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Calculating without numbers: Aesthetic governmentality in Delhi's slums

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Abstract:

This paper looks at the manner in which knowledge of slums in Delhi has been collected, assembled and circulated in two different moments of urban improvement to explore the relationship between calculation and governmentality. Based on an extended study of slum enumeration and the politics of slum demolitions in Delhi, I show that each of these two moments relied on an epistemologically different set of calculative practices—one statistical, the other aesthetic—to render the slum intelligible and secure rule. I specifically show how the statistically rigorous calculative practices of the first moment encountered various technical difficulties and political challenges in producing a governing intelligibility, thus leading to the unruliness of slum space. In response, a new set of governmental techniques operating through the dissemination of aesthetic norms and codes re-secured rule over slums. I describe this shift in governmental technique to demonstrate that the dissemination of aesthetic norms can be both more governmentally effective and practically implementable than the statistical deployment of governmental truths. This suggests the need to expand our understanding of the epistemology of government to include attention to a more diverse array of governmental technologies, some more aesthetic than strictly calculative.

Keywords: governmentality, India, counter-conduct, calculation, law, visuality

I. Introduction

Urban government in Delhi today is marked by a conspicuous absence of accurate and up to date statistics and maps. Yet, governmental programs there, even without these standard instruments of 'rational' planning, effectively 'conduct the conduct' of the population (see Foucault, 2007). How? In this paper, I will explore the relationship between governmentality and calculation through an analysis of the politics of calculating, seeing and rendering knowable Delhi's slums through various governmental programs over the past twenty years. Such programs, as I will show, provide a useful lens for rethinking many of the epistemological assumptions and limitations that underlie current thinking about the practice of government. Specifically, I will show how governmentality can operate as effectively through aesthetic norms as it does through those 'scientifically rational' and statistical processes of knowledge assembly widely discussed in the literature. Attention to these aesthetic modes of governing is particularly relevant for the study of postcolonial contexts, where even if rigorous statistical knowledge exists, it is often missing, forged, or unused (see Hull, 2008; Roy, 2004).

Government, 'understood in the broad sense of techniques and procedures for directing human behavior,' (Foucault, 1997: 82) functions by constructing and making intelligible categories of knowledge that were previously unintelligible and authorizing those categories through expert 'truths.' By investing these intelligible categories (e.g. the rate of economic growth, the occurrence of a disease) with significance and problematizing them such that they appear to require improvement via technical intervention, governmental programs recruit the diverse desires of individuals into a shared normative framework. Such programs are effective to the extent that they produce governable subjects—individuals who evaluate and act upon the social world through lenses provided by government. An essential component of guiding the interests of target population groups is thus the joint exercise of crafting intelligible fields for governmental intervention and problematizing such fields so as to make certain 'deficiencies' emerge as improvable.[i]

The starting point for this paper is to examine the calculative practices, or the techne, through

which governmental programs construct intelligible fields for intervention. This follows from one of Foucault's strongest methodological recommendations that power be studied through an ascending analysis, which requires attention to 'the actual instruments that form and accumulate knowledge, the observational methods, the recording techniques, the investigative research procedures, the verification mechanisms. That is, the delicate mechanisms of power cannot function unless knowledge, or rather knowledge apparatuses, are formed, organized, and put into circulation' (Foucault, 2001: 33-4). This focus on the micro-practices of knowledge formation, or calculative practices, demands attention to the diverse forms in which knowledge is consolidated and used to craft grids of intelligibility: how governmental programs use carefully selected metrics to assess and assign value and meaning to their targets. This means the calculative practices at play in any moment not only establish the technical requirements of government, but also form a *calculative foundation of rule*—the epistemological basis on which information is gathered, knowledge assembled, and 'truths' verified so as to guide and manage a population's interests. Different calculative practices thus give rise to different calculative foundations, or epistemologies, of government; this is the relationship I explore herein.

In the following pages, I look at the manner in which knowledge of slums in Delhi has been collected, assembled and circulated in two different moments of urban improvement. Specifically, I show that each of these two moments relied on an epistemologically different set of calculative practices to render the slum intelligible and secure rule: the first statistical and the second aesthetic. I begin in Section II by defining the primary calculative practice used to render the slum intelligible in the post-Independence period: the slum survey. In addition to its function as a technique of sovereign power used to know and control the territory, the slum survey since 1990 (the beginning of the first moment of urban improvement) took on the new governmental role of recruiting slum dwellers' desires into alignment with the vision of a 'modern,' orderly city. That is, the slum survey became what Foucault calls a 'security apparatus': a governmental technology used to improve the population's welfare and minimize 'what is risky and inconvenient' (Foucault, 2007: 19), in this case by using numerical representations of

the slum to guide slum dwellers through programs of self-improvement. The slum survey in this first moment thus follows the 'rule of evidence' and has the 'scientificity' Foucault (2007: 350-1) described in his lectures on governmentality, and resembles the statistical procedures for 'turning the objects of government into numericized inscriptions' (Rose, 1991: 676) widely discussed in the governmentality literature.

In Section III, I examine how the calculative foundation of this first moment lost its functional efficiency, became ill-suited to secure the desired ends of government, and thus provoked a political response by opening a space for counter-conduct, an example of which I consider in Section IV. Specifically, a community group used a counter-survey exercise to challenge the truthfulness of the slum survey and forced a reconfiguration of how slum space is calculated and rendered intelligible.

In order to re-secure the conditions for rule and overcome such counter-conduct, a new calculative foundation emerged around 2000—the beginning of the second moment—that introduced a new regime of knowing in Delhi. Here, the visuality of urban space—which includes the territory as well as its population and built environment—would become the key metric of that space's legal and moral standing, which I describe in Section V. The slum survey continues to operate as the key governmental technology in this moment, only its mode of gathering and conveying information has radically shifted. No longer implemented to accurately assess slum space, the survey becomes more of an aesthetic and narrative technique to train slum dwellers to see different types of urban space as either desirable or deplorable based on their outward appearance. This 'aesthetic governmentality' marks a shift in the calculative basis of rule away from scientific survey practices and toward an aesthetic normativity, which I detail in Section VI.

My goal in describing how the calculative practices of government shifted between these two moments is threefold: first, to demonstrate how the calculative foundation of government can change *within* an overall rationality of rule (e.g. urban improvement or slum removal); second, to argue that the calculative practices of government provide a particularly supple site, prone to what Foucault (2007) calls

counter-conduct and thus larger reconfigurations of rule; and third, to gesture to a type of aesthetic governmentality that has not been explicitly theorized in the governmentality literature. I return to the implications of these claims, especially as they relate to postcolonial governmentality, in a concluding discussion in Section VII.

II. Calculating slums—the slum survey

In 1950, the Government of India appointed a committee to address Delhi's pressing social and demographic strains (Legg, 2006b), which had been exacerbated by the doubling of the city's population due to the flood of families arriving from Pakistan after Partition in 1947 (Pandey, 2001: 122). One of the committee's main findings, which set the conditions in which the Delhi Development Authority (DDA), Delhi's main land management body, would take shape seven years later, was the need to increase the quantum of 'scientific knowledge' and calculative accuracy in building and regulating the city, especially its dilapidated, overly congested, and unhygienic slum spaces (Sharan, 2006: 4906). This goal of forming a scientifically rational and 'accurate' description of the territory and population defined the calculative foundation of the government of slums for the first fifty years of independence. The primary calculative practice that backed this overall form of government was the slum survey.

In common parlance, slums are areas with sub-standard housing whose residents do not formally own or lease the land on which they reside.[ii] This land can be private or, more often, public. Because the DDA is by far the largest land-owning agency in Delhi, the majority of slums (700 out of 1080 as of 2002)[iii] are located on land that it manages. Whereas the Public Premises Act, 1971 defines the procedures for the removal of unauthorized occupants of public land, the actual basis on which slums are surveyed and assessed is located in the guidelines of the DDA and other land-owning agencies. Within the DDA, the Land Department is assigned the task of preventing encroachments and securing exclusive control over land that the DDA has taken into its possession for urban development. The

origin of surveying slums thus lies in the territorial exercise of sovereign power.[iv]

The procedures for monitoring public land and encroachments thereupon are primarily the responsibility of the DDA's and State Revenue Department's field staff. The first step in this process is the identification of encroachments. After a field staff, during regular field visits, finds that a particular portion of DDA land is unauthorizedly occupied, he is to (a) report such an occupation to the revenue collection officer charged with overseeing the given plot in the Revenue Department and (b) 'keep a record of all such reports in the form of a register' (DDA, 1987: 1). This register includes the nature of the encroachment, the existing use of the land, the Revenue Department cadastral number, the extent of the encroachment on the mentioned plot(s), the name of the encroacher, the number of occupants of the land, and the approximate date of encroachment, among other details of the land. The revenue collectors then maintain estate-wise registers by recording the same information into a chart tabulated according to the cadastral map and also make further independent, local enquiries to determine the status of the reported encroachments (ibid.: 1). If the information passed to the revenue collector by the DDA field staff is confirmed, he forwards the information in a written report to the Estate Officer located above him in the Revenue Department. Before reaching the Estate Officer, who initiates proceedings against the encroacher, at least two independent field visits by two different officers from two different government departments are conducted to physically assess the nature of the encroachment.

