was this entirely down to congestion itself? The memorandum again referred to developments in the UK, quoting an article from *The Times* of 10 December 1935 which claimed that over the last 100 years there had been incredible improvements in '(t)he Health, Comfort, Cleanliness, Intelligence, Sobriety and Self-Respect of the people'. This purposefully forged a link between healthy citizens and good citizens, asserting that constant attention to the community had defeated apathy and improved civic pride.

Following the Municipality's dismal record, there was a need not only to remove congestion but also to make Delhi safe for 'Health, Efficiency and Civic Life'. This connection between the biological, the economic and the social took the enquiry beyond Hume's demographics and into the political economy and sociology of the city. The method of tax collection was condemned as inefficient and patchy. Municipal corruption was criticized. Municipal committees were stressed as 'training grounds for self government' which should arouse interest in elections, develop local community and educate the citizenry, yet this was absent in Delhi. To back up these claims, references were made to G. D. H. and Margaret Cole (1934), to Robert MacIver (1926) and to Harold Laski (1925).5 These issues were tied back together by stressing that adherence to municipal byelaws would prevent overcrowding, but that byelaws could only be enforced if power was devolved. Rather than a biopolitical problem, congestion was a question of responsible self-conduct that, it was claimed, would only come with reorganized self-government. Beyond this, it was clear that effective biopolitical regulation of the environment would negate the *laissez-faire* lack of economic regulation and demand huge investment.

Conclusions

In 1954, after seven years of national independence, the Delhi Improvement Trust Enquiry Committee convened to decide why the Trust had failed so completely in tackling the question of congestion in Delhi (Legg 2006).6 Even before the war-economy had crippled its finances in 1944, its achievements had been minimal. There are various reasons for this, the first of which illustrates the tensions between different domains of governmental rationality. Hume's vision of the city encouraged a policy that would remove and rehouse the congested population, a programme that would be very expensive. However, the Trust proved to be, in Prakash's terms, an under-funded and over-extended laboratory of urban modernity. The Government of India refused to fund further re-housing schemes on realizing that they would have to be subsidised. To Hume's consternation, it became clear as early as January 1940 that the question of rehousing the poor had defeated him. Unable to clear slums without places to re-house the population, many of the major schemes stalled.

However, was it the case that with adequate funding Hume's scheme would have worked? There are several reasons to think not. Despite attempts to embed his abstractions in the urban framework of Delhi, Hume embodied the colonial tradition of preferring to envision and calculate from a distance. As such, Hume deployed a level of functional equivalence across his subjects that was incompatible with the city's social geography. Rather than conceiving of the people as self-governing and acculturated individuals, they had been abstractly conceived of as resources or objects. Hume underestimated the local attachment to territory, caste and community that would prevent people from taking up the little housing that was actually provided. In his Municipal Secretarial note of March 1927, Commisioner Sohan Lal had commented on the tendency of castes and sub-castes to crowd in certain areas, creating pockets of Ahirs and Gujars (traditional farmers often associated with milk selling), Chamars (a depressed caste associated with leather production), jewellers or Punjabi Muslims.⁸ Similarly, Muhammad Asaf Ali, long-term campaigner for urban reform, warned the Chief Commissioner in April 1938 that people living in their ancestral homes would refuse to move.9 However, the government ignored these subtle and ingrained distinctions. They were later taken up, as a discourse of rights, in the appeals process that further crippled the DIT's proposals. While these later forms of activism added a level of self-conscious resistance to the Trust's woes, its former experiences had confronted it with the realization that the population was a living, feeling group of human beings, not a mobile and abstract agglomeration of objects. It was this stubborn everydayness of existence that ultimately proved to be the most effective critique of the biopolitical colonial governmentality.

The two alternative reports refer to dimensions of a liberal society that were foreclosed in the colonial hybrid. Both made claims using the rights of the liberal, self-governing subject; claims for education and responsibility. These contained elements of the biopolitical, but went beyond it. The people had not only to be thought of as resources to be processed or objects whose disposition was to be arranged in political society, they were subjects whose conduct had to be conducted, in line with the processes of civil society which they were rational enough to support. While Om Prakash only went so far as commenting on the planning and educative functions of the state, the memorandum went further. Firstly, it appropriated the statistical calculations of the state and turned them back upon it. Secondly,

however, it extended its claims from visualizing the problem into the governmental techne.

