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An Ethnography of Urban Development in Delhi: The Planning Perspective

DISSERTATION

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for the degree of

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by

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>LIST OF FIGURES</th>
<th>iv</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGMENTS</td>
<td>v</td>
</tr>
<tr>
<td>CURRICULUM VITAE</td>
<td>vi</td>
</tr>
<tr>
<td>ABSTRACT OF THE DISSERTATION</td>
<td>vii</td>
</tr>
</tbody>
</table>

## CHAPTER 1: The Planning Perspective
- The High Cost of Free Parking 1
- The Planning Perspective 5
- The Public and the Private, in Perspective 9
- Kashmere Gate 15
- DIMTS 20
- New Delhi 24
- Internationalist Planning 27

## CHAPTER 2: An Exciting Adventure
- The Ford Foundation in Urban India 32
- Optimism and Optimal Urbanization 36
- Small Towns are Dull Towns, and the Future 42
- The Case for Decentralization: The Netherlands 49
- The Case for Decentralization 52
- Planning and Political Boundaries 62
- Planning and Plans 71

## CHAPTER 3: The Rise and Fall of Bus Rapid Transit in Delhi
- Inauguration of a Demolition 74
- Expertise Indicted 75
- How the BRT Came to Be 77
- Why the BRT Failed 84
- Hard Truths 92

## CHAPTER 4: A Goddess’ Eye View
- Vision 96
- Data Collection 100
- The Data Isn’t Necessary 113
- Little Data, Lots of Understanding 115
- A Vision of Various Futures 121
<table>
<thead>
<tr>
<th>Chapter Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning in Ethnographic Perspective</td>
<td>124</td>
</tr>
<tr>
<td>Planning and Cultural Preference</td>
<td>124</td>
</tr>
<tr>
<td>Planning and Ethnography</td>
<td>125</td>
</tr>
</tbody>
</table>

REFERENCES  
128
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Defense Colony Market</td>
<td>3</td>
</tr>
<tr>
<td>1.2</td>
<td>Chandni Chowk today</td>
<td>18</td>
</tr>
<tr>
<td>1.3</td>
<td>Kashmere Gate Interstate Bus Terminal (ISBT)</td>
<td>19</td>
</tr>
<tr>
<td>1.4</td>
<td>Office cubicles of DIMTS’ Transport Planning group</td>
<td>24</td>
</tr>
<tr>
<td>1.5</td>
<td>New Delhi Secretariat buildings</td>
<td>27</td>
</tr>
<tr>
<td>3.1</td>
<td>The beginning of Delhi’s defunct BRT corridor</td>
<td>77</td>
</tr>
<tr>
<td>3.2</td>
<td>Cars drive in the bus-only lane of the BRT</td>
<td>83</td>
</tr>
<tr>
<td>3.3</td>
<td>Pedestrians cross in front of a Delhi bus</td>
<td>94</td>
</tr>
<tr>
<td>4.1</td>
<td>Shashwat explains the road survey to two enumerators</td>
<td>101</td>
</tr>
<tr>
<td>4.2</td>
<td>Chirag reviews a bus survey</td>
<td>104</td>
</tr>
<tr>
<td>4.3</td>
<td>An enumerator counts vehicles entering Naina Devi at Toba chowk</td>
<td>107</td>
</tr>
<tr>
<td>4.4</td>
<td>Shashwat and Chirag hiking from Kot Khas village</td>
<td>109</td>
</tr>
<tr>
<td>4.5</td>
<td>A staircase in Naina Devi, with the temple in the distance</td>
<td>111</td>
</tr>
<tr>
<td>4.6</td>
<td>Chirag’s map of Naina Devi</td>
<td>112</td>
</tr>
</tbody>
</table>
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ABSTRACT OF THE DISSERTATION

An Ethnography of Urban Development in Delhi: The Planning Perspective

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This dissertation offers an ethnography of urban development in Delhi, told from the perspective of urban transportation planners. This planning perspective entails a network approach to the city: a way of seeing cities as aggregates of human activity. Such a perspective creates an inherent distance from the individual experiences of urban residents, which renders planning vulnerable to critiques of cultural inappropriateness and insensitivity. Recounting the history of Delhi’s first Master Plan, the rise and fall of Delhi’s Bus Rapid Transit corridor, and the work of two Delhi planners working as consultants in a small Himalayan town, this dissertation seeks to complement ethnographies of cities and planning that critique planners and planning for misguided hubris and power plays made at the expense of individuals and communities. What these ethnographies miss – and what ethnography of place, perhaps, misses – is that localized interests and perspectives can be unjust in their own ways, because they don’t consider the effects on neighboring communities ‘down the road’ or the city as a whole.
CHAP 1: The Planning Perspective

The High Cost of Free Parking

Defense Colony is a lush neighborhood of south Delhi, where asoka trees line broad sidewalks and banyans create a canopy of shade above streets of large, boxy, multi-family homes. In the Defense Colony market, a rectangle of commercial development, restaurants and cafes, coffee shops and bars, clothing boutiques, toy stores, and stationary and electronics shops fill narrow two- and three-story storefronts. The carts and offerings of kebab, fruit, flower, newspaper, and cigarette vendors spill out on the market’s sidewalks, and, running through the center of the market, a small park of green grass offers benches for sitting. The southwest corner of the market opens into an oblong parking lot where a uniformed parking attendant hovers to collect parking charges from shoppers who have come by private vehicle. It was here that my fieldwork began on a balmy day in June, and it was here that I first confronted the challenge of seeing the city like a planner while also studying its planning as an anthropologist.

I had tagged along with a fellow anthropologist to the market that day, chauffeured by a driver at the wheel of an American Institute of Indian Studies vehicle: a free ride for both of us, facilitated by an institution that supports researchers like us. As she ran into a pet store to have passport photos taken (such is the multi-disciplinary entrepreneurialism of Delhi shopkeepers), I waited in the car with our driver, Mr. Prakash. As we idled, the market’s parking attendant came and asked Mr. Prakash to pay the parking fee. He responded that we wouldn’t be long, but the attendant was insistent. Still dazed from jet lag, I hadn’t been paying too much attention. As Mr. Prakash pulled out of the parking area, he said to me, “chakkar lagana” (We’ll have to drive around).
Without thinking, I replied, “chakkar lagane main kya faida?” (What good will driving around do)?

He replied that the parking attendant was asking for 40 rupees, or about $0.60, and left it at that.

The solution, in other words, was self-evident: it was better to drive around for a few minutes and return for my colleague than to stay and pay for parking. That I had questioned this common sense in the first place, I realized then, belied both a different sense of self and a different standard of evidence. I could certainly remember thinking of parking fees as an inconvenience to be avoided, as Mr. Prakash did, but they had come to represent something quite different to me. Like a sommelier learning to identify a wine’s terroir from taste alone, as well as how to pair it with food, I had spent two years training to see the small costs of operating an urban transportation system as the legs, aromas, acidity, and body of effective urban planning and policy-making. Parking fees are certainly an acquired taste, and as an urban transportation planner, I balked not at the cost of parking but at the less obvious costs of driving around instead of paying.
As a student of urban planning at the University of California, Los Angeles, I’d studied with Dr. Donald Shoup, an internationally recognized guru of parking policy. An economist by training, Shoup has spent a lifetime studying parking and its effect on cities and transportation systems. After decades of research, publication, and persistent tweaking, his ideas have been embraced around the world as a high watermark in urban policy, making him a darling of urban policy nerds and transportation planners alike. Taking the old economists’ adage that “there is no such thing as a free lunch,” Shoup has built a legacy by showing that, contrary to what children learn playing the board game Monopoly, “there is no such thing as ‘free’ parking” (Shoup 2011, 1). His 750-page book, The High Cost of Free Parking, has become a bible for progressive urban planning around the world.

It was Shoup’s classes that first introduced me to the idea of planning cities according to market principles, using pricing to manage common public resources. In a Microeconomics
class, for example, he recounted his struggles with local bus operators and the UCLA administration to offer students free rides on local buses: cash-strapped students would travel free with just the use of their student identification cards, and the University would pay transit operators directly in bulk for students’ trips. Wealthier students paying full tuition would, in turn, help subsidize the transit fares of students with fewer resources receiving financial aid and scholarships. Additionally, the university would benefit from increased transit use and reduced traffic congestion around campus. In such ways, Shoup sought to find win-win solutions to stubborn public policy problems.

One of Shoup’s influential findings was that up to 80% of urban traffic congestion is caused by people that are looking for free curb parking rather than traveling, per se. Free and artificially cheap curb parking, according to Shoup, “presents a classic ‘commons’ problem”: instead of livestock competing for scarce grass, as in the centuries old articulation of the economic phenomenon resurrected by Garrett Hardin, “drivers compete in their search for scarce curb parking spaces” (Shoup 2011, 7). Such a commons problem arises, according to Hardin and Shoup, because the nature of a commons is that, without pricing, individuals have no incentive to practice self-restraint. Every individual is incentivized to maximize his own use of the commons, because there is no cost to them. Inevitably, however, the sum of every individual’s maximizing efforts is a commons ruined for all. Even Hardin’s analysis included an example of parking to bring the example of livestock overgrazing into modern perspective. In a broader sense, Shoup’s ideas about free parking can be applied to the road network as a whole: while driving a private vehicle is not free of costs, most individual vehicle owners don’t think about the marginal cost of each trip taken, or every mile driven. Because the vehicle and even the fuel that runs it feel like
past costs already paid, individuals are incentivized to make the most of the money they’ve spent. Traffic congestion, in this view, is another example of common infrastructure overgrazed by individuals each acting in their own interests.

The Planning Perspective

In the parking lot of the Defense Colony market, my response to Mr. Prakash reflected this training with Shoup and this view of common infrastructure. Reflecting on my response forced me to confront my own expertise as a planner who thought about the city in the aggregate and with some distance from my immediate surroundings. As we cruised to avoid paying for parking, I imagined the implications of replicating such behavior across Delhi’s 8.5 million registered vehicles. Mr. Prakash interpreted my question in terms of his own perspective as a driver, and in terms of my experience as a passenger. He understood my question to mean ‘what good will it do for us’ to drive around? But I was thinking on a different scale. I meant: what’s the benefit to the public of making us drive around, while we waited for a passenger to run a quick errand? We were overgrazing the crowded common roads in order to avoid a small fee.

The perspective that I brought to the issue of whether to pay for parking or drive around the block is one that forms the central theme of this dissertation: that urban planning, and transportation planning in particular, entails a network approach to the city, or what I call a planning perspective. This city-wide perspective considers how people and places are connected, and how the movement of people in one place affects the movement of others somewhere else, as well as how changes to one area of the city can have repercussions ‘down the road.’ The planning perspective considers how individual actions
aggregate across a system, in both space and time. Planners are trained to ask not just how a change to the network will affect conditions as they exist in the present time but how those changes will affect the future of the network. Importantly, though, this perspective necessarily discounts the experiences of individuals. Just as I failed to connect with Mr. Prakash’s experience as a driver acting reasonably to save himself 40 rupees, so transportation planners are often unsympathetic, or unaffected, by individuals’ experiences of traffic or transit. This does not mean that planners don’t also rely on anecdotal and subjective information in their decision-making, including their own experiences in a place. But how they reconcile such subjective information with the planning perspective is a significant part of the work of planning and also fuels much of the political conflict over planning for transportation infrastructure.

The word perspective has roots in both French and Latin and has referred to the science of refraction and optics, as well as the art of making mirrors. There is a sense of sleight of hand that the word carries with it, though not necessarily of dubious intent. As a noun, it can refer to the appearance of three-dimensionality in a two-dimensional drawing or painting. In other words, an optical illusion intended to imitate, or illustrate, reality. This seems an apt description for the planning perspective, as planners have only simplified pieces of the city to work with; data collected through fallible means and software and other tools that simplify in order to represent and model the complexity of urban life, as well as an unknowable future. Their reports also attempt to represent the complexity of reality through simplified metrics and standards of analysis: two-dimensional numbers, charts, and prose intended to represent diverse urban movements. The same can be said of ethnography, however; and while the methods of analysis that planners use differ from
those of anthropologists, there is a kinship in how the two fields think about urban social and technical systems.

It can be easy to see the simplified representations and models that planners write about as intentionally abstruse and obscurantist. Several of Shakespeare's plays refer to perspectives as figures designed to appear distorted except when viewed from a certain position. Likewise, the kinds of decisions that the planning perspective gives rise to can feel nonsensical or even unjust to individuals and communities in any one part of the urban network. And no doubt, the planning perspective often does contribute to nonsensical and unjust planning decisions in Delhi and elsewhere. This dissertation therefore offers a kind of secular theodicy (Herzfeld 1992); an ethnographic approach to reconcile the disappointments of planning with its intentions. What I show here is that perceptions of planning are more often than not just that: perceptions of a perspective that does not translate well to individual experience, or that needs to be viewed from the proper angle to be seen and understood. Ethnographies of cities and planning have historically adopted this individual perspective, critiquing planners and planning for misguided hubris or power plays made at the expense of individuals and communities. What these ethnographies miss – and what ethnography of place, perhaps, misses – is that localized interests and perspectives can be unjust in their own ways, because they don't consider their effects on neighboring communities or the city as a whole.

Perspective can also refer to the act of investigation, or even to looking through something. It can refer to an individual's point of view, as well as to an understanding of the relative importance of things; a sense of proportion or context. It can refer to a mental outlook or anticipation of the future. All of these connotations are useful in understanding
the work of transportation planning. Planning decisions can often seem arbitrary, and political and bureaucratic conditions often contribute to some level of arbitrariness in planning, but the network approach of transportation planners exists for a reason and deserves to be understood and critiqued on its own terms. The ethnographic accounts of planning included here illustrate this planning perspective, as well as the challenge of communicating that perspective to individuals who espouse a local view.