By this point, however, the encroachment will only have been identified and registered. Before any particular encroachment case is disposed of, the Estate Officer must send a monthly report to a more senior officer to approve the reporting of the land use scenario in his area. During this process, if 'an Estate Officer is satisfied that a large number of squatters at a particular site remain unsurveyed, due to one reason or another, he may propose a special survey' to this senior officer in which multiple encroachments are assessed together (ibid.: 3). This would be the third comprehensive survey of the land and encroaching population. Concurrently, the field staff is to issue a 'show cause notice', along with a certified extract of the encroachment file and the Estate Officer's order, to the encroacher by returning

to the physical site and affixing the notice on the encroaching structure. During these steps, the Guidelines state that 'Every care should be taken to see that the calculations are correct and the notices have been filled correctly and completely', which could require further field visits (ibid.: 4).

Through a minimum of three site visits, with the likelihood of more visits to confirm the details of the land assessment across departments, the Estate Officer assembles a detailed (and 'accurate') 'assessment register' that consists of an up-to-date index of all encroachments and the status of the proceedings against them. All of this sets up the calculative requirements and expectations of the sovereign's knowledge of, and control and regulation over, public land and encroachments thereupon. This system of land oversight—which has the 'scientificity' Foucault (2007: 351) discusses in his treatment of statistics and, following Porter (1995), might be described as 'mechanically objective'[v]—has been in place, roughly in this form, since the DDA was established in 1957.

However, for much of this period, compiling such an accurate account of land occupation was difficult because slum residents viewed the slum survey as something to be avoided. As a technology of sovereign power, which functions by 'laying down a law and fixing a punishment for the person who breaks it' (Foucault, 2007, 5), the slum survey operated by defining a legal norm and penalizing all those who did not comply with it. Slum residents outside this norm, therefore, had no incentive to participate in the survey (and thus enter the ambit of the law) and did all they could to avoid, divert, or postpone its implementation. According to surveyors[vi], some of their sabotage tactics included: removing public notices (which the surveyors are legally required to display before initiating the survey process) and then refusing to be surveyed on the basis of the absence of a written notice, disappearing on survey days, and bribing clerks and low-level field staff to void their names and locations from the survey register. Slum dwellers' ability to continue land occupancy was contingent upon *exclusion* from government records—i.e. they had an informal, 'paralegal' tenure status operating outside the privileged domain of 'civil society' (Chatterjee, 2004)—which undercut the state's ability to collect accurate statistical summaries of the territory.

Therefore, despite the regulatory requirement to maintain comprehensive knowledge over all public land and prevent permanent encroachments, more than 900 slum clusters were settled in Delhi by 1990.[vii] The task of regulating such massive and complex informal settlements exclusively through penalties and laws proved too great for the administrative and political apparatuses of the time. Just as Foucault found in the shift from sovereign to governmental power that 'too many things were escaping the old mechanism of the power of sovereignty,' causing an 'adjustment' toward the disciplinary and security mechanisms (Foucault, 2001, 249), so too in Delhi did the juridical mechanism face limitations that required the rise of new technologies of power. Thus, in 1990 the government transformed how it would implement the slum survey. No longer simply for the maintenance of control of land (sovereign power), it would be put to a different use: to render a picture of slums that could be diagnosed and improved upon. That is, knowledge of slums would no longer be used exclusively to form a centralized database of state land, but also put into circulation in an attempt to positively conduct the conduct of the slum population by creating new incentives and presenting clear depictions of how this population could be aligned ('regularized' or 'normalized' in Foucault's words) with the rest of the property-owning society. It did so by directing calculations of the territory toward the constitution of a different type of slum subject: the slum dweller not just as an 'illegal,' but also a citizen eligible for relocation and (self-)improvement.

This change in the character of the slum survey took place largely through the efforts of the government of V.P. Singh, India's then new Prime Minister who in 1989 began implementing a range of aggressive social justice programs (Jaffrelot, 2003: Ch. 10). Taking note of the burgeoning slum population in Delhi and the failure of previous slum programs to abate slum growth, Singh initiated the city's first comprehensive slum survey to register and (partially) legalize all slum dwellers (Mustafa, 1995). Making use of existing survey techniques and field staff, this four-month-long exercise enumerated every slum household in Delhi and issued what came to be known as V.P. Singh tokens. The purpose of the V.P. Singh token was to provide slum dwellers with formal proof of residence, but the incentive for slum

dwellers to partake in the survey and actively self-identify as 'encroachers' was tied to the introduction of a new governmental object: resettlement.

The V.P. Singh token gave token-holding slum dwellers a permanent right to live in the city, defining all registered slum families as Delhi residents and formalizing their right to resettlement in case their slum was removed. At the time of a slum demolition, therefore, any slum family that could prove it had resided in Delhi since before 1990—most easily by showing a V.P. Singh token—was entitled to a government-issued resettlement plot. To slum dwellers, however, resettlement meant much more than the right to the city. Resettlement was also seen as a means to escape the stigmatized space of the slum and was thus viewed as a pathway to improvement.

A complex mix of government rhetoric, popular history, and personal desire informed slum dwellers' conceptualization of resettlement through most of the 1990s. Early, targeted slum resettlement actions carried out during Indira Gandhi's rule as Prime Minister in the 1970s and early 1980s came to be viewed by slum dwellers as a best-case scenario. In these limited resettlement drives, slum dwellers were usually relocated within a five kilometre radius of their previous settlements and given well-serviced and relatively large plots, free of cost, on a permanent leasehold basis. Such resettlement sites have since been developed and integrated into the surrounding residential areas, bearing little to no visual distinction with the neighbouring, middle class residential colonies.[viii] Due to financial and space constraints, the terms of resettlement were far less favourable by the early 1990s, and less than a third of displaced slum families were receiving resettlement plots by the late 1990s.[ix] Yet, the DDA and Municipal Corporation of Delhi (MCD) still actively perpetuated (and continue to perpetuate) the perception of resettlement as a positive process through media campaigns and the slum survey, as we shall see.

Since the introduction of resettlement rights in 1990, the slum survey is initiated only after the DDA determines that a piece of encroached land is needed for a public purpose, at which time it issues a notice to the residents of the specified land alerting them that a survey exercise will be carried out on a forthcoming date.[x] On that date, a survey team consisting of at least ten field staff descends upon the

settlement and sets up camp in a clear, central area. Once the residents have assembled, the chief officer displays a map, tells residents what the intended use of the land shown on the map is, and states that this use has been hindered by the presence of the slum. Be it a school, public park, or road, the map shows the slum as 'out of place.' He thus begins by depicting the slum as an illegal encroachment, clearly violating the official land use laid down according to planning procedures. In addition to highlighting the technical deficiency of the slum population—its infraction of the land use plan and its residents' lack of property ownership—the officers describe a possible means by which residents can escape the label 'illegal': by following the procedures of the survey, government will improve eligible slum dwellers by resettling them to serviced plots, thus removing their deficiencies and furnishing the conditions necessary for 'normal' urban life. Only by following the enumerative steps of the survey, residents are told, will resettlement be provided.

The officer follows by describing the procedures by which resettlement eligibility will be assessed. Residents have to collect all forms of their residence proof (e.g. ration cards, identity cards, voter cards, V.P Singh tokens) and have them ready when the officers reach their houses. Next, they have to remain present at their homes so that their family can be registered, display their pre-1990 residence proof, demonstrate a legitimate (non-commercial) use of the land, and have their house inscribed with a survey number and recorded on a chart. Finally, they have to wait in line after the entire settlement has been enumerated and have their residence proof scrutinized by the chief officer, who adds the family to a list of those either 'eligible' or 'ineligible' for resettlement. In slums whose demolition is imminent, residents who are added to the former list (and thus deemed 'improvable') have to sign a piece of paper agreeing to the terms of resettlement, which include paying a sum of money and abiding by certain land use and site development norms. These calculated steps aim to 'render technical' (Li, 2007; Rose, 1999) the complex 'slum problem' by depicting slum 'improvement'/resettlement as a procedural, not political, exercise. Bracketing off the question of whether the slum should be removed or not, the survey concentrates attention on resettlement eligibility, the success or failure of which is placed upon the

internal dynamics, desires and practices of the slum population itself.

During the course of the survey process, the survey team compiles preliminary summaries of households according to three categories: eligibile, ineligibile, and ambiguous. Residents become aware of these overall numbers as well as their own classification status. Households marked 'ineligible' or 'ambiguous' thereafter attempt to provide further proof or bargain otherwise to enter the 'eligible' category. Community leaders are often called into this negotiation process, out of which some reconfiguration of the final numbers emerges. Because resettlement is something many residents desire— either over and above continued habitation in their slum or in recognition that they are better off being resettled than risking protest against the demolition—slum residents see the act of being enumerated and registered as a positive technology, something to be promoted and worth struggling to attain, unlike the pre-1990 survey, which slum residents ardently avoided. The first effect of the post-1990 survey, then, is to draw slum residents into the practice of government by soliciting interest in the survey process: the introduction of the right to resettlement achieves this. Second, it fosters the slum population's desire for resettlement—that is, the desire to be deemed permanent and legal by the state and public—by (a) identifying a deficiency within the slum (its violation of law, its lack of recognition by the state and general public), and (b) depicting resettlement as an attainable and desirable means to remove that deficiency. In doing so, the survey also encourages slum residents to identify as eligible resettlees, 'encroachers,' or other terms provided by government. Third, by bifurcating the slum population into 'eligible' and 'ineligible' categories and providing a statistical distribution of the slum's makeup according to these categories, the survey divides the interests of the slum population. In the majority of instances, residents 'eligible' for resettlement do not resist displacement, instead viewing it as an inevitable step in the city's and their own personal development: why oppose the demolition when they are the lucky few granted resettlement? This reduces the number of residents likely to directly oppose slum clearance.