The analytical categories deployed here allow comparisons between Hume, Om Prakash and the memorandum to be drawn out. Moving over the three, there was an expanded epistemological concern, from population to society and economy. Visualization moved from an uncritical empiricism to critical, comparative statistics. Identity was thought of in terms of rights, not just living space. The problem had to be conceived beyond simple congestion, taking in mortality and liberty. The under-writing ethos went beyond Hume's flattening of the intensity map to a care for health, efficiency and civic life. Finally, the required techne had to take in not just improvement, but also re-housing and local control of the municipality. As Gyan Prakash's work has suggested, the Municipality of Delhi, its byelaws and infrastructure, had made modern Delhi and, thus, to make claims on the control of one, was to claim the other. Controlling congestion was a means of producing the population and forming the citizenry, a task at which the colonial government had been proven, by its own calculations, to have failed.

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Notes

- 1 Census data, quoted in Hume (1936).
- 2 Delhi State Archives, Delhi (henceforth DSA) Confidential Files, Education 1937 12B.
- 3 Memorandum and Appendix Submitted to Mr A.P. Hume, 20 June 1936, Delhi Public Library.
- 4 Information from the Memorandum and Appendix. The peak was caused by the influenza ('Spanish Flu') epidemic of 1918–19, which killed 23,176 people in Delhi Province. The continued peak in 1919–20 was due to an outbreak of enteric fever and malaria in the Delhi Municipality Committee (Report on the Administration of Delhi Province for the Year 1918–19 and 1919–20, Superintendent of Government Printing, India, Delhi, 1919 and 1920).
- 5 Laski argued that power was 'federative' and relied upon the co-operation of those whom it targeted, claiming that social rules construct, rather than restrict, individual freedom. The Coles actively criticized the Government of India for restricting development of the Indian nation and stressed, like Laski, that active co-operation was the keystone to successful government.
- 6 Report of the Delhi Improvement Trust Enquiry Committee (Government of India Press, New Delhi, 1951).
- 7 DSA Chief Commissioner's files (henceforth CC) Local Self Government 1940 1(40).
- 8 DSA CC Home 1930 29B.
- 9 DSA CC Local Self Government 1938 499.

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Abstract translations

La gouvernementalité, la congestion et le calcul à Delhi au temps de la colonisation

L'objectif du présent article est d'explorer une façon inédite de traiter de la «différence» entre les gouvernements européens et coloniaux, montrant ainsi comment l'état colonial hindou investissait davantage dans la société politique que la société civile. La première avait pour cible la population

et des politiques susceptibles de produire des effets que l'on pouvait élaborer à distance et à faible coût. La seconde avait pour cible le domaine social et impliquait forcément l'acceptation de droits et privilèges de la citoyenneté libérale. La société politique privilégiait les activités telles que les manières particulières de visualiser une population, les hypothèses épistémologiques sur ce qui pouvait être appréhendé, les hypothèses sur l'identité et comment les sujets devaient être envisagés, et l'ethos qui protégeait l'état contre le fardeau des dépenses exorbitantes. Ceci est illustré concrètement par une analyse des discussions portant sur les problèmes de congestion à Delhi au temps de la colonisation. Trois textes qui se sont intéressés à ces discussions sur la congestion font l'objet d'un examen détaillé: un rapport officiel du gouvernement; un document d'un membre du Delhi Improvement Trust; et un mémorandum soumis au gouvernement. Ces textes mettent en évidence la gamme étendue d'opinions sur les méthodes qui s'offraient pour résoudre les problèmes de congestion et sur les calculs relatifs aux sujets locaux que ces solutions laissaient sous-entendre.

Mots-clefs: Foucault, governementalité, colonialisme, Delhi, biopolitiques, calcul.

Gubernamentalidad, congestión y cálculo en el Delhi colonial Este papel trata de explorar un modo distinto de examinar la 'diferencia' entre gobiernos europeos y coloniales, mostrando como el Estado colonial de la India privilegiaba inversiones en la sociedad política en vez de la civil. La primera se dirigía a la población y trataba de lograr efectos mediante políticas que se podría coordinar a distancia con pocos gastos. La segunda se dirigía al terreno social y necesariamente reconocía los derechos y privilegios de la ciudadanía liberal. Actividades en la sociedad política privilegiaban ciertas maneras de visualizar una población, suposiciones epistemológicas sobre lo que era posible saber, suposiciones sobre identidad y cómo deberían ser concebidos los sujetos y valores y actitudes que protegían el estado de gastos fuertes. Esto es ilustrado por medio de una exploración del debate sobre congestión en el Delhi colonial. Analizo de modo exhaustivo tres textos que se dirigen al debate sobre congestión: un informe oficial de gobierno, una publicación escrita por un miembro de la 'Delhi Improvement Trust' (Fundación para el Mejoramiento de Delhi) y un memorando presentado al gobierno. Estos textos demuestran la extensión de opiniones sobre modos de resolver el problema de la congestión y los cálculos sobre sujetos locales que estas soluciones suponían.

Palabras claves: Foucault, gubernamentalidad, colonialismo, Delhi, biopolítica, cálculo.