To put things into perspective – either in space or in time – is to put them in context. Doing so might also require an illusion and no small amount of reduction. In this sense, the planning perspective has something in common with ethnography, which attempts to describe culture by constructing a narrative of context out of observations made in a limited capacity. Perspective can also be disorienting; the same thing may appear differently to different people, depending on the context in which they view that thing, or the context they bring to that viewing. Inherent is a sense of distance from the thing itself. To put something in perspective has a positive connotation, denoting a sense of proper balance. But distance may also give a false sense of perspective, and something observed at closer range may turn out quite differently.

Drawing on my dual training as a transportation planner and anthropologist, I conducted over 22 months of archival research and ethnographic fieldwork among planners and policy-makers, transit riders, and tech entrepreneurs in Delhi, India. During this time, I spent 10 months conducting participant observation in the Transport Planning group of DIMTS (Delhi Integrated Multi-Modal Transit Systems, Ltd.), a Delhi-based transportation firm, where I followed planners in their efforts to understand urban travel patterns and envision future infrastructure improvements. I followed them in their own
fieldwork collecting data and meeting with stakeholders, as well as in their statistical analysis, computer modeling, report writing, and recommendations. I also met with students and faculty and sat in on transportation planning classes at the School of Planning and Architecture in Delhi, where I marveled at how similar the classes and content were to what I had learned in my own planning classes at UCLA: a tribute to the transportation of expertise across national and cultural boundaries. I attended professional and trade conferences in transportation, where I saw presentations by researchers, government officials, and vendors in the industry. I rode buses, auto-rickshaws, and the metro; hailed rides via Uber and its Indian counterpart, Ola, talking to these drivers in the new sharing economy; and took every opportunity to walk in my travels around the capital city. I spoke with planners at the highest levels of planning and policy-making in Delhi’s various planning agencies, as well as retired planners working in advocacy and research. I spoke with traffic police and spent time observing their work out on the street, enforcing traffic laws. I visited archives in the United States and in India, collecting artifacts of Delhi’s planning from the 1950s to the present day. To this ethnographic work, I also bring my own training and experience working as a transportation planner in Los Angeles.

The Public and the Private, in Perspective

What my miscommunication over parking and cruising in the parking lot of the Defense Colony market highlighted was a difference in perspective that I would see play out in my fieldwork on a regular basis. One project meeting is instructive. The Ministry of Road Transport and Highways (MORTH or the Ministry) had contracted DIMTS to develop a manual for planning and designing multi-modal transit stations. In most Indian cities,
transit modes are institutionally siloed and lack coordination. City bus operators plan their own routes and build their own stops and stations. Rail and metro operators do the same. Meanwhile, state corporations operate inter-city buses, while a slew of yet more entities plan, build, and manage urban road networks. It's not easy to take a metro to an inter-city bus station, for example, or to find the right bus when departing a train station. DIMTS was created with a vision of integrating these various modes for a more seamless transit system (the IMTS in DIMTS stands for Integrated Multi-Modal Transit Systems), but they don't always get opportunities to do such work.

In this case, Ashvini Parashar, who leads DIMTS' Business Partnerships department, had pitched the manual idea to the Ministry: a standard process and step-by-step instructions for planning multi-modal terminals in any size and type of city across the country. Ashvini was inspired by his experiences in the western state of Gujarat, where he had seen a couple new multi-modal stations. They'd been built with public and private money - managed as Public Private Partnerships (PPP) - but, according to Ashvini, they'd gotten the balance of public and private wrong. Public spaces meant to integrate multiple modes of transportation and to serve the public better, these stations were funded, in part, by private retail vendors willing to pay for the premium location of a busy transit hub. The private retailers helped subsidize the public transit transfer points, but Ashvini saw that the stations had been designed in a way that wasn't working. The stations weren't designed effectively, and the retail shops were actually getting in the way of travelers transferring from one mode to another. The stations created more of the same chaos, rather than streamlining the process, in his view. The private players were obstructing the public space. Ashvini worried that more cities, inexperienced in multi-modal integration, would
build unsuccessful stations like those he’d seen, so he recommended that the Ministry contract DIMTS to develop guidelines for multi-modal station planning. The Ministry was persuaded by his pitch and nominated the project.

The multi-modal manual project therefore brought together within DIMTS experienced PPP managers (the Business Partnerships, or BP, group) and planners (the Transport Planning, or Planning, group), as well as urban design specialists from a national urban think tank (what I will refer to as “Design”). Among other things, their discussions involved clarifying how a planning perspective differs from a design perspective.

In this project meeting, six men were seated around a conference table, making their way through cups of tea with biscuits: two from the BP group, two from the Planning group, and two from Design. Ashvini led the discussion and also moderated between the planners and the designers. Samir Sharma, head of the Planning group, spoke on their behalf. Design consisted of two young freelance designers, who I will call John and Aditya. Ashvini had told me he’d brought them on board, because he thought they’d work harder than designers with more experience and prestige. Together, these three groups outlined an order of operations for both the manual and their own work writing the manual: first would come guidelines for assessing the location of an existing or proposed station within a metropolitan area. The Planning group would take responsibility for these guidelines. Next, the Design team would take responsibility for outlining steps for laying out and designing the station itself.

They discussed a similar manual that an architecture firm had recently developed. Its guidelines were limited to the station design and lacked a broader assessment of site location, or station planning. Everyone in the meeting agreed that the manual served as a
useful anti-model for their own; an example of what not to do. Full of beautiful charts and countless categories to be considered in station design, its comprehensiveness overwhelmed while failing to give hard and fast figures on which to base decisions. Putting his hand on the manual, Ashvini said, “I don't like this, because it's qualitative. I want quantitative guidelines. There’s no such thing as accha (good) and boora (bad).” What he wanted was a simple mechanism for scoring and planning a station based on location and design. He wanted the manual to offer a decision matrix in a three-by-three grid: comprehensive but simple. They couldn’t afford ambiguity or interpretation, because untrained local officials in small cities across India would be planning new stations using these guidelines. On a scale of 100 points, he decided, Planning would come up with 60 points for assessing and selecting a site location, and Design would come up with 40 points to assess and guide a station’s layout and design.

They began to discuss what would guide such an assessment. “I will tell it from connectivity, from the transport perspective,” said Samir.

John, one of the designers, began thinking out loud, imagining what might qualify for inclusion in this scoring system. “If there are three access roads versus two, if it’s attached to a ring road…”

Samir interrupted him. “That’s a connectivity perspective. You think from your perspective.”

Aditya, the other designer, began to clarify the difference between planning and design: “There is bus flow, passenger accumulation, terminal access, and urban design.” These are features to be taken into consideration for the design of the station itself. How will buses move through the station? Where will passengers wait? How will other vehicles access the
station? What other features of the surrounding area should be taken into consideration?
But planning operates on a different level. He continued: “The guidelines we’ve read stop short here, and this is where it gets complicated. For example, the relationship between terminal size and number of people who accumulate at the terminal.” He was gesturing toward what planners refer to as demand. How would they know how many people and vehicles would be using the station? It is a more foundational question than how the building can be integrated into the architecture of other buildings in its vicinity and how it should be laid out.

Ashvini, recognizing such relationships as the purview of Planning, turned to Samir, saying, “We need this. In airports, they have these kinds of guidelines. How can we determine these volumes?”

“That is not a problem,” said Samir. “There will be parameters. For example, the occupancy of buses. Based on those occupancy ratios, we can determine how much space is needed.” He began to explain the process of forecasting demand and sizing a station accordingly. He explained that there are standards and guidelines for such decisions. “If you have money, you can do the survey. If you don’t have money, you can use these guidelines.” But then he zoomed out to bring the conversation back to a planning perspective. “The focus should be on the size of the city first of all, rather than multiplying all of these factors.”

John chimed in then, reiterating Aditya’s earlier point, “These guidelines that we’ve read are based on the architecture, urban design perspective.”

Bookended by the designers’ attempts to distinguish their own perspective and purview, and that of the anti-model manual, from those of the planners, this exchange helps
to articulate the planning perspective that I found myself unwittingly giving voice to in the parking lot of the Defense Colony market and that Samir’s comments help illustrate. As designers, John and Aditya put themselves in the position of transit station users. They imagined how someone accessing the station from various modes and with various individual concerns would move through and use the space. They were thinking in terms of qualitative assessment: like the manual that they didn’t like, their recommendations would be informed by the qualities that make a space efficient and effective, as well as pleasant for individuals passing through it.

But as John was imagining the station’s access roads and how they would account for a station located on a major arterial road versus smaller neighborhood streets, Samir interrupted him to enforce a boundary between his work, as a transportation planner, and John’s work as a station designer. “That’s a connectivity perspective,” he said. “You think from your perspective.” In other words, Samir considered the walls of the station and the boundary of its site as the limit of the designers’ scope of work on the station guidelines. His own scope opened up onto the entire urban road network. His inclination was to begin not with a plot of land but with the city as a whole. To look at travel patterns across the network and bus occupancy across transit lines. Then to use standards for determining the necessary size of the station and to find the best location.

For planners to put themselves in someone else’s shoes for the sake of planning is a more fraught exercise than it is for designers. Rather, they learn to see cities as systems; complex networks in which equilibrium is a theoretical but aspirational state and in which every movement or intervention has an effect. Movement through a network can only be understood in the aggregate and often in probabilistic terms, while every decision has an
opportunity cost; the cost of foregone paths. Understanding the network eschews an individual user’s perspective, which is inherently limited and, therefore, biased, because what’s good for one person is not necessarily (and, often, by definition) not good for everyone together, or for the system as a whole.

What I experienced in my interaction with Mr. Prakash, and what I saw frequently in my observation of planners in action, was a negotiation of this planning perspective with the perspective of individual users. In this case, Samir was thinking in terms of the planning perspective and why a multi-modal transit station has to be seen, first and foremost, from a citywide network perspective. The designers, John and Aditya, were thinking in terms of individual users. Their perspective was limited to the site itself and how users would move through the space of the station, as well as how the station would fit in with its immediate surroundings, in terms of a local and architectural aesthetic.

Kashmere Gate

In 1638, the Mughal emperor, Shah Jahan, called for the construction of a new imperial capital. Shah Jahan was a cosmopolitan aesthete that instructed his servants to read to him from his favorite travel books, biographies, and histories as he fell asleep each night. He was a dreamer in his waking life, too. In the existing capital, Agra, he had replaced the palace’s red sandstone walls with white marble. In the palace courtyard, where emperors before him had met three times a day with the inquiring public, he had built a throne alcove of white marble inlaid with precious stones, where he sat at a height above most men’s heads. Stretching out before him, he installed 40 pillars of red sandstone painted white in order to dramatize and humble all those who approached the throne.
Across the river from the palace, he commissioned the Taj Mahal as a tribute to his wife, who had died in childbirth. But the emperor had grander plans still and was bored with his available urban canvass.

Agra’s lanes were narrow and crowded with merchants. They could not accommodate the grand processions that he felt were his due. Peter Mundy, a British merchant traveling through Agra in 1632, described one of Shah Jahan’s imperial processions: the emperor rode horseback in the midst of a moving sea of elephants outfitted in velvet and gold, flags and streamers, like “a fleet of ships” among thousands of other horsemen and men on foot (Beach and Koch 1997, 86). But Shah Jahan felt that the city’s lack of overall formalism was cramping his style (Noe 2002). Though he had never seen them himself, Shah Jahan envied the grand market boulevards of Isfahan, the capital of the neighboring Safavid empire (Gole 1993, 100; Gupta 1993; Noe 2002). There, the emperor Shah Abbas had redesigned the city’s bazaars so that market lanes were wide and orderly, arranged octagonally and covered as arcades (Gupta 1993, 28). Agra’s merchants, however, refused to accommodate Shah Jahan’s plans to widen the capital’s streets, so he commissioned his architects and engineers to build a new capital elsewhere (Spear 2002, 26). On May 12, 1639, he laid the foundation stone for a new imperial capital in what became known as Shahjahanabad and is now Delhi.

The new capital would serve as a monument to Shah Jahan’s rule. Its walled palace - a veritable city within a city - overlooked the Yamuna River from its southwestern bank, one hundred miles north of Agra. To the west of the palace, Shah Jahan built the largest mosque in the empire, the Jama Masjid, and running parallel between these two focal points - the palace and the mosque - were two wide boulevards lined with shops selling
luxury goods from around the world and canals that circulated cool air through the bazaars. The most famous of these was Chandni Chowk, the Moonlight Square. As a whole, the capital presented a picture of imperial order, wealth, and achievement.

During my fieldwork, I would pass Chandni Chowk almost everyday, underground, riding the city’s metro. As I sat in the cool air-conditioned compartment at the front of the train - for ladies’ only - I would often think about how much had changed in 400 years and how much hadn’t changed at all. In Shah Jahan’s time, Chandni Chowk was a place to see and be seen. It was a place to stroll. Now, the underground metro was a place to see and be seen; an air-conditioned escape from the city’s heat and rain, where friends and lovers find refuge and individuals forge global identities by association with the modern infrastructure (Butcher 2011). Like Chandni Chowk, the metro was also, in part, the brainchild of a charismatic man given extraordinary powers to push through a major disruption and, importantly, modernization, of the city’s infrastructure. In doing so, he became revered for his own brand of authoritarian and mystical leadership (Sadana 2010). As I rode the metro each day, Chandni Chowk was not my destination. Instead, I hurled forward at up to 80 miles per hour deep beneath the trodden ground of that old city, headed towards one of its outer gates.
The walled city of Shahjahanabad contained fourteen gates, each named for the distant city it connected by road: Delhi, Turkmen, Ajmere, Lahore, and so on. In the northeast corner of the city, near the river, is Kashmere Gate, connecting the city along the Grand Trunk Road that crosses the subcontinent. In this way, the city’s boundaries were defined by its place in a vast imperial network of other urban markets. It was at these gates that traders would stop to pay their taxes: the price of accessing urban markets.