The sovereign exercise of enumerating the territory and its population, described above, thus changed roles as it became wrapped up with resettlement. Whereas before, slum surveys were supposed

to take place whenever there was a land encroachment (to enforce a juridical norm), in 1990 the DDA began to try to work through the interests of slum dwellers to achieve a delicate balance between forced displacement and voluntary resettlement. Illegality thus became something not to be prohibited, but managed. However, while the new uses of the slum survey in this first moment of urban improvement were programmatically aimed at more effectively guiding the slum population toward voluntary dislocation, the survey's authority rested upon its ability to both (a) accurately assess slum residents' history and location, and (b) convince residents that its metrics for evaluating slum space were the most relevant and 'truthful.' By 2000, both of these requirements proved beyond the technical means of government.

III. Statistics' loss of authority: unruliness in Delhi in the early 2000s

The slum survey has governmental authority and effect, ostensibly, on the basis of an accurate knowledge of slum space. Like other instruments of scientific planning, it is expected to collate complex ground realities into simplified trends and patterns from which deficiencies and programs of improvement can be identified. However, securing this 'level of functional efficiency' (Legg, 2007) requires adhering to specific norms of accuracy and process. As Legg says, summarizing Hannah's (2000) discussion of the functional requirements of statistics and mapping:

> A sufficient infrastructure had to exist to enable the 'abstraction' by which the complex world became accessible. Second, this world had to be subject to an efficient process of 'assortment' such that it was known through rigorous and reliable categories. Third, the information had to be 'centralized' and analysed by an active and efficient state (2007, 154).

However, practically, these technical requirements became increasingly difficult for the state to fulfil in the 1980s and 1990s. Compare the above prerequisites for functional efficiency with the actual condition of information in the DDA:

> The information system in the DDA is characterised by a 'data explosion' at the lower levels and 'information starvation' at the higher levels of management. There is little consolidation or analysis being carried out at any level of the DDA. Even senior officers receive information in the form of raw data. In the absence of the data being processed and presented as information, officials are unable to use it as a decision-making tool, thereby defeating the very purpose for which the data was gathered.[xi]

This shows that there is a certain administrative burden of statistical simplification, which the DDA had been struggling to surmount. Thus, despite a series of 'objective' survey practices to monitor urban space—a type of calculation clearly 'scientific in its procedures,' which Foucault (2007: 350) considered 'absolutely indispensable for good government'—the DDA had great difficulty assembling information into a coherent calculability. More than this secondary step of translating data into a usable form though, the DDA's ability to collect accurate ground data in the first place was questionable. In 1986, the DDA commissioned its first ever institutional review by an external body, the final report for which shows the absence within the DDA of a coordinated set of calculative practices. The report, completed by Tata Consultancy Services, stated that 'Consultants observed that the present information system is characterised by i) missing information links between functional areas… and v) low reliability of information' and noted that DDA data is generally typified by a 'lack of accuracy'. Related specifically to knowledge of land, the report found information inadequacies in areas including the 'inventory of the land with the DDA', the 'status of land development' thereupon, and the 'extent of land misuses.'[xii]

Nonetheless, rule over slums until around 2000 continued to be exercised on the presumption of scientific rigor and accurate statistics.

By 2000, the governmental approach to monitoring and surveying slums became part of the explicit governmental goal of turning Delhi into a 'slum free city', giving it a 'world-class' look, promoting an efficient land market, and converting the 'under-utilized' public land occupied by slum dwellers into commercially exploitable private property (DDA, 1997). These were all part of the policies of economic liberalization initiated by the Finance Ministry in 1991 and concretely implemented in Delhi in the late 1990s (Ghertner, 2005; A.K. Jain, 2003). However, by this time, it had become clear to the city's 'governors' that the pace and efficiency of slum clearance and resettlement in Delhi was insufficient to achieve these ends. The slum population had continued to grow after 1990, increasing from 260,000 families in 1990 to 480,000 by 1995, with the number of slum clusters during the same period rising from 929 to 1,080.[xiii] To address the 'menace of illegal encroachment' and slums[xiv], middle class neighbourhood associations and civic groups began turning to the courts in search of faster, sterner relief. Civic and environmental problems like solid waste disposal, park maintenance, traffic congestion, land use violations, and 'the problem of the slum' had been administered by complex assemblages of governmental and regulatory technologies that operated through the branches of the state, non-governmental organizations and civic groups, local politicians' patron-client relations, and market forces. In the late 1990s, they were suddenly brought into the domain of the judiciary.[xv]

The courts, noting how unruly (i.e. slummy) the city was becoming, took cognizance of 'the dismal and gloomy picture of such jhuggi/jhopries [slum huts] coming up regularly' across the city and said that 'on account of timely actions not having been taken, the Jhuggi clusters [slums] have been multiplying each year.'[xvi] The courts began addressing this situation through a flurry of decisions in the late 1990s that rebuked the DDA for failing to both remove existing slums and prevent fresh slums from coming up: the 'DDA has not been able to protect its land.'[xvii] The court's initial response was to register its dissatisfaction with the ineffectiveness of the DDA calculative process and insist that the DDA follow

its mandate of preventing fresh encroachments: 'We reiterate that the land owning agencies… shall ensure that no new Jhuggi comes up….'[xviii] In a later judgment, the court took note of the unruliness created by the DDA's inability to secure control over its land by (rhetorically) questioning the foundation of sovereignty over slum spaces: 'It is thus contended that there is no purpose in acquiring the land when the authorities are unable to protect the land already acquired which has been encroached.'[xix] But, the court returned to affirm that sovereign authority and control of slum space could not be evaded: 'DDA cannot wish away its liability to clear the encroachments on public lands….'[xx]

The first means the court adopted to re-secure sovereignty was to order the DDA to better follow its own calculative procedures. It did so by reaffirming the DDA's statutory duty to implement the Delhi Master Plan, requesting detailed information on occupied land in pending cases, and threatening to levy penalties and hold responsible officers in contempt of court. However, as the menace of slums persisted and the DDA (along with other accountable authorities) only partially adhered to the court's orders, the court deemed the calculative efforts of the DDA a failure and began appointing its own special committees and court commissioners to do ground-level field assessments in place of the DDA.[xxi] The court's goal was to more efficiently implement the existing survey-based calculative practices[xxii]—that is, it did not fault the existing techne, just those responsible for implementing it.

But, producing accurate calculations capable of guiding the population and administering the law required extensive field knowledge of not only the current ground reality, but also the history of such spaces. These court-appointed surveyors ended up producing equally (or more) flawed calculations of the ground reality, as was pointed out by a civil writ petition contesting a court committee's recommendation to demolish a slum in north Delhi:

> … it is apparent that the inspection and scrutiny performed by the Learned Court
> Commissioner appears, at best, perfunctory… [and contains] marked discrepancies
> about the area and size of the basti [slum]… [The Committee's report] is also

incomplete, cursory and factually inaccurate. [The letter by the Court

Commissioner] requests the Court to give directions for removal of encroachments

without clarifying what are considered encroachments.... further the Monitoring

Committee also differs from the Learned Court Commissioner in its assessment of

the size of the basti... the authorities appear to be unclear even to the extent and

demarcation of the land area in question - the land of two Khasras [plots] (110, 111)

are shown in the Revenue record as merely Government land, without designating a

specific land owning agency.[xxiii]

The petition concludes by saying the question of 'urgent public use,' which is the justification for the

slum demolition, cannot even arise because 'the dimensions of the land and its precise ownership are

itself indeterminate....'

    We thus find that by 2000, through a combination of an increasingly complex and unruly ground

situation and the inability of existing calculative practices to render that ground sufficiently intelligible to

the courts and upper-level bureaucrats, the overall governmental goal of slum removal was opened to

counter-claims and tactics. This unruliness or intractability was not, however, solely the outcome of

technical deficiencies of rule. Unruliness, that is to say, is not necessarily an effect *of* government—i.e. a

failure internal to governmental practice; it can also be an effect *on* government—a calculated 'struggle

against the processes implemented for conducting others', what Foucault calls 'counter-conduct' (2007,

201). Unruliness, then, is not simply that which escapes governmental knowledge; it can also be a

product of contestation or counter-conduct, as I will show below. While governmental knowledge is

necessarily incomplete (Burchell, 1991), the manner in which that knowledge is organized and circulated

is not independent of the practice of politics. Rather, the limitations of governmental knowledge can also

mobilize people 'to contest the truths in the name of which they are governed, and to change the

conditions under which they live' (Li, 2007: 17-9).

IV. Calculated counter-conduct

One clear example of how political practices destabilized the prevailing calculative foundation of rule in Delhi arose in 2003 in the context of a slum survey. Since the early 1990s, the *Dilli Shramik Sangathan* (DSS), or Delhi Labour Organization, a slum organization operating in West Delhi, had been actively following and contesting various attempts by neighbouring property owners, local politicians, and the DDA to demolish the slums in which its members resided. In August 2003, the DDA entered two DSS slums and began a slum survey, saying that the slums would be cleared in the near future. DSS, being made up of residents of these slums and having worked and lived there for years, had an intimate knowledge of the layout of the settlements and had even conducted its own survey of the settlements previously. When the DDA surveyors began the survey process, DSS workers recognized that the categories of eligibility for resettlement; the assumptions about the identity, legality and history of the residents; and the calculative practices used by the government would not only require residents to accept resettlement as a best-case scenario, but would also lead to the displacement of most residents without resettlement (due to their ineligibility).