Stepping out of the metro train at the Kashmere Gate station, I would enter into a sea of human bodies: at times almost carried up the nearest set of stairs from the platform and through a long hallway. At other times, prevented at every step by groups of travelers
laden with luggage, assisting elder members or young children, or else just men of all ages walking slowly or aimlessly, lost or uncertain. In the hallway upstairs, I would pass a flashing diagram of the metro system, where every day, young men would stop - in their rush - to observe and wonder at this man-made system or simply to orient themselves and plan their next transfer. From there I’d turn and cross a river of people flowing down to the yellow line, from whence I’d arrived. And up I’d go. Another staircase. Through another hall, dodging bodies here and there with split second precision. Past several ATMs and snack shops, until I saw the grand yellow arches of McDonalds. There I would descend a final set of stairs, swipe my metro smartcard through the exit gate, and walk out into the open air. Next door to the metro station is the Kashmere Gate Interstate Bus Terminal (ISBT), a modern building seven stories tall with narrow windows and vertical panels that give it a dated geometric look.

Figure 1.3 Kashmere Gate Interstate Bus Terminal (ISBT) (Photo by Paroma Mukherjee)
From the metro station flowed travelers, suitcases and bags in hand. Often I’d see two women or two young men carrying a bag between them, a strap in each of their hands. Every day I had the feeling of embarking on a journey. Ethnographies often begin with an arrival story. My days began with departure: everyone around me leaving to go somewhere. I’d walk amongst them, swept up in the anxious pace, up the smooth new ramp with the inviting sign that says “entry for the differently abled” and into the lobby of the bus terminal. There, I’d leave the crowd of travelers and turn right to the offices of DIMTS. They would continue on through the station and down to their buses, off to places far away.

**DIMTS**

The ISBT and its upper stories of offices is owned by the Delhi Transport Department, a government agency of the city-state. As a firm, DIMTS occupies a unique position in urban development: half public, half private, it was created by the Delhi Transport Department with funding from IDFC, a public infrastructure investment firm. At the time of its creation, DIMTS’ purpose and future was still somewhat uncertain. Some envisioned it to be a metropolitan transportation agency, overseeing and integrating the capital region’s many modes and systems. Others saw it as a supplement to the Transport Department, which lacked planning expertise and was hamstrung by public sector hiring and firing regulations (both are difficult and cumbersome). In creating DIMTS, the Transport Department was able to outsource expertise that was otherwise unavaible. DIMTS’ relationship as tenant in the Kashmere Gate ISBT building is symbolic of its relationship with the Transport Department more broadly, as it has evolved over time: when it was first created, many
Transport Department staff migrated to DIMTS and helped create strong ties between the two. Over time, DIMTS has become more autonomous, with less and less of its work coming from the Transport Department. Instead, the Transport Department seems happy in its role as landlord.

On the ground floor of the ISBT are DIMTS’ administrative and executive offices. On the wall above a set of black leather couches for waiting visitors is a map of Delhi’s multi-modal future: a map included in a 2005 Plan for the metropolitan area that includes 43 transit corridors: six metro lines, 26 “at-grade High Capacity Bus System, HCBS,” lines (better known as Bus Rapid Transit lines), six elevated light rail lines, three elevated monorail lines, and two corridors of IRBT, or Integrated rail-cum-bus transit, totaling over 350 miles of new transit infrastructure. The first time I visited the office, this map felt like an optimistic promise for the city. By the time I’d finished my fieldwork, it felt like a dusty relic and a sad reminder of the impossible gap between plans, their aspiration, and their actual implementation. The map seemed to represent the promise of DIMTS, as well as its commitment to the national capital region. Another of my professors at UCLA liked to talk about his “map theory” of planning: that you can know a planner’s frame of reference by the extent of the map mounted in his or her office. By the look of this map, DIMTS was holding onto a vision of Delhi’s future that had been derailed for years. The firm had yet to update the vision and purview it intended for itself.

DIMTS’ current CEO described the role of the firm to me as one in which they nudge the government along to do the right thing. But in my time with the DIMTS Transport Planning group, they did very little work in the capital area. Delhi’s Transport Department and its elected officials seemed to have different ideas about how to move forward with urban
development. Instead, DIMTS’ transportation planning work took them to Himachal Pradesh in the north and Jharkhand in the east, Tamil Nadu in the south, and even internationally to Sri Lanka and Ethiopia.

Ashvini’s Business Partnerships group and Samir’s Transport Planning group are just two of several that make up the 600-person firm today. The Business Partnerships group is located on the fourth floor of the ISBT building, where Ashvini’s office door is always open, and he can be heard across the floor convening brainstorming sessions and making exclamations about new ideas. He is an energetic manager. The Transport Planning group’s offices are located on the sixth floor of the building, where an inner circle of cubicles is home to five or six of the group’s newest and least experienced planners. They are, for the most part, one or two years out of Masters programs in planning. In a wider ring of cubicles circling the junior planners sit the middle planners, in ones and twos. These planners graduated with planning degrees three or more years ago, and several have had jobs at other planning and engineering firms prior to joining DIMTS. Shashwat, for example, had been working with the group for three years. He smiled easily and was always willing to explain his work. The walls of his cubicle were decorated with printouts of quotes: “Our character is what we do when no one is looking. (It includes disturbing any item on this desk and also not putting any item taken back in its place at end of the day),” read one.

Another: “A second chance doesn’t mean anything if you haven’t learned from your first mistake.”

“Everyone dies, but not everyone lives.”

“The mind is everything. What you think, you become. - Buddha"
Shashwat once shared with me an article he’d written for a motorcycling blog, about a long-distance trip he’d taken through Kashmir. He rode his motorcycle to work and, sometimes, for various festivals, he would ride it all 200 miles home, to Madhya Pradesh, on the border with both Rajasthan and Gujarat. In February, Shashwat got married, and I traveled with others from the office to attend his wedding. Chirag was in his first year working with DIMTS but had spent a year at an international civil engineering firm before joining. He was smart and always well-dressed. His desk was neat and tidy, but Chirag was nervous, too. He held himself to a very high standard.

Lining the outer walls of the floor are glass-paned private offices for vice presidents. Samir Sharma is the patriarch of the group. A man in his late forties, Samir has a round face and straight black hair that he occasionally brushes off his forehead, giving the impression of someone who would like to keep his hair shorter and less bothersome but who is both too busy and too practical to get it cut more frequently. Samir speaks with a professorial tone and demeanor, almost always in teaching mode. The first time I met Samir, he excused himself ten minutes into our conversation to attend to something. When he returned, he resumed the conversation precisely where he’d left off. It’s not surprising that he also teaches at the School of Planning and Architecture, from which many of DIMTS’ planners have graduated. He is a careful man, as well as a caring one. But one who is also deeply pragmatic.
Another of the outer offices belongs to Anand, the other vice president of the group. In contrast to Samir's calm demeanor, Anand exudes a nervous energy. A thin man, his eyes move quickly when he speaks, while his words often trail off at the end of sentences, not always finishing his thoughts. Anand doesn't really live in Delhi. Rather, his family is settled in Bangalore, where he would occasionally return for a couple weeks at a time in between projects. Otherwise, he seemed to be constantly on the move: flying out for stakeholder meetings in Sri Lanka, Chattisgarh, or Jharkhand.

**New Delhi**

In 1803, the East India Company took over Shahjahanabad with the Treaty of Surji Arjungaon. After much of Shah Jahan's city was demolished in the wake of the Indian
Rebellion of 1857, the British remade the city in their own civic fashion. In a pamphlet for their 1911 durbar in Delhi, the British referred to the city as the “Rome of Asia” because of its many reconstructions (Chandra 2002, 9). It was there that King George V (the first and last British king to visit India) announced that Delhi would become the new imperial capital; what would become the twelfth capital on that site and serve as a showcase for their imperial rule (Legg 2007, 28–39). The move was equally an attempt to save face and stave off nationalist unrest in Calcutta. Six years prior, in 1905, Lord Curzon, the Viceroy of India, called for the Partition of Bengal into East and West as an effort to divide the population along caste and religious lines. The partition stoked nationalist desires and brought fierce resistance. At the 1911 durbar, King George V announced the reunification of Bengal as consolation for the region’s loss of the imperial capital (Johnson 2010). Shah Jahan would not be the last ruler to shift his capital to avoid unrest.

The British chose to locate New Delhi south of Shahjahanabad’s walls. They brought Edwin Lutyens and Herbert Baker to design the new imperial capital. Lutyens was well known in the garden city movement. He had worked on Hampstead Garden in northwest London in 1906. Herbert Baker had experience designing colonial capitals, as in Pretoria, South Africa. The garden city movement began in the United Kingdom at the end of the 19th century, in response to the industrialization of cities and the burgeoning of slums. Inspired by the experimental possibility of settler colonialism (despite his own failed attempts to prosper as a farmer in the American mid-West), Ebenezer Howard was a lower middle class stenographer who penned the movement’s manifesto. Living with his family in a small flat in London, he wrote To-Morrow: A Peaceful Path to Real Reform, republished in 1902 and made famous as Garden Cities of To-morrow (Khosla and Rai...
His urban reforms - in the form of planned urban models - sought to harness the best of the urban and the rural in one place: the productivity and employment of cities with the healthy air and greenery of rural areas. Howard called his garden cities “home colonies.” It is perhaps no surprise, then, that his ideas inspired the re-making of colonial cities such as Delhi.

Influenced by Howard’s ideas, Lutyens and Baker also took inspiration from other world capitals, such as Paris and Washington, in designing New Delhi. The new capital would feature a grand Viceroy’s house and Legislative Assembly, Secretariat buildings, and an All-India War Memorial Arch, in an architectural style that would blend British and Indian design. The city would have wide boulevards and ample open space, both to maintain clean air and light as well as to provide beautiful perspectives on the grand state architecture. Cars were still a rare luxury of the rich at that time, and only two Indians owned them (Gupta 2002, 58).
Internationalist Planning

Planning was not simply a mechanism of colonial social control in South Asia; since at least the time of Shah Jahan, Delhi’s rulers had sought to use physical planning to influence the trade of urban merchants and inspire awe in the power and prestige of their empires. Indian nationalists also saw planning as a tool of political and economic change in the decades preceding Independence. The Congress party created a National Planning Committee in 1934, chaired by the movement’s champion of science and technology and future Prime Minister of the newly independent state, Jawaharlal Nehru. Objective planning was a rational response to the self-interested activity of British colonialism, which, according to nationalist historians, had deindustrialized India (Prakash 1999). Through the
National Planning Committee, Congress began to prefigure itself as the state (Chatterjee 1994; Prakash 1999).

India needed planners and technical experts. In 1944, the colonial government started sending Indians to universities abroad and founded five Indian Institutes of Technology (IIT) in Bombay, Calcutta, Delhi, Kanpur, and Madras (Bassett 2009). Many of these highly educated Indians returned to work and lead the new IITs. Recognizing the shortage of urban planning specialists in the country, Nehru recommended an American city planner, Albert Mayer, to head the initiative for planning Chandigarh, the new capital of Punjab, a state split by Partition (Banerjee 2009). Mayer had spent some time in India; having served in the US army there during World War II, he became involved in rural development projects and met Nehru. Mayer impressed on him the importance of urban planning (Banerjee 2009).

Mayer’s approach to planning the new Punjabi capital involved a kind of proto-ethnography. He recognized that creating a city out of rural countryside would mean imposing urban living on rural farmers. He modeled the new city on the concept of neighborhood units, meant to mimic and extend the community of a village within the city. Recognizing the diversity of modes of transportation, he designed for pedestrian footpaths and cycle paths separate from higher speed automotive roadways. The project team’s architect died tragically in a plane crash returning to India, however, and Le Corbusier was hired as his replacement. Le Corbusier eliminated the separation of pedestrian paths, enlarged Mayer’s concept of village-size neighborhoods, and increased the density of the city. He replaced Mayer’s meandering streets with a strict geometric grid. Mayer and the
others resented the changes, and Le Corbusier has been credited exclusively with the city’s
design ever since (Banerjee 2009).

In addition to leaving Punjab without a capital, Partition sent tens of thousands of
migrants and refugees to Delhi, which began to buckle under the pressure of such rapid
population growth. Chapter 2 explores the history of Delhi’s first Master Plan, an effort to
address this influx of refugees, as well as new central government employees. Delhi
planners developed the Master Plan with the help of a team of American planners, under
the auspices of the Ford Foundation, and led by Albert Mayer. In recounting this history,
the chapter describes the optimism and idealism of this team of Americans working in a
newly independent India. Mayer, in particular, was enamored of India’s socialist leanings
and its “planning mindedness.” He and the other Americans hoped to make a substantial
contribution to the “exciting adventure” that was India’s fledgling democracy and its
pioneering attempt to marry national economic planning with physical urban planning.

Together with their Indian counterparts, they sought to demonstrate the potential
of their profession to do good for the 370 million citizens of India. In the course of their
work, however, they wearied of elected and appointed public officials unwilling to commit
to difficult choices; who wanted the benefits of planning without the difficult tradeoffs and
the investment of time and resources that planning required. The chapter charts the
landscape and the context in which the planners made their decisions and debated points
of view. They addressed the bias against large metropolises then strong in India and sought
to offer a rational, balanced, and realistic approach to Delhi’s development. They were
economistic in their thinking. And while they aspired to plan rationally, their own passions
and emotions often got the better of them in the process. Ultimately, the Master Plan betrayed its planners.

Until recently, the southernmost gate of the walled city of Shahjahanabad served as the beginning of a new infrastructure in the metropolitan area. The city’s sole Bus Rapid Transit (BRT) corridor began at Delhi Gate, the entrance (or exit) of Shahjahanabad, and traveled south through the wealthy districts of the British-built New Delhi to the working class suburb of Ambedkar Nagar, along the main arterial road leading to Gurgaon, Delhi’s wealthy commercial satellite. Delhi’s history has often been told through its waves of alternating construction and destruction, and a story of planning in Delhi wouldn’t be complete without a parallel story of demolition. Chapter 3 recounts the rise and fall of Delhi’s BRT corridor. This chapter paints a picture of how planning comes to be politicized in public debate, as well as what is at stake in making planning a scapegoat for social inequality and underdevelopment. Delhi’s BRT was among the first in the world when its planning begun. But as that planning process dragged on over many years, other cities experimented with and perfected BRT as a system and a technology. Delhi’s planners took inspiration and advice from these other cities’ experiences but ultimately made choices in the design of their system they thought would best serve Delhi bus riders.

Eight years after its debut, however, the city’s Deputy Chief Minister held a press conference to celebrate demolishing the BRT. He argued that the corridor hadn’t been planned at all but had been imposed on the city without consideration for the local context. In the wake of such a damning political trial, this chapter recounts the many explanations given for the BRT’s demise and concludes, with the planning perspective, that the infrastructure’s failure says less about planning than it does about the challenge of avoiding
hard truths. A conversation with a bus rider on the corridor aligns with this view: that the BRT corridor was never long enough to make a difference in the commutes of bus riders one way or the other.

Chapter 4 follows Shashwat and Chirag, of DIMTS’ Transport Planning group, in their work as consultants in the small Himalayan town of Naina Devi, where they struggled to make sense of the town’s winding network of hilly roads and staircases, as well as to use limited resources to collect reliable data for standard analysis and reporting. Back in the office in Delhi, however, Samir and Anand would remind them that the data wasn’t necessary and that planning is instead about creating a vision. Ultimately, this chapter recounts the messy and iterative process of developing such a vision, according to the planning perspective. At various times, Chirag and Shashwat were more concerned with a given data set, or how to make future forecasts, but, ultimately, they used the broader experience of traveling around the city, and speaking with locals, to develop multiple possible futures for the town.

Chapter 5 concludes with some further thoughts on the planning perspective and its resonances and dissonances with ethnography as an approach to urban social and technical life.
CHAPTER 2: An Exciting Adventure

The Ford Foundation in Urban India

In September 1955, Prime Minister Jawaharlal Nehru wrote to the president of the Ford Foundation, H. Rowan Gaither, Jr. Nehru described having met with the Foundation’s program director for India, Douglas Ensminger. Then he went on to describe the task of independence: “We are engaged in a great adventure in this country, the building up of a new India based, of course, on the old. It is an exciting adventure for us, and it involves, as you know, the future of 370 million people. We know that the burden of this colossal work lies on us and our people but we welcome the assistance and cooperation of friends” (Jawaharlal Nehru to H. Rowan Gaither, Jr). The Ford Foundation began assisting India in 1951. Mostly, this aid went to agricultural, educational, and health related programs in rural areas, where the majority of Indians lived, and where the majority of India’s poor people resided. In 1953, for example, the Foundation initiated a three-year grant to the Anthropology Departments of Cornell University and Lucknow University, in northern India, to study community development and cultural change in villages.

By 1955, when Nehru wrote his letter, urban migration had begun to concentrate poverty in cities, including the nation’s capital, Delhi, where refugees from the Partition of India and Pakistan joined workers in the growing national government to test the capital’s social and infrastructural capacity. Nehru’s letter to Gaither was the beginning of a new partnership in urban development between India’s central government and the US-based aid agency. In 1956, at the request of the Minister of Health, who also served as the Minister of Local Self-Government for Delhi, the Foundation pledged $250,000 to bring a
team of American experts to Delhi to recommend policies for urban development. Drawing from letters and memos they wrote to one another in the process, this chapter addresses the work of that team: eight Americans who, under the auspices of the Ford Foundation, served as consultants and advisers to Delhi’s Town Planning Organisation (TPO) in developing a Master Plan for the capital city.

The TPO had been set up by the Ministry of Health in December 1955 and would eventually include 13 members. One of those was Sayed Shafi, who had completed a Masters in City Planning at MIT earlier that year, where his 200-page thesis offered a framework for planning Delhi that challenged the municipal city limits of the capital as an appropriate jurisdiction and argued, instead, for the creation of a National Capital Region for planning purposes. Another TPO member was Boniface (Bonny) Fernandes, who had studied City Planning at Berkeley and had been working in the new steel city of Bokaro, in eastern India, when an American architect, Joe Stein, told him about the TPO. “We were the first pioneers to work on a comprehensive plan,” Bonny told me one day, as we sat in chairs pulled into the sun at the India International Centre in New Delhi, which Joe Stein had later designed. Recounting the conditions that prompted planning in Delhi, Bonny told me that it was not just the flood of refugees from Pakistan that caused official concern for the city. It was also the haphazard commercial development that was threatening the order of the administrative capital. At the same time, planning was not well understood as a discipline: compared to engineering and architecture, planning was relatively new. Bonny says there were very few officials who saw the TPO’s work as anything more than producing a published document. This lack of understanding would later express itself in a lack of
support for the TPO and the Ford Foundation team, as well as a failure to follow through on
the Master Plan itself.

Tasked with developing a Master Plan for the capital, the TPO saw what little data
they had to work with – Shafi has commented that half of the Census findings they had
access to at the time were “errata,” or corrections to previously published findings – and
decided instead to develop an Interim General Plan to serve as a stopgap measure until
more data collection and analysis could be done in service of a true Master Plan (Pisharoty
2011). “To build the India of our dreams is a great venture. In its own way to rebuild our
Capital City is also an exciting venture and if all will co-operate, the success of our plans is
ensured” (Interim General Plan 1956). So wrote Amrit Kaur, the Indian Minister of Health,
in 1956 as a foreword to the Interim General Plan for Greater Delhi. Her foreword to the
Plan is both optimistic about the prospects for planning to improve conditions for urban
living and also somewhat dismissive of the Plan’s recommendations. “All is not well with
the Capital City,” she began. Citing traffic jams, accidents, uncontrolled sprawl, and the
influx of both government employees to build the independent nation and refugees from
Pakistan, she described the causes of concern that justified the need for a document to help
“hold the line” on Delhi’s deterioration and begin to address its problems in a systematic,
rather than piecemeal, way (Interim General Plan 1956). “It has been estimated that the
ultimate Master Plan will take two or three years to develop,” she wrote, “But of course
priorities will be set up so that certain urgent matters will not need to wait that long.” Aside
from a few concrete recommendations from the Plan, including the provision of some 3,000
acres for housing development, 200 acres for industrial development, the resettlement of
cattle herders, and the accelerated improvement of slums, the Minister wrote that the
Plan’s provisions “are included only for purposes of eliciting opinion, stimulating
discussion, and illustrating objectives so that the ultimate studies soon to begin may have
the maximum benefit of participation and comment” (Interim General Plan 1956). In other
words, she wanted the Plan to have teeth and “hold the line” on unwanted development but
also remain provisional and subject to further discussion. She saw the Plan as a blueprint
for development over the next two or three years, while also assuming that urgent matters
would take priority. Her tone here would prove revealing in light of the Master Plan work
of the Ford Foundation with the TPO.

Over the course of the next six years, the Ford Foundation team, working with their
counterparts in the TPO, built on the work of the Interim General Plan. They studied and
debated the optimum size, density, and industrial makeup of Delhi, including how to
integrate the walled city of Shahjahanabad with New Delhi. They checked Census data
against the survey results of university researchers and the datasets of other government
agencies. They surveyed thousands of households and businesses, as well as pedestrians,
bicyclists, and the drivers of ox carts and other vehicles across the metropolitan area. They
studied the history of Indian cities and other developing countries, as well as the wind
patterns of Delhi. They visited wholesale vegetable markets at five o’clock in the morning
and small towns and industrial estates in the surrounding countryside, in order to
understand life and work in the capital. They surveyed land uses throughout the
metropolitan area and drew up architectural sketches for a Civic Centre to unite Old and
New Delhi and to symbolize the new nation. In the process, they wrote memos to one
another and to those in various government and institutional offices. They also grappled
with the Ministry of Health and the vision of planning held by the Ministry and other
government agencies, as well as the challenge of doing long-term planning when the TPO’s planners were constantly called to address more urgent matters. The history recounted in this chapter draws primarily from the Ford Foundation team’s letters and memos, which offer a moving picture of the process of planning, as it informed the final Master Plan. Focusing on the process of planning involves attending to the context in which choices were made: the sources of inspiration and points of debate; the initial optimism, tempered later by small frustrations and larger disappointments; and the mix of political apathy and personal conflict that characterized a newly independent nation and young democracy. Ultimately, this focus on planning demonstrates the various ways in which the Master Plan – and perhaps all plans, inevitably – betrayed its planners.

**Optimism and Optimal Urbanization**

To head up its team of experts, the Ford Foundation hired Albert Mayer, a New York-based architect who had planned Chandigarh, the new capital of Punjab after that state was split by Partition (Banerjee 2009). Mayer had also advised planning in Ahmedabad and Bombay. He was a busy man and a prolific writer, who saved and archived all of his work and correspondence, bestowing the archive of his work in India to the University of Chicago’s Regenstein Library. This archive contains hundreds of his notes and letters, many of which are written by hand on hotel or restaurant stationary, leaving a trace of his travels and offering an analog geocoding of his thoughts. Others are typed and numbered (“Letter No.167”), filling meticulously numbered pages with points discretely organized by number, letter, and underlined subject headers. He visited Delhi several times over the course of the Foundation team’s work on the Delhi Master Plan but oversaw the
work primarily from afar. His archive gives the impression that Mayer was a voracious reader and frenetic networker. He frequently wrote to the Foundation team members to summarize studies and lectures he thought might inform their work, attaching book chapters or published articles and citing relevant paragraphs in his own text. At other times he used carbon copies of his letters to sustain spirited debates among multiple interlocutors simultaneously, sending one person’s response to another with provocative questions. A charismatic leader, the trials and tribulations of the planning process in Delhi can be traced through the various tones evinced in Mayer’s correspondence.

Preparing for the Foundation team’s first meeting in New York in March 1957, Mayer wrote a characteristically long and fervent memo that contained a table of contents and was divided into seven sections, covering 22 pages, including a Preliminary Note and an Introduction. Ever attentive to detail and nuance, Mayer was keen on prefacing most of his statements and explaining the context and motivation for many of his thoughts. The team that Mayer put together included: Gerald Breese, an urbanization specialist; Edward (Ned) Echeverria, a physical planner; Archie Dotson as a government and administration specialist; George Goetschius, an urban sociologist; Britton Harris as regional demarcator and industrial planner; Walter Hedden, a traffic and transportation specialist; and Bert Hoselitz, an economist. Mayer’s first memo to the team refers to them as “Specialist-advisers” and describes his purpose in writing as “to act as a first step in further crystallizing the approach and procedures and objectives for the Delhi-New Delhi Regional Plan” (Memorandum on Delhi-New Delhi Regional Plan). He viewed the metropolis as an agglomeration of two cities rather than a single capital. From the beginning, therefore, he was interested in finding ways of better integrating the two.
At the same time, he was optimistic about the ability of his team to integrate with their Indian counterparts and wanted to set a standard for planning that could be continued after the team’s departure. “The essence of the role of the team advisers is that it works with and through the Indian group whose project it is, and that we must so help to set up and organize, that there will be no perceptible change or gap when any one or all of the advisers are no longer on the ground” (Memorandum on Delhi-New Delhi Regional Plan). Mayer was excited to take part in the exciting adventure that Nehru summed up in his letter to the Ford Foundation two years before and describes India more than once as “plan-minded,” a reference, no doubt, to the independent nation’s socialist Constitution and Soviet-inspired Five Year Plans for economic growth and industrialization. Referring to the power and influence of the country’s national Planning Commission, Mayer wrote, “there is a real chance, if fruitful relations are established, that for the first time in the modern world, the economic and social planning which it evolves will be closely linked with the Regional-physical-area planning which the team of advisers and the Town Planning Organization will work out. Even in India it is not yet entirely grasped that the full economy and potential of national economic-social planning can only be achieved when there is a practically simultaneous realization of regional-physical-area planning. If this is indeed achieved, it will be a world ‘first’” (Memorandum on Delhi-New Delhi Regional Plan).

Mayer’s optimism references an observation that where national economic planning was practiced, it had up to that point failed to remedy the problems of urban development. Mayer cited Catherine Bauer in making his point about the Delhi Master Plan’s potential to forge a new path. Bauer was a professor of city planning at Berkeley and a specialist in housing policy and advocacy, who had written about the prospects for urban development
in India and across the developing world and would later write about Indian housing and architecture. Describing the important role cities play in national economic development, Bauer had written about the gulf between national economic planning, “carried on mainly at the national level in terms of quantitative analysis and specialized policies,” and city planning, “which tries to cope with community problems after the basic development trends and decisions have established the pattern. ... In this no man’s land, some form of area-wide programing of urban and industrial growth seems to be needed,” she argued (Bauer 1956, 68). Mayer envisioned bridging this gap with the Ford Foundation’s work in Delhi. He maintained a lively correspondence with Bauer throughout the team’s work on the Master Plan, and they frequently cited each other in their respective work.