The DSS thus undertook two political actions. First, it directly intervened in the DDA survey process by following surveyors around and challenging the accuracy of their assessment of the ground reality. If a hut was locked and the DDA surveyor was on the verge of omitting it from the survey register, DSS workers told them who the resident was, for how long s/he had been living there, and confirmed this information from the neighbours. If surveyors wanted a truly accurate assessment, the workers told them, they would have to trust local knowledge or return later to re-assess the status of the hut. This increased the administrative burden of the survey. DSS workers also convinced the surveyors to record all residents, even those who did not have residence proof or whose proof was dated after the resettlement cut-off date (of 1990). Slum surveyors always rely on some amount of local knowledge, at

least to get the lay of the land before initiating a survey. In this case, those local 'helpers' countered the legitimacy of the survey and declared the survey process inaccurate and insufficient to determine the eligibility of the residents.

Second, the DSS undertook a counter-survey by enumerating all the huts within the two slums. In addition to doing the slum survey 'better,' DSS workers went further by listing the number of family members and the names of the head of household of each generation (if any) leading back to the family's arrival in the settlement, recording the hut's precise location on a map of the slum, making copies of the relevant residence proof regardless of that proof's date, affixing past voter logs to the survey to show that the residents were deeply connected with the electoral process, attaching school records of children, copying letters from government officials and elected representatives who had approved the extension of services (the construction of a toilet block and dispensary) to the slums, and appending notarized, government documents proving that the slums' earliest residents had been brought to Delhi and settled by government contractors as workers to build the surrounding residential colony. All of this information was assembled in an attempt to prevent the erasure of the complex history that led to the slums' present.

Fifty DSS members then delivered this counter-survey to the Commissioner of Land Management in the main DDA office, located above the district office that conducted the slum survey. They also submitted written and verbal accusations that DDA surveyors had requested and accepted bribes from residents in order to be added to the register and that the DDA survey did not even include all of the households.

The counter-survey, on the one hand, challenged the calculative practices of the DDA on its own terms by demonstrating the DDA's inaccurate assessment of the slums. If the Account's Branch of the Land Department of the DDA is supposed to 'maintain Ledgers of Accounts of the encroachers Estate-wise' (DDA, 1982: 115), the DSS showed how this task had not been accurately completed. On the other hand, the counter-survey challenged the overall calculative foundation of government by questioning the metrics used to assess the identity of slum dwellers, the type of improvement (i.e. resettlement) they

could be eligible to receive, and the basis on which that eligibility would be determined (the 1990 cut-off date). The DSS counter-survey showed that the people living on these plots are not 'illegal encroachers' or 'criminals,' but 'workers' and 'city-builders.'

Going one step further, the DSS aligned with a network of slum organizations called *Sajha Manch* (Joint Platform) and received technical assistance from professional non-governmental organization workers to show that the DDA had failed on its own terms to account for and accommodate the population growth anticipated and planned for in the Delhi Master Plan. They claimed (to the DDA and media) that this was a political, not a technical or implementation, failure by comparing (i) the Master Plan's guideline for low-income housing provision for the year 2001 with (ii) the actual housing stock built by the DDA.[xxiv] The DDA had failed to provide even 15% of the required stock (cf. Verma, 2002), a fact the DSS used to question who should be termed 'illegal,' slum dwellers or the government. By re-asserting the legal entitlements guaranteed to the poor through plans laid down in the pre-liberalization past and demonstrating the calculative errors of the DDA survey, the DSS (armed with its own 'accurate' surveys and numerical representations) countered the DDA's claim to exclusive, expert knowledge of slums.

Raising the threat of DDA corruption in the media and armed with its own claim to accuracy, the DSS threw its own 'web of visibilities, of public codes and private embarrassments over' (Rose, 1999: 73) the calculations of government. The result of the DSS's calculative counter-conduct was that the slum survey was suspended and the demolition order was withdrawn.

Recent studies have emphasized the general methodological importance of the politics of calculation within the exercise of governmental power (see Elden, 2007; Legg, 2006a). Numerous governmentality studies have also suggested that the knowledge formed through governmental technologies can be 'repossessed' by 'the governed' to contest the terms of rule (Kalpagam, 2000; Rose, 1999: 92), or, as Gordon (1991: 5) says, 'the terms of governmental practice can be turned around into focuses of resistance.' Yet, these studies examine this politics almost exclusively through internal debates

among the 'governors' or within an encompassing rationality of rule—that is, as a process internal to rule in which 'the constitutive role of contestation drops out of sight' (Hart, 2004: 93; see also Joyce, 2003: 102-3; O'Malley, Weir, & Shearing, 1997). Governmental knowledge, in this view, can activate politics and be used for different strategic ends, but this happens only after this knowledge has already been established as 'truth.' These studies therefore do not consider how (counter-) tactics among the governed can change the strategies of government, or how calculative practices can themselves become sites of struggle. The DSS counter-survey, like other examples from the counter-mapping literature (see Appadurai, 2002; Peluso, 1995; Turnbull, 1998), provides insight into how these tactics can shape (at least temporarily) larger strategies of rule and shows that the calculative practices of government are not politically inert, but rather can be contested so as to reconfigure the character of governmentality.

V. The rise of an aesthetic normativity

The unruliness of slum space by the early 2000s arose, as shown above, because of technical difficulties in producing a governing intelligibility through existing calculative practices on the one hand, and the politicization of those calculative practices on the other. By this time, the courts had already intervened to try to reassert the existing accuracy-based calculative framework of government, but with little success. With mounting pressure from commercial investors and the 'normal,' middle-class public to make Delhi look 'world-class,' the DDA and MCD turned to the courts to identify new strategies to ensure these ends. For example, the MCD submitted in the High Court that the problem of unauthorized constructions and slums is 'mammoth in nature - and cannot be controlled by simply dealing under the existing laws or under the provisions of [Delhi's] master plan' (Biswas, 2006). Here we see that government, in a moment of crisis, called upon the sovereign mechanism of law to impose order by any means necessary (cf. Schmitt, 2006)—in this case, by recalibrating legality and establishing a new calculative foundation of rule.[xxv]

The courts, through a series of decisions in the early 2000s, declared the existing procedures of governing slums too slow and inefficient to make Delhi world-class and slum-free. In a 2002 decision, the court stated 'it would require 272 years to resettle the slum dwellers' according to existing procedures and that the 'acquisition cost… of land… and development… would be Rs. 4,20,00,00,000/- [~USD 100 million].'[xxvi] This set of conditions was clearly intolerable, so the court began relying less heavily on the previously dominant (and statutory)—but slow, inefficient, expensive, and contestable—calculative procedure of surveying slums. Instead, it started using a surrogate indicator to identify illegality: the 'look' or visual appearance of space.[xxvii] In lieu of accurately assessing (i.e. creating paper re-presentations that correspond to) physical space, a set of visual determinants began to be used to render slums intelligible and locate them within a new 'grid of norms': a *world-class aesthetic* defined by the DDA and Delhi Government's prioritization of making Delhi a 'world-class' city.

As part of Delhi's world-class city-building efforts, public finances in the early 2000s were gradually shifted away from education, public housing, healthcare, and food subsidies toward large, highly visible and 'modern' infrastructure projects like the Delhi Metro Rail, more than 50 new flyovers, two new toll roads to Delhi's posh, satellite cities, and the Commonwealth Games Village—prestige projects built 'to dispel most visitors' first impression that India is a country soaked in poverty' (Ramesh, 2008). Similarly, the Delhi Government approved more than USD 100 million (which it later retracted after cost estimates almost doubled) for building a 'signature bridge' modelled after London's Tower Bridge[xxviii] and the municipal government liberalized building bye-laws and development norms to allow for denser and taller (i.e. more 'modern') commercial development across the city. Along the same lines, various 'world-class' monuments (e.g. the world's largest Hindu complex, the Akshardham Temple) and commercial developments (e.g. India's biggest shopping mall complex) in direct violation of the city's land use plan were deemed 'planned' and legal in order to facilitate Delhi's ascent as a site of India's biggest and best architectural feats.

With the Chief Minister of Delhi declaring the preparations for the 2010 Commonwealth Games

the government's top priority and a frenetic buzz in the media since the early 2000s to ensure that

Delhi's appearance is appropriately 'global' before the Games, a shared aesthetic sense of how the city

should look quickly took shape. This has been enhanced by the general celebration of middle-class

consumptive lifestyles and spaces in the media as well as public campaigns by trade associations, the

media and government (often in partnership) aimed at creating the perception that Delhi will look like

London or Singapore in the near future (Dupont, 2006). This 'world-class' aesthetic became more than

media hype or city boosterism, however, when the courts began tying 'law and order' to it; it soon

became both 'the end and instrument of government' (Foucault, 2007: 105).

In the early 2000s, the courts began making widespread mention of Delhi as a 'showpiece', 'world-

class', 'heritage', and 'capital' city. In a landmark judgment from 2000, the Supreme Court stated,

> In Delhi, which is the capital of the country and which should be its showpiece,
>
> no effective initiative of any kind has been taken by the numerous governmental
>
> agencies operating there in cleaning up the city…. Instead of 'slum clearance'
>
> there is 'slum creation' in Delhi. This in turn gives rise to domestic waste being
>
> strewn on open land in and around the slums. This can best be controlled at least,
>
> in the first instance, by *preventing the growth of slums*.[xxix]

In 2001, the Delhi High Court made the barriers to Delhi's world-class ambitions equally clear: 'Delhi

being the capital city of the country, is a show window to the world of our culture, heritage, traditions

and way of life. A city like Delhi must act as a catalyst for building modern India. It cannot be allowed to

degenerate and decay. Defecation and urination cannot be allowed to take place in open at places which

are not meant for these purposes.'[xxx] Here, the obstacle to Delhi becoming a 'catalyst' of modernity is the

nuisance-causing activities (e.g. open defecation) of slum dwellers (for whom the state has failed to

provide adequate infrastructure for enclosed latrines).

Court documents from this period show that the growing concern for the city's 'world-class' appearance increasingly came to be expressed through an environmental discourse of cleanliness and pollution (cf. Baviskar, 2003). Popularized through the phrase and public campaign called 'Clean Delhi, Green Delhi,' this discourse tied deficiencies in environmental well-being and appearance to the presence of slums, largely through the legal category of 'nuisance.' Before 2000, nuisance-causing activities like open defecation or unhygienic living conditions did not provide sufficient justification for demolishing a slum. Through the 1980s and 1990s, unsanitary conditions in slums and general slum-related public nuisances were legally considered the responsibility and fault of the municipal authorities: slums were dirty because the state did not provide them with basic services. However, as I have argued elsewhere (Ghertner, 2008), the early 2000s introduced a new legal discourse of nuisance that reconfigured the parameters and mechanisms by which slum-related nuisances were to be remedied.

The juridical category of 'nuisance' is broadly considered any 'offense to the sense of sight, smell, or hearing' (Ashok K. Jain, 2005) and is as such directly linked with aesthetic norms. The definition of public nuisance, according to statute and precedent, had until this time included only particular *objects possessed* or *actions performed* by individuals or groups that interfered with a public right. Aesthetically displeasing, annoying, or dangerous actions or objects could only be addressed by improving municipal services or fining individuals for their violation.[xxxi]

The inability of the DDA and MCD to improve, clean up, or remove slums, as well as the court's failure to efficiently provide order to the city by removing slums through existing Acts, led to a gradual reinterpretation of nuisance that made the *appearance* of filth or unruliness in and of itself a legitimate basis for demolishing a slum. This change took place by redefining the categories of nuisance such that not only *objects* or *actions*, but also *individuals and groups* themselves could be declared nuisances. This vastly expanded the range of procedures that could be administered to remove nuisance: no longer by stopping nuisances through imposing fines and penalties, but by displacing entire populations.

Once the interpretation of nuisance was expanded to include categories of people or particular

population groups, the legal (and calculative) basis for slum demolition was simplified. Demolition orders no longer require complex mapping and survey exercises to determine the nature of land use or demand even the confirmation of land ownership in slum cases. Today, courts ask for little more than the demonstration by a petitioner (who is usually a neighbouring property owner) that the slum in question is (i) on public land (which is the definition of 'slum' and has never been a sufficient condition for demolition orders in the past), and (ii) a nuisance to the public. Evidentially, this is most commonly and effectively done by furnishing photographs that show the slum's 'dirty' look and poor environmental conditions: open defecation, overcrowded living conditions, children playing in and 'taking over' the street, stagnant water, municipal waste, etc. Since approximately 2002, the courts have considered such photographs sufficient evidence to confirm that the slum in question does not conform to the aesthetic and civic codes deemed 'normal' in Delhi and have, in the majority of such cases, issued demolition orders. Today in Delhi, the look of the slum alone confirms its illegality, and the calculative practices of producing expert knowledge of a population group now consists of a judge's aesthetic judgment of that group's contribution to the overall security and vitality of the city (Ghertner, 2008).

Over the past ten years, close to a million slum dwellers have been displaced in Delhi[xxxii], the vast majority thanks to court orders equating slum clearance with environmental and visual clean up. This new aesthetic ordering of the city, in which the legality and essential features of space can be determined entirely from a distance and without requiring accurate survey or assessment (i.e. space can be calculated without numbers), marks a clear shift from the previous scientific/statistical calculative foundation of rule. In this new, more aesthetic calculative framework, the law, in conjunction with a variety of other aesthetic and security techniques (including the slum survey, discussed again below), crafts fields of intelligibility by disseminating standardized aesthetic norms. Spaces are known to be illegal or legal, deficient or normal based on their outer characteristics. A shopping mall, even if in violation of planning law, is legal because it looks legal.[xxxiii] A slum, even if its residents have been formalized at their current location, is illegal because it looks like a nuisance. As a 'social vision' then, law 'defines our idea of

discursive relevancy, positing distinct epistemological criteria for verification' (Singer, cited in Blomley, 1994, 12-13), in this case, aesthetic norms. As of approximately 2000 then, the manner in which slum space is rendered intelligible—that is, the system of verification used to deem the representation, or picture, of the slum truthful—shifted away from the statistical procedures described above to an aesthetic evaluation.

This new regime has made ensuring security in the city administratively and technically less complex than before because it provides a clear visual grid for assessing the quality of space without requiring the rigorous inscriptive/statistical simplifications previously necessary to render such ground conditions easily intelligible. In the context of urban government, Foucault describes the security imperative's primary focus as 'a matter of organizing circulation, eliminating its dangerous elements, making a division between good and bad circulation, and maximizing the good circulation by diminishing the bad' (2007: 18). The law's ability to clear unruly and displeasing spaces through this less technically rigorous calculative regime has accelerated the circulation of what Delhi's governors consider aesthetically and economically 'good.' Thus, unlike the first moment of urban improvement described above, in which the law set the conditions for the slum survey to guide slum dwellers toward improved ends, today the law itself has become the main instrument of improvement. Law in this configuration thus takes on an affective power, inhering a security dimension through its ability to perpetuate and codify the 'world-class' aesthetic.[xxxiv] However, the law—a juridical mechanism—is ill-equipped to directly access the 'mechanics of interest' (e.g. the desire for resettlement among slum dwellers) (Foucault, 2007: 352), the 'fundamental target and instrument of the government of populations' (Ibid., 106). Government must deploy other techniques to ensure that the population's interest is cultivated in the direction of the 'suitable ends' of the world-class city. This remains the task of the slum survey, the role of which has qualitatively changed in this second moment.

VI. Slum survey as aesthetic technology of government (2000-present)

No longer needed to assess the legality of slums, the slum survey's previous juridico-legal function of knowing and securing the territory has been taken over by the visual technology of nuisance law. I attended three slum surveys in 2005-6, during which I observed the surveyors' limited focus on conducting a rigorous physical assessment of the land and much stronger emphasis on instructing the slum population on its proper 'place' in the city. The process of 'rendering technical' the 'slum problem' resembles that of the pre-2000 survey (described in section III) in that it begins by contrasting 'illegal encroachers' with the 'normal' public that lives in formal residential colonies. Surveyors today, however, establish the illegality of the slum not in reference to a map or comprehensive register of all residents, but rather on the basis of the settlement's appearance. The chief officer during all three surveys, after assembling the residents, began by describing the nature of urban development in Delhi. On one occasion, the officer said:

> Today Delhi does not look how it used to. In ten years, it won't look like it does today. Delhi is developing. It is cleaning up. Only the best people will live in Delhi. Soon, there will be no slums here. All the deserving people will stay, but everyone else will have to go. The international [Commonwealth] Games are coming to Delhi and people from all over the world—America, England, Japan—will come here and see our city. We all want Delhi and India's name to grow. Look around; you see the Delhi Metro has come, all these malls have come. It is time for Delhi to rise. That is what we all want. Everyone must fit.

The survey thus starts by invoking world-class aesthetics as the desired end of government. Over the course of the survey, individual surveyors then locate the slum and households being assessed in relation to this norm. For example, one surveyor told an angry resident, 'In the whole world, no settlement that

looks like this is legal,' and suggested that the resident's demand to remain settled at his current location is at odds with the interests of the rest of the city. 'Can't you see that nobody wants this type of slum?'' he concluded. The slum's physical conditions thus get tied to a notion of illegality and are, in part, the deficiencies of the population that must be corrected. These deficiencies, surveyors either directly stated or indirectly intimated, include overcrowding, congestion, unhygienic living conditions, lack of property ownership, and other environmental and public health risks that slum dwellers' 'illegal' residency imposes on the land.

During the course of the survey, surveyors spend as much time narrating the physical traits of the slum as they do producing the survey log. The survey thus becomes a type of narrative technique through which the surveyors constantly move back and forth between describing the particular slum being surveyed and the problems with 'slums in general.' For example, one surveyor said to a group of women, 'This area has become a complete [traffic] jam. Delhi can't function like this. *Sarkar* [government] will improve these areas, and you. Everyone will benefit. Look at Kali Basti [a nearby slum that had been resettled years earlier]. They have become such good people and the area is clean now.' The survey thus operates by instilling a set of observational practices into the slum population. By constantly pointing to the aesthetic impropriety of the slum ('this area has become a complete jam') and referencing slum deficiencies to the aesthetic norm established by law, the survey process trains slum dwellers to see slum space through lenses provided by government.