In the same article in which she described the gulf between national economic planning and physical city planning, Bauer theorized the optimal pattern of urbanization for developing countries. Dense, metropolitan concentration seemed to be a natural trend in developing countries, she observed. “People flock on their own initiative to the place where they seem most likely to achieve some kind of subsistence, however minimal. Then the vast underemployed labor supply leads to the concentration of new economic activities in the same place, and the cycle continues on another round” (Bauer 1956, 64). Such were the conditions of many European and North American cities in the nineteenth century. And in a similar pattern of history, she writes, “considerable time may pass before governments are forced to do something about such resulting problems as housing, sanitation, and communications, and then the measures taken are likely to be sporadic ad hoc remedies, however costly, to meet particularly pressing emergencies” (1956, 64-5). No doubt, Mayer read this assessment as an appropriate description of Delhi’s urbanization. In fact, Bauer
cites Mayer’s own writing about India to establish a premise that large metropolitan cities are not ideal for improving productivity without further eroding living conditions and social welfare for large sections of the urban population. It is no surprise, then, that Mayer would continue to take Bauer’s recommendations for urban development as his own and preach them to whoever would listen in Delhi.

Bauer argued that capital expenditures in dense metropolitan centers were considerably more expensive than proportional expenditures in smaller towns. The lower density of smaller towns, furthermore, might obviate the need for such costly infrastructure as transportation and utilities. Citing Mayer’s writing about the Bombay Master Plan, she observed that higher housing densities in large metropolitan cities were also more likely to lead to crowded and unsanitary conditions than lower density housing in small towns or outlying areas, where residents could use their own labor and cheap materials to improve their housing stock. Workers continued to crowd into uncomfortable living arrangements in central cities, however, because the cost of transportation from outlying areas to available jobs was prohibitive. While some economists saw such crowding as an unfortunate but necessary stage in a country’s industrialization, Bauer thought there was a better way. A more optimal pattern of development would therefore distribute employment opportunities in such a way as to keep housing and transportation costs low and prevent the need for costly infrastructure.

“Great cities are necessary and desirable,” wrote Bauer, “and no one seriously proposes to break up the existing centers” (1956, 67). She thought such a task would be futile anyway. “The only issue is the scale of their future expansion,” she argued, “Must they absorb most of the tremendous horde of additional urbanites due in the next few decades,
thus swelling their size to fantastic proportions?” (1956, 67). As an alternative, she thought decentralization was feasible in a number of forms, including the development of new towns, industries in villages and village clusters, smaller cities, and satellite communities in the metropolitan hinterland. These practical approaches to urban development resonated with Mayer, who made them a foundation of the Delhi Master Plan. Addressing the Ford Foundation team in that first 22-page memo, Mayer wrote, “Growth by nucleated development may be possible and involve transportation and other capital economies so that we by-pass the apparently wasteful conurbated metropolis and at the same time minimize capital requirements for which there are many competitive requirements. Here again, it is conceivable that a ‘first’ or a prototype can be worked out which will influence the future large cities of the East, and to an extent of the West too” (Memorandum on Delhi-New Delhi Regional Plan).

Two years later, Mayer was still echoing Bauer in notes he wrote to prepare himself and members of the Foundation team to present their work and recommendations to the country’s Planning Commission. He described planning as an economical approach to the physical stresses that development placed on urban areas. A cornerstone of the Master Plan would be its recommendations for regional “counter-magnets” to distribute employment opportunities and balance population density, intercepting the influx of urban migrants to central Delhi. “It is likely to be part of the Delhi plan itself to attempt to locate and to re-locate some present population and industry, but particularly future putative accretions, in outlying cities and in nearby villages and village clusters,” he wrote (Some Underlying or Background Notes). This strategy of decentralization would prove “economical,” he argued, because smaller towns allowed for more workers to get to their jobs by low-cost means of
transportation, such as walking and bicycling, and because “the standard of construction and utilities in smaller cities and towns and large villages can be of an appreciably lower standard (and cost) and still be acceptable and safe, as compared with the more densely populated metropolitan city” (Some Underlying or Background Notes). Mayer thought decentralizing Delhi by way of counter-magnets would offer the Planning Commission – and the country – the most bang for its buck, or, as he put it, “in terms of economy of capital expenditure per unit output” (Some Underlying or Background Notes). Mayer believed in planning as a rational enterprise that would restore fairness and a certain balance to cities, reclaiming them from the haphazard interventions of “emotional” policy reactions (Some Underlying or Background Notes). This rational approach to planning does not mean that Mayer himself didn’t also get emotional in the process. In fact, his early optimism and belief in optimizing Delhi’s development withstood many challenges in the time between the Foundation team’s first meeting in March 1957 and publication of the Master Plan in September 1962.

Small Towns are Dull Towns, and the Future

Britton Harris was the Ford Foundation team’s resident regional scientist. A professor in the Institute for Urban Studies at the University of Pennsylvania, Harris was Mayer’s equal in providing the theory of the Master Plan’s methods and recommendations. His views often differed significantly from those of Mayer and Bauer, however, and the three engaged in rigorous academic debate in their letters throughout 1958. When the team’s work was just kicking off, though, Harris wrote a letter to Mayer offering his thoughts about Delhi’s urbanization; thoughts that challenged Mayer’s own nascent
thinking about decentralization and counter-magnets. Harris wrote that there were two ways of understanding the capital city's influx of migrants. The first way viewed urban migration as a response to more and better opportunities in Delhi relative to the countryside. Unfortunately, in Harris' view, opportunities were difficult to measure quantitatively. “Some factors of social and sociological importance are also at work,” he wrote (Britton Harris to Albert Mayer, Estimating the Future Size of the Delhi Region). This view inclined him, in part, to favor the second way of understanding migration to Delhi: to view migration as relatively autonomous, that it “may in fact run ahead of economic development,” as he wrote (Britton Harris to Albert Mayer, Estimating the Future Size of the Delhi Region). This view implied that Delhi’s allure exceeded its ability to provide sufficient employment and housing to migrants. It follows that decentralizing those opportunities would not necessarily stem the tide of urban crowding.

In this debate, Harris proved more open to being convinced. From the beginning, he seemed more attuned to the method of their decision-making than to any particular outcome. In these early thoughts about the tasks ahead of them, Harris wrote that it was not their decision, as consultants in the planning process, to decide what the optimal pattern of development in Delhi would be. Their role should be to analyze and present a number of possible paths for future development for Delhites to discuss and decide which was right for them. “What is our optimizing principle?” he asked (Britton Harris to Albert Mayer, Optimum size of Delhi City). They could choose to optimize the welfare of the individual citizen, for one, but it would be difficult to know which values to prioritize in achieving such welfare. “How does the average Indian value the quantity of his living space versus the distance he must travel to work? How does he value open space as against close-
living contact with his neighbors? How much is he willing to pay for whatever he values the highest, through taxes needed to support these values?” (Britton Harris to Albert Mayer, Optimum size of Delhi City). These were all questions to be answered in the course of their research and planning. “An alternative optimizing principle might be efficiency of operation,” he posed (Britton Harris to Albert Mayer, Optimum size of Delhi City). Such an approach would compare the costs of transportation, utilities, and public service, among other factors. Harris thought the activities that would place demands on such infrastructure and services would increase at a more rapid rate than the city’s growth, adding costs, such as those associated with congestion. While a decentralized city-center-with-counter-magnets pattern might provide some cost savings, in terms of infrastructure and capital expenditure, he also thought the pattern might increase other costs. “In accounting systems which attempt to deal with this problem,” he wrote, “it usually makes a considerable difference to the final conclusion where costs are assessed. Public costs, business costs, and household costs come out of different pockets” (Britton Harris to Albert Mayer, Optimum size of Delhi City). He suggested their team work through a number of these scenarios to estimate the costs and benefits of each. The scenarios could then be presented for public discussion, which he suggested should reach a broad audience. “Special care should be exercised to avoid hovering the discussion exclusively amongst literate, informed, middle-class Indians who would judge the plans primarily in terms of their own values,” he wrote (Britton Harris to Albert Mayer, Optimum size of Delhi City). Elsewhere, Harris wrote about the difference between democratic and undemocratic decision-making, arguing that democratically-made decisions involve people and therefore stand a better chance of future implementation and consistency, as well as momentum. “In
relating goals to resources, the community can and must take a far longer view than most individuals are able to afford, both because social adjustments require more time than individual and familiar adjustments, and because the lifespan of the community is indefinitely long” (The Role of Government in Industrial Development in the Caribbean). Harris thought that planners were likely to bring too much of their own agenda into planning and that the most important decisions were best left up to communities to make.

In this way, Harris was a realist. But he still thought planning had an opportunity to bring about change, including cultural change. In one of his first weekly reports to the team after arriving in Delhi in September 1957, he wrote: “Despite a number of interesting and pleasant qualities in Delhi, ... [the] city is rather lacking character” (Britton Harris to Gerald Breese, Weekly Report Sept. 19-25, 1957). From his other writings, it seems clear that Harris saw urban liveliness and character as measures of economic health. Dullness and lack of unity, on the other hand, were symptomatic of unrealized potential for commerce and trade. His role as industrial analyst for the team was to understand where potential lay for development to increase the city’s productivity while also allowing life to be lived simply and easily. The challenge of planning was to see these opportunities and potential – thinking big – while also remaining sensitive to local context. He wanted to analyze a number of possible development options, leaving the ultimate decision of which path to choose to the people and leaders of Delhi.

A month into his stay in Delhi, Harris represented the Ford Foundation team at a conference of the Indian Institute of Planners in Patna, Bihar, 700 miles east of Delhi. Despite its population of half a million residents, Harris found the city “indescribably dull and poorly provided” (Britton Harris to Gerald Breese, Report on Indian Institute of
Planners Conference). This fact further baffled him, because the consensus of the conference delegates, as he perceived it, was that growth should be focused in cities like Patna, rather than the larger metropolises, such as Delhi. “Presumably they want other people to work in them!” he quipped (Britton Harris to Gerald Breese, Report on Indian Institute of Planners Conference). He described a predominant viewpoint expressed at the conference that “large towns are somehow beyond the ‘optimum’ point” and that “the preservation of historical cultural values is terribly important” (Britton Harris to Gerald Breese, Report on Indian Institute of Planners Conference). This was not the first time Harris had expressed impatience with cultural concerns. In 1952, he submitted a report to the Economic Development Administration of Puerto Rico outlining opportunities for modernization and industrial development. Responding to concerns that such developments posed a threat to “existing culture” that might “result in destroying the local ‘way of life’” on the island, he was pointed and unsympathetic:

> “Practically, this viewpoint must be taken very seriously because it is a latent factor in many political decisions; but intellectually it represents extremely shoddy thinking. The facts are that under the impact of urbanization and commercialization the old, agricultural way of life is already breaking up in most parts of the world, including the Caribbean, and that regardless of any decision to transform the economy, this process will continue under the further impact of population growth and poverty, unless new sources of income can be established. In other words, individual and social survival is a paramount societal goal, and must in the long run take precedence over preserving an obsolete and dying culture” (The Role of Government in Industrial Development in the Caribbean).

Harris saw himself as a modernist, and his opposition to romanticizing local culture was rooted in his distrust of ideologically driven planning. Of course, his own rational planning approach was equally ideological, but he questioned whether the Indian planners
advocating small town growth and village life were truly representing people’s interests and desires.

At the conference in Patna, he saw represented a planning approach that foregrounded engineering to the exclusion of economic and social considerations. The “vague feelings” expressed about keeping growth focused in small cities had “various degrees of currency,” he wrote, “it is significant that many of them are held and applied by the very town planners who are most ‘engineering’ in their approach.” In other words, the planners who spoke of preserving local culture and tradition, Harris felt, were the least likely to incorporate social analysis in their planning. These “physical planners,” as he referred to them, were “too self-centered.” American-style planning, unfortunately – in Harris’ view – had fueled this ideological approach. He wrote that “a core” of planners that had mostly been trained in US schools were “evangelistic” and saw “the whole planning process as the salvation of India.” Specifically, they saw “physical planning” as key to India’s socialist efforts. “They are very determined and self-righteous,” he wrote (Britton Harris to Gerald Breese, Report on Indian Institute of Planners Conference).

Harris’ own approach to planning was more akin to what Bauer described as an economistic approach to urban development. In 1955, he spoke in New York to the Association of Regional Scientists, where he described the role of the urban planner as one “concerned with the disposition of a limited resource, land, on which will be placed a heavy concentration of fixed capital” (Projecting Industrial Growth of Metropolitan Regions). “The city planner attempts to evaluate and guide the most economic uses of this land, not only for the present but also for the future, and not only in purely monetary terms but also in terms of welfare” (Projecting Industrial Growth of Metropolitan Regions). Harris didn’t see
planners doing this kind of analysis in India, however. Their focus on preserving what he saw as dull small towns was misguided, while their interest in building homes to achieve socialistic ideals ignored the realities of a working economy and the need for cities to drive industrial growth and create jobs. Overall, he thought Indian planners were stuck in the present and weren’t thinking enough about the future. He thought change was inevitable and the only real question was to what extent that change was guided for the benefit of the public or allowed to run roughshod over cities, at the expense of all but a few.