In its current form, the slum survey is not just about making individual slums visible, bounded and calculable. It is also about taking easily identifiable, visual attributes of slums and linking those attributes to a particular normative category of space—illegal encroachment. A clear effect of the slum survey is that it makes use of what slum dwellers already know about the slum—that it is dirty, congested, *kachcha* (constructed in a 'temporary' fashion), unserviced, on public land, different from private residential colonies—to produce a vision of slum space as illegal and lacking the characteristics necessary for 'normal' citizenship. This makes slums knowable through their outer, visible characteristics.

Spaces that look like slums, that look dirty and overcrowded, are learned to be illegal, despite their far more complex political, residential and legal histories. Thus, participants in the slum survey learn a way of seeing and identifying the essential traits of urban space and are, in the process, trained to conceptually link locations in the city that share these same traits. That is, 'slum space' across the city, as a category, is rendered imaginable and intelligible through the survey. By offering resettlement in conjunction with producing this vision of slum space, the survey shows slum dwellers that the government is attempting to improve this category of space; that individual slum dwellers are part of a larger deficient population whose improvement is necessary for the city's improvement; and that it is in their interest to cooperate with this process. This 'will to improve' (Li, 2007) is induced, as Rose says, 'by throwing a web of visibilities, of public codes and private embarrassments over personal conduct: we might term this *government through the calculated administration of shame*' (Rose, 1999: 73). In Delhi, the only difference is that this personal conduct is not an individual act or particular type of 'deficient' behaviour; it is a status of being. Being a slum dweller in and of itself is criminalized and denigrated through this governmentality. As one man responded when I asked him during the course of the survey why his home will be demolished: 'Because we are dirty and make the city look bad…. Nobody wants to step out of his home and see us washing in the open or see our kids shitting.'

Participating in the slum survey requires slum dwellers' active self-identification as 'illegal.' Waiting in line, being compliant with government officers and pleading with them to register your name, displaying your residence proof and being observed and inspected, accepting that the procedure and timing of your home's demolition is something you neither control nor have a right to influence, and accepting your displacement as a gift from the government are all subjectifying practices that guide slum residents' desires in clear, predictable ways. As Dean says of the way in which the population's 'identity' becomes a key target of governmental practice: 'Regimes of government do not *determine* forms of subjectivity. They elicit, promote, facilitate, foster and attribute various capacities [in the case of the slum survey, the capacity to be resettled], qualities [supplicatory, dirty] and statuses [illegal] to particular agents

[slum dwellers]. They are successful to the extent that these agents come to experience themselves through such capacities…, qualities… and statuses…' (1999: 32). Therefore, as slum dwellers participate in the survey, identify resettlement as a best-case-scenario—that is, as they accept voluntary displacement as a desirable outcome—and adopt world-class aesthetics as their rationalization of change, they occupy a subject-position—i.e., they 'subject' themselves (Foucault, 1983) to the meaning of world-class aesthetic discourse—that sees slums as out of place, as dirty, as illegal. Forced resettlement, through the slum survey, hence comes to be seen not as the violent limit of sovereign power, but as the necessary action of an improving government. Li (2007: 12) says a key difference between sovereignty and governmentality is that in the former violence can be used with impunity, whereas in the latter violence must be justified by a notion of improvement. In Delhi now, most slum dwellers see displacement as improvement (at least of the city, if not of the self), even in cases when they are unsure of their eligibility for resettlement. As a result, heavy resistance to slum surveys and demolition drives are rare in Delhi today, as most slum residents are resigned to the fact that Delhi will be 'slum-free' in the near future.[xxxv]

And, if slum residents do not initially accept the improving mission conveyed through the slum survey and deny that they are encroachers (and thus challenge the grounds of the survey) on the basis of, for example, the fact that government officials or politicians wilfully settled them at their present locations, the surveyors can resort to the authority of the law, forcing resident to choose to self-identify as illegal and committed to the resettlement process or be demolished without compensation. The law, whether invoked explicitly or implicitly, hence structures the discursive field so that only certain actions appear possible: slum demolition, forced resettlement, and, more generally, the end of 'slum life.' Sovereign power is used in this manner to set the conditions for improvement, while the slum survey declares 'slum life' itself a threat to the vitality and efficiency of the city. Again, government here does not have to operate by convincing everyone that resettlement is a desirable end, just enough people to quell resistance and render the population manageable.

Interviews with slum organizers and residents confirm that the vast majority of slums in Delhi have undergone a slum survey along these lines at least once after the original 1990 survey, even when the survey is not followed by a demolition.[xxxvi] This suggests that the slum survey has become a consistent governmental technology of shaping and guiding the slum population's interest. And, that the survey is no longer premised on a statistical calculative foundation, but has rather become more of an aesthetic technique of disseminating observational dispositions, is confirmed by the fact that a comprehensive statistical summary of the size and distribution of Delhi's slum population has not been reported since 1998. The government itself is unaware of the total number of slums in Delhi and thus continues to report 1998 numbers as if they were valid today (Dupont, 2008: 83). In fact, most official land use numbers are outdated, blatantly inaccurate, or never recorded in Delhi. For example, in a 2005 interview with the Commissioner of Planning in the DDA, in which I asked how the statutorily mandated baseline land use survey for the newly drafted Master Plan was conducted, he said 'we didn't do a survey. Well, we did a "windshield survey": I sent some engineers out in cars and had them look and see how things were…. If people knew we were measuring them, things would get too political. We know what needs to be done without having to survey.'[xxxvii] This scarcity of numbers and maps in Delhi is what led me to study the slum survey process in the first place. It was therefore no surprise to me in observing surveys in 2005-2006 that land-use maps and statistical summaries were virtually absent. A former special consultant with the Slum Wing of the MCD, which conducts its own surveys of slums on its land, told me that 'Survey and land-use numbers are concocted. If you survey a slum a second time the numbers will come out totally different.'[xxxviii] The slum survey, and land use planning in Delhi more generally, clearly does not rest on 'mechanically objective' or 'scientifically rational' survey procedures, nor does it capture an accurate summary of the land, today.

This change in the slum survey has had significant implications for the politics of calculation. The evaluation of slums in the first moment of urban improvement (1990-2000) took place locally: knowledge of the territory is assembled as government officials walked through the narrow corridors of slums, a

process slum residents could observe and in which they could intervene, as the counter-survey conducted by the *Delhi Shramik Sangathan* (DSS) discussed in Section IV demonstrated. However, the main calculative practice of government today is located in the courtroom when a judge assesses the legality of a slum through a set of photographs. Calculative practices today therefore require far less 'translation,' as Latour (1986) calls it, between 'reality out there' and 'reality in here.' That is, physical space is not being accurately/'objectively' assessed, and a correspondence between a 'paper truth' and 'reality out there' is passed over in making expert claims. Once the court passes an order, the correspondence between the physical space of the slum and the photograph used to depict that slum in the courtroom cannot be easily questioned, making governmental calculation less prone to the intrusion of local knowledge and counter-claims. As a result, attempts to contest the slum survey, as the DSS did through its counter-survey, have vastly different effects today than they did in the first moment of urban improvement.

For example, during a slum survey in April 2006, another slum organization affiliated with DSS called *Nirman Mazdoor Panchayat Sangam* (Association of Construction Worker Committees) conducted a counter-survey along the lines of the DSS survey described above. However, after presenting its counter-survey to government officials, the officials responded by saying, 'The demolition is based on a court order. It is out of our hands.' Knowledge of the traits of the slum was not based on the physical slum survey, so the counter-survey's claim to accurate knowledge had limited effect because government did not itself claim rigorous knowledge of the slum as a basis of authority. The counter-survey's influence on the overall terms of the demolition was that the DDA accepted a more diverse type of residence proof (e.g. *Nirman*-issued identification cards) to confirm the residents' resettlement eligibility. As a result, it provided more residents with the option of resettlement, but the demolition proceeded just the same. The counter-survey's overall effect, then, was not a challenge to the demolition; rather, it facilitated the governmental exercise of enumerating the residents and showing them that resettlement was a desirable option.

For most slum dwellers in Delhi today, resettlement has become not only the most exulted path to improvement, but also the only such path for those unable to buy private plots. The increasingly powerful hand of the sovereign state in ordering slum demolitions, combined with slum dwellers' self-perception as illegal, largely cultivated through the slum survey (among other means[xxxix]), has made demolition appear inevitable to many. As public housing expenditure has stagnated and liberalization of the land market has driven up land prices, other options for increased livelihood and tenure security have been gradually removed. As a result, resettlement has been elevated as the primary target of slum life. We thus find that the combination of a dominant and imposing aesthetic order in the city and a set of micro-practices operating on and through individual desires to re-calibrate slum residents' sense of self and place has made the 'world-class city' appear in the interest of the greater good, even to many of those who will be displaced to make way for its arrival. This is not to say that counter-conduct has disappeared or that rule is complete. New forms of aesthetic counter-conduct aimed at challenging the image of the world-class city are beginning to emerge in Delhi (including by the DSS, which I will explore in future work), but have not yet been able solicit interest in a large enough percentage of the slum population to slow the slum removal process.