The presentism of Indian planning, as he saw it, stemmed in part from a narrow focus on particular problems, as they were locally perceived, rather than viewing the city as a whole, in proper perspective. “There is room in comprehensive planning for some grandiose thinking ... to tie together the city and make it a more interesting and unified whole,” he wrote (Britton Harris to Gerald Breese, Weekly Report Sept. 19-25, 1957). Doing so required a comprehensive view of the city from a planning perspective, rather than a narrow focus on any given concern. “We tend to exaggerate some problems by getting too close to the local situation and forgetting what we know about other places,” he wrote (Britton Harris to Gerald Breese, Weekly Report Sept. 19-25, 1957). He recommended a thorough data collection program, in order to understand the economic base of the city and the metropolitan area, including land use and employment surveys. Later, he learned that a government survey of manufacturing enterprises in 1953 had collected data on floor space and land requirements but had not tabulated the data (Britton Harris to Gerald Breese, Weekly Report (two weeks) Sept. 30-Oct. 12). He worked with the TPO to tabulate that important data for their use in the Master Plan.
The Case for Decentralization: The Netherlands

Albert Mayer hired Walter Hedden to serve as the Ford Foundation team’s transportation specialist. Hedden studied economics as an undergraduate at Williams College and as a graduate student at Columbia University. In 1930, he published *How Great Cities Are Fed* as an exploration into the foodscapes of urban areas and their vulnerability to attacks on the transportation system. In 1953, Hedden retired as Director of the Port Authority of New York, after working for 31 years in “transportation problems relating to water, rail, highway and air,” as he described his background in a letter to Mayer, to which he attached his resume and several relevant pieces of work (Walter P. Hedden to Albert Mayer, 8 February 1957). During World War II, Hedden served in the Office of Defense Transportation “as unpaid consultant in connection with plans for expediting the flow of oil to the Eastern States by better utilizing of inland waterways, railroads and pipelines” (Walter P. Hedden to Albert Mayer, 8 February 1957). He also advised the War Production Board on “problems of storage and transportation” (Walter P. Hedden to Albert Mayer, 8 February 1957). Since his retirement from the Port Authority, he had served as a consultant to clients that included the Republics of South Korea, Liberia and Turkey, the International Bank for Reconstruction and Development, and the Havana Docks Authority. Mayer thought Hedden would bring a “down-to-earth” quality that was lacking in the other team members (Walter P. Hedden: Interviews, Opinion and References).

In early September 1957, as Mayer was preparing for a trip to the Netherlands, Hedden wrote to him to suggest that he collect information about urban Dutch bicycle paths, what he called “urban cycle ways” (Walter P. Hedden to Albert Mayer, 6 September 1957). “In view of the magnitude of movement by bicycle in the Delhi region,” wrote
Hedden, “there is great interest in the possibility of providing specialized and channelized cycle ways” (Walter P. Hedden to Albert Mayer, 6 September 1957). The Interim General Plan for Greater Delhi, prepared by the TPO and published in 1956, reported that bicycles accounted for 65% of total traffic in the capital city (Interim General Plan 1956, 37).

Between 1952 and 1955, the number of bicycles doubled from 100,000 to 200,000 and also accounted for 30% of accidents on Delhi roads, prompting the TPO to include in the Interim Plan a recommendation for cycle tracks to separate cyclists from both pedestrians and motorized vehicles (Interim General Plan 1956, 37-38, 71). With Rotterdam and Amsterdam in mind, Hedden wrote that he was “particularly interested in the extent to which cycle traffic in the heart of the city is channelized either in connection with other thoroughfares or by provision of special cycle ways from which other traffic is excluded” (Walter P. Hedden to Albert Mayer, 6 September 1957). What Mayer collected in response to Hedden’s request would reinforce his ideas about decentralizing Delhi and shape the core of the team’s recommendations in their drafts for the Master Plan.

The bicycle became the inspiration and justification for the team’s recommendation that Delhi control urban migration and balance population and employment density through “counter-magnets”: areas of concentrated development and industrialization that would “pull” migrants and workers away from the central city of Delhi. In a similar vein, the team would develop plans for District Centers throughout Delhi itself, to serve as self-sufficient one-stop-shops for employment, small industry, and retail. In the Netherlands, Mayer learned that the national population of 11 million owned a total of 4 million bicycles, or one for every two to thee people (Albert Mayer to Bert Hoselitz and Britton Harris, 5 November 1957). Dutch planning capitalized on this density of cheap and autonomous
transportation by focusing industrial growth in small towns that could support workers cycling six or seven miles to their jobs. In the eastern areas of the country, ten “village-attracting work centers” had been planned on this model. But the planners had revised their plans to respond to the popularity of motorized cycles, which could travel at 25 or 30 miles per hour and so increased the “cycling radius from village to work-place” to twelve miles or more. They therefore reduced their planned work centers from ten to six. In this way, as Mayer reported to the team, national policy in the Netherlands, as well as the “policy of the individual large cities (Amsterdam, Rotterdam, The Hague) is to attempt to limit their further growth to about 20% of present population and to create the kind of ‘counter-magnets’ I am talking about” (Albert Mayer to Bert Hoselitz and Britton Harris, 5 November 1957).

Relating this finding to the Delhi context, Mayer muses: “One very great advantage of such a policy would be that in industries requiring labor that is not highly skilled, much of the labor force can (and does) remain in villages and cycles to and from work daily - thus largely doing away with the capital cost of urban housing and utilities - for a long period at least - which is such a vital economy.” In this way, the bicycle came to justify and support the savings on “overhead” that Mayer and Bauer saw as detrimental to urban development in metropolises. By simple math, Mayer argued that developing counter-magnets both within Delhi and across the Delhi metropolitan region, would save the city huge capital expenses: “The total village hinterland that could easily ‘commute’ into the city by cycle from a given maximum radius would of course be much greater for, say, 10 cities of 75,000 each, than for one city of, say, 750,000. ... The geometry of the two situations clearly demonstrates this” (Albert Mayer to Bert Hoselitz and Britton Harris, 5 November 1957).
The peripheral areas from which workers would be able to commute by bicycle would be almost five times larger in the former scenario of 10 small cities, as compared to one large one.

Without concerted effort to control Delhi’s growth, Mayer envisioned an increasingly dense and disorderly metropolis, with increasing costs for improvement and day-to-day functioning. “If no counter-magnets are created, in the form of medium-sized and smaller cities and towns, by positive action there, it will probably be found that the influx into the major cities will be excessive, and create simply tremendous agglomerations” (Albert Mayer to Bert Hoselitz and Britton Harris, 5 November 1957). Brit Harris was less convinced that metropolitan agglomerations were something to be avoided and that Mayer’s counter-magnet strategy would actually result in cost savings. Throughout the spring and into the fall of 1958, Harris maintained a spirited debate with Mayer and Catherine Bauer about the relative costs of metropolitan development and industrialization vis-à-vis smaller towns and cities. Mayer and Bauer maintained, against Harris, that there are efficiencies to be achieved and overhead costs to be saved from more decentralized development, whereas Harris saw metropolitan cities as the seedbed of industrialization.

The Case for Decentralization

In June 1958, Bauer wrote to Harris, “This is just a note to say that I’d be extremely interested in whatever dope you are putting together re the big city as the favorable milieu for new and growing enterprise in India. I’m no zealot on the decentralization question, but the evidence I’ve come on thus far re living conditions, social ills, and overhead costs, tends
to back up the Indian anti-big-city bias (which itself has some underlying cultural significance that cannot be ignored)” (Catherine Bauer Wurster to Britton Harris, 4 June 1958). Bauer had been kept in the loop about the Ford Foundation team’s work in India, and she was responding to Harris’ preliminary notes on future growth in Delhi, as well as a conversation they’d had over dinner at the home of a mutual friend. Harris had asserted the same point he’d made in response to his trip to Patna: that there is a significant cultural gap between large metropolitan areas and small towns. He did not think it was practical to assume that entrepreneurs and industrialists would be willing to set up shop or relocate to small towns.

Bauer, like Mayer, worried about the consequences of unchecked metropolitan growth, and raised concern that Harris’ forecasts for future population growth in Delhi were too low. Noting that his forecasts assumed the same growth rate for all cities, regardless of size, she wrote, “I must check the Indian Census again, but my rough notes indicate that from 1941-51, the five biggest cities almost doubled (including Calcutta’s metropolitan growth), while the population in cities over 100,000 increased by around 62% and in cities 50-100,000 by 33%. The same picture holds for the rest of Asia, only more so if anything.” In other words, she expected Delhi, like other Asian metropolises, to continue to grow at breakneck pace, while smaller cities would grow proportionately slower. “All in all, I suspect that it would take an extremely knowing and well-integrated deconcentration program merely to keep the metropolitan centers down to two or three times their present size by 1980,” she wrote (Catherine Bauer Wurster to Britton Harris, 4 June 1958). Bauer was, at that time, preparing for her own study in India, in which she planned to address the question of city size and overhead costs directly.
In drafting his Requirements for Manufacturing Industry report, Harris had concentrated land for industrial growth within Delhi itself, aiming for 25% of employment in the capital to be in industry. In earlier reports, he had outlined which industries would be appropriate to foster through zoning, within the capital, and which “obnoxious” industries should be relegated to less populated areas. Mayer pushed back against this centralizing approach, writing to Harris and copying Catherine Bauer to suggest that he allocate part of the land Harris had considered necessary for future industrial development to satellite or outlying towns. Making his position clear, Mayer wrote, “I am disagreeing more seriously ... with some of your strongly expressed underlying philosophy” (Albert Mayer to Britton Harris, 18 July 1958). While their disagreements didn’t affect the ultimate recommendations for land reservation in the Plan, Mayer was concerned that the differences of philosophy would be evident in the final report to accompany the Plan. He wanted their rationale for the Plan’s recommendations to be consistent. In his characteristic way, Mayer was systematic in his response to Harris, organizing his letter by numbered point of debate, quoting passages from Harris’ previous writing, and addressing each point and passage in turn. There were six points on which he thought they disagreed fundamentally if not practically:

1. Optimum Pattern of Urbanization: Relative Social costs of large and small cities: prima facie evidence of growth of larger cities
2. Some discussion, pro and con, of the advantages to the Industrialist (especially small industrialist) of the Metropolis
3. On the inevitability or otherwise, of unbridled migration into the Metropolis
4. 1980 Population: 4,000,000 or 6,000,000? Can We Influence It?
5. Insanitation and Overcrowding vs. Boredom

6. Some Additional Points of Agreement, and Near-Agreement

Mayer’s discussion spans ten type-written pages.

In June 1958, Harris had written to Bauer, explaining, “Some of the vehemence with which I speak on this question (The Optimum Pattern of Urbanization) is due to the fact that officials in India and elsewhere, and planners throughout the world, have tended to make very broad and sweeping statements about the relative social costs of large and small cities without, in my opinion, the slightest evidence which is capable of overthrowing the prima facie evidence of the growth of larger cities” (quoted in Albert Mayer to Britton Harris, 18 July 1958). Citing this passage, Mayer responded that there was a good deal of evidence – if not quantified – to support the belief that large cities have higher social costs. As evidence, he offered the decision by a majority of workers in Modinagar and Naini – two small industrial towns that Mayer had visited – to continue living in their villages and cycle to work, rather than moving into company-provided housing within the towns themselves. “Granted the housing in their own villages is not very wonderful,” he wrote, “the housing and living conditions are substantially better than in the city slums or in the squatters’ hovels.” He also referred again to the example of the Netherlands, where industrialization in small towns allowed workers to rely on their bicycles and “cheap auto-cycles” to get to work. By contrast, “no such proportions can hold in a large city, because the ratio of city to peripheral area is just so very much higher” (Albert Mayer to Britton Harris, 18 July 1958).

Questioning whether large metropolises were more favorable to industrialization than smaller towns, Mayer asked whether more industries had been shaped in New York, Chicago, and Philadelphia, or in Syracuse, Dayton, Toledo, and Akron. He was less
convinced of Delhi’s ability to incubate new companies. Similarly, he thought improving outlying areas to serve as counter-magnets would stem the tide of migration into Delhi. Harris, on the other hand, saw migration as inevitable, even in spite of diminishing economic conditions in the capital city. Mayer expressed more faith in the potential for India and its overall planning-mindedness to take control of uncontrolled social and economic trends. Discussing whether they should expect Delhi’s population to grow to 4,000,000 or 6,000,000 by 1980, Mayer wrote, “in India and its planning climate, we may not be so much in the grip of laissez-faire or of just riding trends” (Albert Mayer to Britton Harris, 18 July 1958). In his insistence on the counter-magnet scheme as the solution to each of Delhi’s problems, Mayer’s confirmation bias becomes evident: it’s not clear exactly why he was so attached to the idea of decentralizing Delhi as a metropolis, but it is clear that he was willing to bend all evidence to fit the solution he had already determined.

Harris addressed the bias of planners directly in his skepticism that urban slums and squatter settlements deserved all the attention that planners gave them: “insanitary conditions and overcrowding in the large cities are automatically assumed to be disadvantageous to the individual as well as dangerous to the community,” he wrote, “while the boredom and lack of opportunity in the smaller cities tends to be overlooked since it does not have a physical expression” (quoted in Albert Mayer to Britton Harris, 18 July 1958). Mayer, in response, countered that urban slums did not necessarily alleviate boredom, while he still saw rural boredom as more favorable than urban overcrowding.