To consider more fully how the combination of an imposed aesthetic order and the slum survey might guide the population's interest, and to say something about the epistemological foundation of an aesthetic governmentality, I want to take a page from Bernard Cohn's (1996) classic study of colonial knowledge in British India. Inspired by Foucault, Cohn focused on what he called the 'investigative modalities' used to assemble knowledge and build the imperial capacity to govern. In addition to his discussion of a 'survey modality' and 'enumerative modality,' Cohn found another set of modalities that operated more through the cultural domain of habits, tastes and expression than facts and figures. One of these, the 'observational/travel modality,' provides direct insight into how the imposition of an aesthetic order in Delhi today has a governmental effect.

As Cohn said, 'The questions that arise in examining this modality are related to the creation of a repertoire of images and typifications that determined what was significant to the European eye' (6). This modality works by providing a narrative for the experience of, or movement through, a given space. It creates expectations for how space looks and how it should look. Cohn discussed this primarily in terms of establishing set itineraries or patterns of movement for newcomers to India so that they could easily comprehend 'India' through an already narrated experience (cf. Goswami, 2004: Ch. 3); but this modality could also be thought of more broadly as training a particular way of seeing. By providing routine, shared experiences of moving in a given space a consistent narrative or set of clear aesthetic markers, this technique makes *the experience of space itself* the inter-subjective epistemological basis for knowing that space and its features. When this narrative of moving through and seeing space becomes dominant within a population—i.e. when it prompts the viewing public to identify with the state's vision—then *how one sees* that space becomes the basis for assessing what that space is, positively, and what it should be, normatively. That is, seeing becomes a way of knowing because the shared experience of moving and living in space becomes a basis of intelligibility; seeing becomes a calculative practice. This is the function of the slum survey: it takes hold of a set of aesthetic indicators prescribed by the law and trains slum dwellers to see themselves and the space of the city through that aesthetic lens. 'What is observed and reported' in this process 'is mediated by particular socio-political contexts as well as historically specific aesthetic principles' (Cohn 1996, 7). Crary (1992) has called this mediation of how the visual field is encountered and filtered a 'technique of the observer,' or how the observer's position and way of seeing is the outcome of socio-historical processes. Walking through slums with slum dwellers and showing them how the state views such spaces trains slum dwellers to 'see like the state,' to borrow Scott's (1998) phrase. This, I have argued in this paper, produces definite governmental effects.

This ability to provide a normative dimension to seeing, to cultivate an aesthetic normativity in the population, forms a distinct calculative foundation of government. As Cohn says, the power to 'propound canons of taste' is 'among the most significant instrumentalities of rulership' (10). The

prevalence of a powerful, shared aesthetic and narrative of urban improvement in Delhi, which is endowed to the slum population (in part) through the slum survey, confirms the significance of seeing and standards of taste as a key instrumentality, or calculability, of rule.

VII. Conclusion

In this paper, I have attempted to shed light on a type of technology of power that can be considered governmental—in the sense of guiding the conduct of the population from a distance (Rose 1999)—but which has been largely unaccounted for in the governmentality literature. Foucault found 'scientifically rational' statistics to be 'the main technical factor' (2007, 104), or calculative practice, undergirding governmental knowledge. This observation has led governmentality scholars to the epistemological presumption that 'To govern a problem requires that it be counted' (Rose, 1999: 221), thus treating Foucault's historically and geographically specific conclusion about the calculative foundation of government as analytically generalizable. Be it the census (e.g. Brown & Boyle, 2000; Corbridge, Williams, Srivastava, & Veron, 2005; Dirks, 2001; Murdoch & Ward, 1997), mapping (e.g. Hannah, 2000; Joyce, 2003; Legg, 2006a), accounting practices (e.g. Miller & O'Leary, 1987; Miller & Rose, 1990), resource statistics (e.g. Agrawal, 2005; Demeritt, 2001), or any host of statistical aggregations, empirical studies making use of the governmentality framework often take the identification of numbers or other 'scientific' depictions of targets of rule as the starting point for their analysis. But, few studies have explicitly considered how government operates in the absence of such numerical accuracy and 'scientificity' (Foucault, 2007: 350). What is to say that numbers necessarily play a determining role in producing subjectivity and conducting conduct? What is to say that other forms of knowledge do not have greater affective power in producing governmental effects?[xl] This concern is especially relevant in postcolonial contexts given that the technical means to secure accurate statistical knowledge are often incomplete in the post-colonial state (Corbridge et al., 2005: 18; Hansen &

Stepputat, 2001); or, when such knowledge is gathered, it is often missing, deliberately concealed, forged, or unused (see Hull, 2008; Roy, 2004).

In Foucault's final lecture of *Security, Territory, Population*, where he lays out his concluding treatment of 'modern and contemporary governmentality' (2007: 348), he states, 'The knowledge involved [in this governmentality] must be scientific in its procedures. Second, this scientific knowledge is absolutely indispensable for good government. A government that did not take into account this kind of analysis… would be bound to fail.' He continues by saying that 'government cannot do without the consequences, the results, of this science' (2007: 350-1). Recent empirical studies making use of the governmentality framework that find an absence/shortage of numerical accuracy or scientific survey techniques similarly conclude that such a lack of scientific knowledge leads to the failure of governmental projects, or to general unruliness (e.g. Legg, 2007: Ch. 4). While it may often be the case that the absence of, or inability to create, an intelligible summary of governmental targets (e.g. territory, populations, illegal 'elements,' etc.) through numerical survey leads to a failure to 'govern from a distance,' might a shortage of numbers, or geometric/'planimetric' accuracy, give rise to other techniques that provide 'a "calculative" sense of the identity of land' and population (Pottage, 1994: 371)? Thus, while Smart (2001: 31) suggests that 'we need to pay more attention to spaces in which control seems to be conspicuously absent, where neglect is more apparent than surveillance,' I suggest that we also need to pay more attention to spaces in which surveillance and monitoring are conspicuously absent, but where control is nonetheless achieved. For, Foucault initially contrasted the less rigorous technical requirements of governmental knowledge with the more panoptic and comprehensive techniques of disciplinary knowledge centred on the precise surveillance of bodies. Governmental knowledge's epistemological difference is its ability to govern while knowing less, to operate at a distance, to conduct individuals' conduct by operating on a scale and summoning categories larger than that of individuals but that nonetheless somehow resonate at the scale of everyday life. The epistemology of government, then, appears to be marked by a certain 'unknowing.' An absence of numerical accuracy or 'the rule of

evidence' (Foucault, 2007: 350) should, perhaps, be the presumed epistemological condition of governmental knowledge.

I have explored these issues here by analyzing two different moments of urban improvement in Delhi, each with a distinct calculative foundation, but both geared toward educating slum dwellers' desire for voluntary resettlement. Each moment thus shared the governing rationality of producing a 'slum-free' Delhi, but the technical means of achieving this end differed. The calculative foundation of the first moment (1990-2000) was characterized by the 'scientific', or 'mechanically objective' (Porter, 1995), survey of slum space. By collating the complex dynamics of slums into intelligible and easily manageable categories—those 'eligible' for resettlement and thus improvable, versus those 'ineligible'—the survey aimed to divide the slum population's interest, reduce the likelihood of resistance, and depict slum demolition as a process of urban improvement. However, the slum survey itself became politicized through this process, leading to resistance not only to the terms of resettlement, but also to the calculative foundation of government. By conducting their own surveys, slum residents engaged in calculative counter-conduct, appropriating the calculative techniques of government and turning them against the existing governmental rationality.

In response to slum unruliness in the late 1990s, a new calculative foundation of government gave rise. No longer premised on rigorous 'scientific' assessment of slum space, government would know and assess space based on outward visual appearance alone. Through a rise of juridical power, in particular the law of nuisance, a new aesthetic norm—which I have called 'world-class' aesthetics—was established, against which urban space could be evaluated from a distance. Now, if a space *looks* polluting and dirty, regardless of its formal legality or relationship to the Master Plan, nuisance law deems it illegal. In contrast, spaces that positively portray Delhi in its world-class pursuits (e.g. shopping malls), even if statutorily illegal and in violation of the Master Plan, are deemed legal. Bypassing the need for rigorous physical survey, government in this second moment (~2000-) assigned the slum survey a new role: aesthetically training slum residents to read the territory through world-class aesthetics.

That affect plays a central role in shaping power, that the ability to govern from a centre (i.e. the state) is bound to the ability to tell stories or put on displays that evoke favourable responses within—or impart subjunctive imaginaries to—'the governed,' and that myth and rumour are invoked to authorize authority (e.g. Amin, 1984; Taussig, 1997) are all well known. Yet, the governmentality framework has not seriously considered how these modes of governing are incorporated into governmental programs, which, in my view, has confined its applicability and rendered it distant from the experience of everyday life, and thus the stage on which governing rationalities gain meaning. By showing that a type of aesthetic governmentality can be equally or more effective than 'governing by numbers' (Rose, 1991), I have attempted to take preliminary steps toward a more historically and geographically specific treatment of the epistemology of government.