Writing to Bauer directly, Mayer wrote that Harris was “historically dis-oriented” in his claim that metropolitan areas had been the seedbeds of industry. “The seed-bed of industry is the city, but not the Metropolis,” wrote Mayer. By contrast, he saw the
Metropolis as the site of a later stage in industrial development: that of mergers and headquarters, once an enterprise had reached a level of success. Still, he questioned whether Indian metropolitan areas would ever see the same pattern of development seen in Western countries. “In the USA, no one – or very few – who come from a village or farm or a country town and gets to be a big shot in the city or the Metropolis ever dreams of going back, or keeps a home there. In India, many many successful and eminent men look forward to just that, and do it.” Mayer argued that, in India, there was a “human-social factor” that militated against “the strong social-and-prestige pull of the Metropolis” and that, furthermore, policies could discourage further metropolitan concentration if they encouraged this “sentimental and built-in traditional counter-magnet” (Albert Mayer to Catherine Bauer, 2 September 1958).

Responding to Harris, Bauer expressed a sense of invigoration from the healthy debate. “In American city planning, with its built-in habit of trying to avoid public controversy by concocting a bland kind of compromise before the basic issues have been clarified,” she wrote, “we never even get to the point of thrashing things out in terms of conflicting viewpoints or values” (Catherine Bauer to Britton Harris, General comments). In contrast to previous arguments in favor of decentralization, Bauer was in agreement with Harris that increased production was necessary to resolve India’s urban problems: industrialization was needed to provide employment for the growing population. Where she differed was in thinking that increased industrial production must come at the expense of improved living conditions. With Mayer, she wanted to see Delhi and other Indian cities commit to a minimal standard of living and to promote industrialization in a way that did not simultaneously exacerbate squalid and unhealthy living conditions. She also saw
Harris’ acceptance or dismissal of unchecked urban migration as threatening:

“The fact that people flock to the cities only means that anything is better than rural starvation: it doesn’t mitigate the effects of urban squalor. Indeed, the ‘push’ factor merely dramatizes the urban industrial planning problem, because it suggests that there will be no automatic check on urban growth and crowding short of total economic breakdown: i.e. equal hopelessness and economic desperation in both country and city. As long as new jobs are mainly available in the largest most crowded cities they will continue to have the highest growth rates, even though living conditions may be far worse than in the villages” (Catherine Bauer to Britton Harris, General comments)

In her alternative view, Bauer made “social overhead” the focus of industrial location as well as urban development policy. This term encompassed, for her, the sum of investments – personal and public – required to sustain a worker and his family, including “utilities, transportation lines, sanitary and health facilities, schools, and to a large extent housing as well” (Catherine Bauer to Britton Harris, General comments). The summation of her views on the subject, honed in this debate with Mayer and Harris, were articulated in a 1962 article she published, entitled “Urban Living Conditions, Overhead Costs and the Development Pattern: An Approach to the ‘Decentralization’ Question” (Bauer Wurster 1962). She wrote that city size, per se, “has little direct influence on housing costs. But the high land prices and related accessibility problems which are often prevalent in large cities both tend to increase the required density of residential development. And density is a critical factor in the cost of housing construction” (Bauer Wurster 1962, 140). Density, more so than land cost, drives up the price of housing, she argued, because dense living required modern construction materials and technology, whereas low density housing could accommodate auto-construction with cheap materials.
Perhaps echoing Harris’ earlier arguments, Bauer described a view that saw urban industrialization and metropolitan concentration as inevitable: “It is often assumed, implicitly or explicitly, that the trend toward industrial and population concentration in a few major areas cannot be diverted, whatever the resulting social costs, because any different pattern would require such arbitrary controls that enterprise would be dampened and productivity reduced. This view tends to ignore the effect of public decisions on locational attractions” (Bauer Wurster 1962, 142). Rather, she argued that the placement of schools and sewerage, as well as transportation facilities, determined to a large extent where industries would locate. In India, unlike in western cities historically, such urban infrastructure was within the public realm and offered an opportunity to avert some of the costly mistakes that western urban development – by its ad hoc nature – had had to overcome. As an example of the most cost effective form of industrial development, Bauer offered the Etawah Pilot Project, “whose small brick-kiln provides local employment, enhances local income, and supplies material for village improvement” (Bauer Wurster 1962, 142). Mayer had led this rural development project as a pilot example of self-help for rural communities. No doubt, his belief in counter-magnets as a solution to India’s urban problems was borne in his experience in Etawah.

Bauer also offers Coimbatore, with its many textile mills outside of the town center, as another example of industrial development that does not require new housing or social overhead costs. In both the village setting of Etawah and the more urban setting of Coimbatore, she notes, “villagers have acquired new employment without leaving their old homes” (Bauer Wurster 1962, 142). Reviewing further the benefits and costs of several other development models, including the new industrial town, the expansion of
metropolitan areas, and the expansion of moderate size cities, Bauer in every case emphasizes the savings to be achieved in terms of social overhead from smaller, decentralized growth, as opposed to concentrated growth. Her conclusions about the most cost effective development for metropolitan areas, for example, sounds like it was pulled directly from the Delhi Master Plan, if not one of Mayer’s letters about it: “Probably the most economical pattern for metropolitan expansion is a network of more or less self-sufficient sub-centers whose size would vary with functions; but each with a fairly wide range of employment opportunities and related housing accommodation. Such a pattern would also permit a great many more villagers to commute from their present home to urban types of employment than is possible in a highly centralized type of large metropolitan community” (Bauer Wurster 1962, 143).

Harris, for his part, remained skeptical that planners had sufficient insight into the social conditions of urban living and migration to make decisions about the best form of urban development. In 1958, Harris wrote a paper for a seminar in the Department of Land and City Planning at Penn titled “Research and Education in Physical Planning for Underdeveloped Areas” that took place at the end of May that year. Amidst his discussion of population pressures and the need for urbanist expertise, Harris also described the shortcomings of planning, or, at least, its knowledge of developing places. “In approaching this economizing function, it would be a grievous error for planners to neglect the human aspects of urban growth. Because the planner deals in physical facilities, I do not automatically assume that he does neglect the human element; in fact, the needs of people, their household living conditions, their travel to work, and their essential inter-action are the fundamental elements from which the planner builds his view of the physical structure
of the city. I would suggest, however, that our understanding of urban social and cultural processes is inadequate, especially in an economically-developing area” (Harris 1958, 4).

Describing the many Planning Commission-sponsored surveys and studies, he found that they still didn’t provide much insight into the basic trends in joint families and everyday living in urban areas, which have significance for planning. “On this basis, I think it is safe to say that sociological and ecological understanding of Indian cities, which is a most elementary prerequisite of planning, is still in its infancy” (Harris 1958, 4).

Anthropology, in his view, had the potential to offer an important supplement to the analysis of planners. “I do not wish to tread in areas of controversy between closely related sciences such as Anthropology and Sociology,” he wrote, “so I cannot attempt clearly to define the differences between these two sciences in the study of present-day living conditions. Clearly, however, the anthropologist and the social anthropologist, whose work is in many ways similar to the sociologist, have a great deal to contribute to the study of urban conditions. This might be especially the case since in underdeveloped areas the population of the cities is much closer to a folk society and to rural conditions of life than is the population of most of the large cities of the West. I hope that there is a means of defining the problems of anthropology so that the tools of this science (Harris 1958, 8) may be focused equally upon rural and urban, folk and industrial societies. We may then expect still further contributions to the understanding of the urban environment and the way in which people react to it, for the tools of anthropology and its approach have a unique contribution to make” (Harris 1958, 9). As Bonny Fernandes would tell me, nearly 60 years later, “to plan, you have to know the city, because the city is a living thing. It’s not just
artifacts and buildings. It is the people.” To emphasize his point, he said, “You are planning for the people.”

As if to acknowledge the shortcomings of their plans, he added, “When you look at today’s Delhi, only 25% of people are living in planned areas.” Planning has been a fraught effort in the capital: one full of promise but also plagued by disappointment. In the end, the debate over decentralizing Delhi sustained by Harris, Mayer, and Bauer overlooked some crucial social and political developments in the newly independent nation. As continued urban migration would later show, Mayer and Bauer underestimated the powerful pull of the metropolis, or perhaps the push of rural misery. But Harris also underestimated the negative consequences of urban squalor. The greater mistake, however, was in assuming that India was planning-minded, as Mayer had described the policy mood, and that their Master Plan would serve as a prototype for the marriage of economic and physical planning for all of Asia and the rest of the developing world. In fact, the Ford Foundation team struggled to see its work carried through into the final Master Plan, because as they collected and analyzed new data and debated the merits of decentralization, power was changing hands in Delhi so as to compromise the Master Plan process itself.

Planning and Political Boundaries

“Planning to be effective must transcend political borders.” Despite their disagreements, this was a point made by Mayer with which Brit Harris very much agreed. It was this concept that had inspired Sayed Shafi’s Masters thesis and that had carried through the TPO’s Interim General Plan recommendations, and it was the concept that sustained the Master Plan process. All the planners involved were in agreement that
planning should have a place above and beyond politics; that it should rely on objective
data collection and analysis, taking into consideration the lives and livelihoods of all
Delhiites, regardless of class or interest, and that, ultimately, plans should make
recommendations to benefit the greatest good.

It was clear from early on in their work with the TPO, however, that the Ford
Foundation team would have to fight for clarity and commitment on the team’s efforts
towards Master Plan development. As early as August 1957, Mayer’s ambitions for
leveraging India’s being planning-minded to serve as a prototype for the developing world
were already being tempered by conditions on the ground in Delhi. In a confidential memo
to the Ford Foundation program administrator in India, Mayer expressed an
uncharacteristic urgency of tone. It is as if the challenge of the project had only just begun
to weigh on him, and he was trying to double down in order to execute the ideals that he
had outlined in his earlier sketches of the team’s tasks and purview. “The overall situation
is that there does not exist in the Delhi area the penetrating concept of what a plan is and
involves,” he wrote. There was not public opinion or civic pressure to support physical
planning, and there was not political will either to wrangle “the anarchic disparate
intrenched [sic] power foci who push in and out more or less as they please” (Albert Mayer
to Douglas Ensminger, Memo). Among these he included several Ministries, Delhi State
officials, municipal officials, and members of Parliament.

The decentralization and disorganization of power weighed on Mayer and would
continue to frustrate him and the team over the course of their time in Delhi. “Neither the
Delhi Improvement Trust nor the Town Planning Organization is a real power focus,” he
wrote. “Both are driven from pillar to post and shot at by all sorts of demands and
proposals, by what I have called the anarchic power foci.” Further complicating matters was the fact that the Trust and the TPO treated each other with similar disregard. He accused the Trust’s Chairman of “shoving all sorts of proposals” at the TPO, “with a deadline of ‘next day’ … and then, likely as not, paying little attention to what is evolved in response.” To remedy this “anarchic power foci,” Mayer wanted leadership; from the Prime Minister or another influential Minister, a senior civil servant, or even the Charmain of the Trust or the head of the proposed Delhi Development Authority. The TPO, he worried, was suffering from a lack of status, organization, and maturity, while also facing a much greater challenge in developing the Master Plan than had been presented by the Interim General Plan. “There are too many disparate forces and power foci at play,” wrote Mayer (Albert Mayer to Douglas Ensminger, Memo).

The TPO was also woefully understaffed, in his view. Only three of the planned eight or ten planners had been appointed to the organization. And those that had been appointed were young and lacking power. There was no one in a position of power to make change on their behalf. The staff were unhappy. “These guns are not heavy enough,” wrote Mayer (Albert Mayer to Douglas Ensminger, Memo). The Ford Foundation team of “specialist-advisers” hadn’t even arrived yet, but Mayer worried that the TPO would not be equipped to take advantage of their special advice. In December 1957, the Delhi Development Act was passed. The act provided for the constitution of the Delhi Development Authority (DDA) with the power to “acquire, hold, manage and dispose of land and other property, to carry out building, engineering, mining and other operations, to execute works in connection with supply of water and electricity, disposal of sewage and other services and amenities and generally to do anything necessary or expedient for purposes of such
development and for purposes incidental thereto” (Delhi Development Act 1957). The Act also directed the DDA to carry out a civic survey and prepare a master plan for the capital city, to be approved by the Central Government. The Ford Foundation team had been optimistic about this policy advance, but the new DDA would prove to be a source of conflict over the course of their work and in publishing the final Master Plan.

In a letter to Mayer and Breese dated June 10, 1958, Echeverria described “a further crisis in the Town Planning Organization.” He described “the faulty underpinning and structure of the TPO and the live danger of the Plan being sabotaged for personal interest” (Edward G. Echeverria to Albert Mayer and Gerald Breese, A Further crisis). The Foundation team had been “throwing its weight around” in trying to keep one of the TPO planners, Bhagwandas Rai, from being discharged. The issue was over another appointment that Rai held in Madras, from which he may not have resigned and so was still receiving a salary. Mukharji, Chairman of the Delhi Improvement Trust and chairman of the TPO, had promised Escheverria that he would handle it. They needed Rai for the land use survey. But on May 31st, Rai had received notice that he was no longer employed in the TPO and should turn over his charges. Escheverria expressed willingness to boycott the whole affair if Mukharji didn’t step in to remedy the situation. He threatened that the Plan would not be ready by June 1959. Mukharji responded by issuing Rai another two-month contract.

Escheverria described other power plays at work that were undermining the TPO. “I feel that we have come to a point where if we do not strongly recommend that TPO be put on a more sound basis with some strong backing in the Cabinet, ...the plan is going to have little chance of becoming accepted” (Edward G. Echeverria to Albert Mayer and Gerald Breese, A Further crisis). The Ford Foundation team, with their TPO counterparts, was
continually frustrated by the TPO’s ad hoc and vulnerable status. Constantly threatened with the expiration of its existence, TPO members began looking for other jobs.