Thus, while the Delhi case shows an instance of the supersession of a statistical mode of government by a more aesthetic one—a pattern we might expect to see in other contexts marked by contestation over government statistics/maps and a strong normative sense of improvement (be it preparation for an international event (e.g. the Olympics), postcolonial anxiety about 'catching up', or urban entrepreneurialism)—this mode, like any other, has its own calculative risks and vulnerabilities. Government in Delhi today rests on the continued ability to produce subjects whose interests align with the vision of a world-class city, only now it relies on a general aesthetic sense of improvement more than 'mechanically objective' criteria for classifying urban space. Thus, while it is less prone to the intrusions of local counter-claims and disputes over the procedures of classification, if alternative aesthetic visions of Delhi are popularized, or if the promise of resettlement no longer adequately manages slum residents' aversion to displacement, then the legitimacy of slum demolitions will undoubtedly be called into question, requiring another shift in the calculative foundation of government at the very least, if not deeper shifts in the rationality of rule.

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Notes:

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[i] For more on government as 'the conduct of conduct,' see Foucault (2007). See also Gordon (1991) and Rose (1999).

[ii] See Ramanathan (2005) for an elaboration of how slums are defined in law.

[iii] Okhla Factor Owner's Association vs. GNCTD (Delhi High Court, 2002), Civil Writ Petition 4441/1994, final judgment, paragraph 18.

[iv] Throughout this paper, I will refer to the sovereign, disciplinary and security dimensions of government, the three modes of power that triangulate within any governmental regime. In his first lecture in *Security, Territory, Population*, Foucault uses the example of town planning to show the different strategic functions of each of these modes. The goal of sovereign power, in the context of 'the town,' is to secure control over the territory: ' a good sovereign… is someone well placed within the territory, and a territory that is well policed in terms of obedience to the sovereign is a territory that has a good spatial layout' (Foucault, 2007: 14). As a disciplinary instrument, planning operates by imposing a hierarchical distribution of elements through zoning. It thus does not start by thinking of the town as the centre or capital of the territory, which is the approach of sovereign power, but rather on the basis of a hierarchical and geometric figure used to ensure that spaces and components of the city are functionally efficient and in their proper place. The security dimension of planning focuses on facilitating the circulation of 'what is good' and reducing what is 'bad' through programs to increase the well-being of the population (e.g. sanitation and hygiene campaigns). Its goal is not perfection, as is the case with the disciplinary model, but of maximizing the positive elements within the town.

[v] For Porter (1995), mechanical objectivity consists of the repetition of standardized procedures of measurement, demarcation, quantification, and reportage that are typically required when the subjective discretion/judgment of 'experts' is questioned. Mitchell too describes how it is through a well-defined set of procedures that objectivity is established: 'The performance of the law will gain its authority from following this particular sequence of acts [granting land, survey of boundaries, placing of boundary stones, recording of measurements…]' (2002: 58).

[vi] This information is compiled based on DDA survey instructions, DDA Annual Reports describing survey outcomes, and interviews with DDA staff in 2005 about slum surveys in this period.

[vii] MCD. 2002. *Annual Report of the Slum and JJ Wing, 2001-2002.*

[viii] The slum re-housing that took place in the 1980s was called 'resettlement,' whereas by the mid-1990s it was formally called 'relocation.' The terms and reasons behind such re-housing differed, with the latter carrying weaker tenure rights, but the point here is that slum dwellers in the post-1990 scenario did not recognize this distinction and saw contemporary relocation programs through the lens of the positive experience of earlier slum re-housing programs. Slum residents and government officials use the same word in Hindi (*punarvas*) to describe both types of re-housing.

[ix] Resettlement plots are now 12.5 or 18 m^2 in size, depending on the date of one's residence proof, whereas they were 50 m^2 in the 1970s. Unlike old resettlement colonies located within the city limits, current resettlement plots are typically more than 30 kilometres away from residents' original jobs and homes, have access to far fewer public services than slums, have few local job prospects, come with mere five year residency licenses (far less secure than ownership or a lease), and have grave health and environmental conditions (see Menon-Sen & Bhan, 2008).

[x] These observations are based on survey instructions from this period, conversations with DDA surveyors in 2005 about their past experiences conducting slum surveys, and interviews with slum residents surveyed in the 1990s.

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[xi] Tata Consultancy Services. (1986). *Delhi Development Authority Organizational Review Study*, *Vol. 1 Proposed Management Information System*, pg. 4.6.

[xii] Ibid.: 4.2-4.4.

[xiii] See note 3.

[xiv] Affidavit filed by Under Secretary, Ministry of Urban Development & Poverty Alleviation in the High Court of Delhi, CWP 2253/2001.

[xv] One indication of this shift toward the judiciary is that by 2000 the courts were responsible for ordering almost all of Delhi's slum demolitions, whereas before that the decision to raze a slum was the almost exclusive domain of the concerned land-owning agency (Ramanathan, 2006).

[xvi] Pitampura Sudhar Samiti versus Government of India, CWP 4215/1995 (Delhi High Court), order dated May 26, 1997.

[xvii] Ibid., final judgment.

[xviii] Ibid., order dated May 26, 1997.

[xix] See note 3, paragraph 24.

[xx] Sewa Hotel and Resorts vs. DDA (Delhi High Court), CWP 15115/2004, paragraph 13.

[xxi] For example, see the order dated February 16, 2001 in Samudayik Vikas Samiti vs. Government of India (Delhi High Court), CWP 6553/2000.

[xxii] This is a component of what is regarded as 'judicial activism': when the judiciary takes over decisions that fall within the domain of the legislature or executive (e.g., see 'Court steps on MCD turf', *The Times of India*, New Delhi, March 24, 2006).

[xxiii] Civil Misc. Petition 6982/2007 (Dayavanti & Ors.) in CWP 4582/2003 (Delhi High Court).

[xxiv] The Report of the Committee on Problems of Slums in Delhi, constituted by the Planning Commission, Government of India, June 2002, confirms this finding: 'DDA claims that 20% of the residential area [of Delhi] is earmarked for Economically Weaker Sections/squatter population under the integrated development project. DDA has not allotted any land to Slum & JJ Department [responsible for slum housing] during 1992-97…. Prima facie, the allocation of land for the housing of the urban poor has been insufficient to meet the requirements, and below the proportion of their share [provided through the Master Plan]' (29-30).

[xxv] Compare this with studies that point to the increased importance of the node of sovereignty in the sovereignty-discipline-government triangle in (post)colonial contexts (e.g. Legg, 2007; Moore, 2005; Prakash, 1999; Watts, 2003).

[xxvi] See note 3, paragraph 22.

[xxvii] Compare with the role of aesthetics in the high-modernist programs explored by Scott (1998, especially Ch. 7).

[xxviii] See *Hindustan Times*, 'A tale of two bridges', January 18, 2007.

[xxix] Almrita Patel vs. Union of India (Supreme Court), final judgment, *Supreme Court Cases* 2000 (2): 679, emphasis added.

[xxx] CWP 6553/2000 (Delhi High Court), order dated February 16, 2001.

[xxxi] See The Indian Code of Criminal Procedure, 1973, Section 133.

[xxxii] Combined demolitions reported by the DDA and Slum and JJ Wing of the Municipal Corporation from 1997-2007 lead to the conservative estimate of 710,000 displaced residents. From 2004 onwards, the Slum Wing has reported only households that have been resettled, leaving the vast majority of the recently displaced unrecorded. If all demolished households were included, this number would likely cross one million.

[xxxiii] See 'SC stays construction in Ridge area in Vasant Kunj', *The Hindu*, New Delhi, May 1, 2006.

xxxiv This aligns with what Foucault said about the inherent dependency and blurring between sovereign, disciplinary and security mechanisms in his first lecture of *Security, Territory, Population*: '… getting these systems of security to work involves a real inflation of the juridico-legal code' (2007: 7).

xxxv This was a sentiment conveyed to me frequently throughout my field research. For example, in a 51 person, in-depth survey I conducted in a slum in West Delhi in 2007, 40 respondents agreed with the statement "In ten years Delhi will have no slums."

xxxvi DDA Annual Reports show that, each year, fewer than 10% of the structures surveyed and given notice for encroaching public land are demolished. This is because the DDA initiates proceedings under the Public Premises (Eviction of Unauthorized Occupants) Act, 1971 only when it intends to use that land for a particular purpose.

xxxvii Interview with Mr. A.K. Jain, May 26, 2005.

xxxviii Interview at informant's office, May 24, 2005.

xxxix The rise of the new middle class in India's post-liberalization period (1991-) has been shaped by a politics of visibility and display in which codes of behaviour and the quality of physical space acquire heightened discursive and representational significance (Fernandes, 2006). The 'intensified circulation of images of global cities through cinema, television, and the internet' (Chatterjee, 2004: 143); the representation of this new middle class in popular culture and state policy as the model citizen of India's grand, 'world-class' future (see Brosius, 2007); and the rapid capitalization of the built environment all contribute to the collective re-imagining of the Indian city.

xl My aim here is not to deny the power of numbers (or maps) to simplify and centralize knowledge (see Asad, 1994; Hacking, 1992; Harley, 2001) or the historical significance of statistics/maps in extending new forms of rule (see Barry, Osborne, & Rose, 1993), especially in colonial contexts (see Appadurai, 1993; Dirks, 2001; Edney, 1997; Prakash, 1999). Nor is my goal to discredit studies that empirically describe how individuals' desires and populations' interests are shaped through numbers (e.g. Miller & O'Leary, 1987; Miller & Rose, 1990). In section III I showed how the slum survey in Delhi operated precisely in this manner through the 1990s. Rather, I have here attempted to consider the dissemination of aesthetic norms as a different type of governmental technology.

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