Preparing his thoughts for presentation to the Planning Commission in March 1959, Mayer addressed the team’s decision to use a metropolitan approach to the Plan. He wrote:

“It is important to plan and to devise forms of land use and control beyond the political boundaries of the Metropolitan city because with present-day means of transport - the motor car and the bus and the truck - measures of planning and of control of just the city are quite ineffective. If, just beyond the political boundary and within easy transport access, uneconomical and unsocial sprawl are permitted which are found inimical in the city itself, then the plan of the city is ineffective. Lack of sanitation there, unsuitable industries there - in quality and quantity - scattered building operations destroying agricultural land: all these can to very a large extent nullify the intra-city plan rationalization. They can for example impose transport loads entering the city that make its own well-planned road network inadequate; and uncontrolled development along roads to the city cause congestion and delay and danger long before the city is reached. The placement of noxious industries just outside the border-line can make living areas within the border just as unpleasant or as unsafe as though they were inside it. Another reason for Regional Planning around the Metropolis is that the economic connections between the center and certain outlying cities may and often are so close that the overall economy demands and justifies joint thinking and treatment” (Some Underlying or Background Notes).

Nearly everything the team was planning towards – counter-magnets of industrial development and employment density throughout the metropolitan area to help distribute employment and keep transportation costs low – was dependent on a regional approach to planning for the capital. For such planning to be implemented, furthermore, would require coordination and cooperation among government agencies in not only Delhi but also the neighboring states of Punjab and Uttar Pradesh (UP).

There was no precedent for such coordination. In his same notes for the Planning Commission, Mayer wrote that “local committees and agencies, even with interlocking
members, are constantly surprising the planning agency with independent decisions, later communicated more or less accidentally” (Some Underlying or Background Notes). What kind of administrative apparatus would be needed to fulfill this vision was something still under construction in the planning process. Archie Dotson’s role on the team was precisely to outline a plan for administering the Master Plan. Later that year, Ned Escheverria initiated steps to bring officials from Delhi together with officials from Punjab and UP. The meeting was presided over by the Minister of Health’s Secretary, Pillai. “A Delhi official suggested something along the lines of what he’d seen in Moscow,” reported Escheverria, “an overall planning body that would implement with [its] own staff and engineers.” But Pillai shot down this idea, he wrote, saying that such an inter-state planning body would be unconstitutional. As an alternative, Pillai suggested a coordinating committee. Escheverria’s frustration is evident in his writing. “At that point I gave them my lecture No. 53,” he wrote, “on how planning cannot be done by a Committee. It was as pungent as I could make it without weeping myself, reciting chapter and verse of intersection foul ups, disjointed utilities in the west etc” (Edward G. Echeverria to Team Members, Notes on the joint meeting).

Escheverria emphasized the proposals that the Ford Foundation team, with the TPO, had been championing: a Metropolitan Planning Act to guide planning for both the Metropolitan Area of Delhi, as well as the larger National Capital Region. Because the Ministry of Health had initiated the Master Plan process, it remained significantly in control of the plan’s outcomes, and even if the Plan would be produced. Yet the leadership in the Ministry had changed over the course of the six years that the Foundation team had been working in Delhi, while other entities had begun to usurp the work of development and
planning. This is what Mayer increasingly referred to as the “anarchic power foci” of planning and decision-making in the capital. In closing his thoughts about the inter-state meeting, Escheverria speculated that Pillai, and the Ministry, would be one of the team’s “biggest obstacles.” Referring to Pillai, Escheverria wrote, “he talks loud and listens weak - what a mess” (Edward G. Echeverria to Team Members, Notes on the joint meeting).

Later that same month, Escheverria wrote to Mayer, reporting that people were leaving the TPO for higher pay elsewhere. “As we draw close to the end of this project the obstacles become more difficult to surmount,” he wrote. By this point, the team had begun to temper its ambitions for the Plan. “I am burdening you with these day-to-day difficulties so that you will bear with me on the shortcomings of the plan,” continued Escheverria (Edward G. Echeverria to Albert Mayer and Gerald Breese, Meeting with Pillai). The Ford Foundation was winding down his service in India, the last of the team to remain in order to coordinate the Plan’s consolidation and publication.

Mayer responded immediately with concern, first proposing that Escheverria go to the Prime Minister and then determining to write to Nehru directly himself. “With the amount of heart’s blood of you and me that has up to now gone into this,” wrote Mayer, “we should not settle for less” (Albert Mayer to Edward G. Echeverria, Letter 127). On November 9, 1959, Mayer sent a radiogram to Prime Minister Nehru, expressing a desperate need to continue the TPO, whose continued budget was left in the lurch, and which, in his view, was “daily disintegrating.” Mayer implored the Prime Minister to take immediate action to secure the TPO’s budget, citing their lack of basic supplies such as tracing paper, which inhibited their ability to make progress on the Draft Plan. “I realize that I am taking extraordinary and by normal standards unwarranted action in cabling you
thus urgently,” wrote Mayer, “but the situation leaves no alternative in view of my deep interest in India. This cablegram is sent purely at my own initiative and expense without in any way involving Ford Foundation which has not been consulted” (Albert Mayer to Edward G. Echeverria, Fast Direct Radiogram). The urgency of Mayer’s tone here evinces his feeling that the plan was slipping away from him and his team. Later, he would worry that the DDA planned to publish the Plan without even mentioning the TPO.

Ten days later, Escheverria wrote back to Mayer reporting on his meeting with Nehru’s private secretary, who the Prime Minister had asked to follow up on Mayer’s telegram. Escheverria said he “explained in great detail the situation we were faced with on arrival in India 2 1/2 years ago, with the deep resentment by some of the TPO colleagues and an almost complete disinterest by the Ministry in the work of the plan. To give him as complete a picture as possible I painted the roles of the Minister Kamarkar, Secretary Pillai and Mukharji, pointing out the complete breakdown of the administration to support the plan.” Nehru’s secretary was shocked by the administrative hurdles they were encountering and agreed that the plan should be taken out of the Ministry of Health and turned over to the Delhi Administration. He asked if Escheverria could stay on longer in Delhi. The Foundation’s continued support on the matter depended on the government taking action to preserve the TPO. Wrote Escheverria: “On this I feel we are all agreed. There is no sense in continuing a consultant service unless there is an agency to consult with, putting the onus on them” (Edward G. Echeverria to Albert Mayer, Minutes of Meeting). Despite the tension of the situation, Mayer’s cable created a sense of urgency that secured the backing the Plan needed for its conclusion.
In July 1960, the DDA released the draft Master Plan to the public for comment. In March 1961, the DDA completed its review of nearly 600 objections and suggestions received from the public and various organizations about the draft Plan, and in November of that year, the Master Plan for Delhi was finalized. It was approved by the Central Government and published in September 1962. Though Escheverria, in one of his last letters from Delhi, had expressed concern that the DDA would print the report with only minor mention of the TPO, as a thank you in the preface (Edward G. Echeverria to Albert Mayer, Minutes of Meeting), in the end, the Plan acknowledged both the TPO and the Ford Foundation team. The DDA did make significant changes to the recommendations they had together researched and developed, however. For example, the vision of the walled city that the TPO put forward in its Interim General Plan and that the Ford Foundation team elaborated on in their drafts of the Master Plan sought to return the old city to the glory of its days as Shahjahanabad; embracing its past as a walkable city and prohibiting automobiles through the market streets. They wanted to return Chandni Chowk to a pedestrian-friendly bazaar, while also increasing connections by road between the old city and the new, including a new civic center complex and entrance connecting the two cities at Ram Lila. The DDA’s published Master Plan includes only a list of streets in Old Delhi to be widened for improved vehicular throughput. The Plan did embrace Mayer’s vision of counter-magnets, but their implementation would prove half-hearted at best. The idea of decentralization also supported a vision of development without the need to spend large capital on transportation infrastructure: “The rational and functional land use pattern envisaged in this Plan, which has taken into consideration the physical interrelationship of the various land uses on the principle of relative self-containment of each Planning
Division, will obviate the necessity of costly new transportation lines.” As Delhi’s development since then has shown, large capital expenditure on transportation as been the go-to, rather than the fallback, for addressing mobility concerns in the city. The most obvious example of such extravagant expenditure is the Delhi Metro.

Planning and Plans

Fifteen years after Prime Minister Nehru invited the Ford Foundation along as a friend on India’s “exciting adventure,” the head of the Foundation’s India office could write with much more clarity about the challenges and opportunities of urban planning in Indian cities. Drawing a distinction between project-based planning and comprehensive planning, he argued that the Government had failed to carry through with the latter. Quoting a scholar of planning, he wrote: “The essence of planning is to calculate prospectively available but limited resources and to assign them among competing claimants in a balanced system so as to assure that a desired result is produced at the lowest possible cost” (Tobias 1968, 19, quoted in Andrade 1970). India, by contrast, had failed to take such a frank and rational approach to its own problems. He wrote that there had been “a failure to understand the importance of comprehensive planning to the achievement of the goals the country has set for itself, in effect, to understand the nature of its problems and the implications of many governmental decisions” (Tobias 1968, 11, quoted in Andrade 1970). It is not the goal of this chapter to address this claim, but by recounting the evolution of planning in one city – Delhi – we can see what might prompt such a claim. The history of Delhi’s first Master Plan provides context for contemporary planning efforts and shows that the questions of planning power and purview, the planning perspective, and
institutional decision-making that plague Delhi’s current efforts to plan its future has a long and deep history.

It is also the case that how transportation, in particular, is viewed and valued in the capital, has roots that date back at least as far as the Master Plan. Britton Harris returned to India in the early 1980s and wrote a reflection on his time there and its recent urban developments. Urbanization, he observed, had not kept pace with the rates they’d predicted in 1958. Nor had industrialization. Furthermore, their plans for decentralized growth had been thwarted: urban migrants showed a bias toward the largest metropolises, rather than the nearest towns, when looking to improve their prospects and access opportunities. Without claiming righteousness or mentioning the debate he’d carried on with Albert Mayer and Catherine Bauer on this point, he did reinforce his own earlier views that an anthropological approach to urban living was a necessary requisite to planning well. He attributed the metropolitan bias of urban migrants to the caste-based social structures and entrenched power dynamics of the smaller and mid-sized towns that they chose to bypass in their urban migration.

What he saw in Delhi was an increasingly difficult choice that residents were forced to make between living in costly housing close to employment centers or living in more affordable quarters and paying large sums and spending considerable time commuting to their places of work. He remained committed to the principles of decentralization, however, favoring land use as a mechanism of control over transportation as a solution to this double bind. “In principle, I believe that it is substantially a mistake to view these problems as problems of transportation,” he wrote, “Taking this view leads in the long run to egregiously large public expenditures such as the construction of the Calcutta subway.
system.” Never a fundamentalist in his thinking, though, Harris also saw room for improvement in transportation options, but which means of transportation he chose to highlight is telling. He wrote, “insofar as transportation conditions can benefit from marginal improvements, there is room for some ameliorative measures. Most particularly, there is reason to feel that inadequate attention is given to the needs of bicyclists in Indian metropolises” (Harris 1981).

Since he made those comments, Delhi has spent millions on its metro system, while investments in more cost effective solutions to transportation have been denied or rejected. Development has galloped along with little control or analysis for its effect on transportation. And many planners in the city would still agree with Harris that the city’s problems are not primarily transportation-related. Nor can transportation solve all of the city’s problems. But traffic congestion is seen as the symptom of many of the city’s ills and new infrastructure as the cure for those symptoms, if not the underlying disease that ails the city.
Chapter 3: The Rise and Fall of Bus Rapid Transit in Delhi

Inauguration of a Demolition

“Delhi has never seen anything like this before,” declared the Times of India on January 20, 2016. The “inauguration of a demolition!” it exclaimed. A corresponding photograph depicts a white kurta-clad politician taking a sledgehammer to the pavement, while a crowd surrounds a backhoe on display for this unconventional press conference. The politicians, press, and public were celebrating the demolition of Delhi’s Bus Rapid Transit (BRT) corridor. Other media reports of the event highlighted how much had been invested in the infrastructure, which was now to be turned to scrap. An Indian Express headline read, “Good idea, poorly implemented.”

Delhi’s Deputy Chief Minister, Manish Sisodia, spoke at the press conference that day, outlining several reasons for the BRT’s slated demolition. “The corridor was constructed without any planning,” he said. “This is a copy and paste concept, taken from other countries, which failed badly. ... The concept of BRT is not bad,” he conceded, “Several countries have BRT corridors. It is good to learn new things from other countries, but there is also a need to implement them keeping Delhi in mind.” His comments served as an indictment not of the infrastructure itself but of those responsible for its planning, who took an international model of bus operations and imposed it on the Indian capital without consideration for local context.

The failure of Delhi’s BRT therefore serves as a useful case for examining how planning becomes vulnerable to social and political critique. In such a context, what is being asserted in the name of planning? And what is it about planning that makes it an easy
– and, perhaps, useful – target for criticism? Contrary to Sisodia’s claim that its planners imposed the BRT on Delhi without taking the local context into consideration, the BRT was a watershed in urban transportation planning in India. Its planning was less formulaic and more thorough than perhaps any other stretch of roadway in the country, up to that point. Its planners did take cues from international examples, but they made deliberate choices to eschew foreign standards in favor of Delhi’s own circumstances. Sisodia’s criticism of this planning process is not only a matter of misinformation, or a lack of awareness on his part; his critique holds planners accountable for something much larger than planning itself. His critique represents a rejection of expertise, as well as a rational and systematic approach to ordering (or re-ordering) the public realm. Every critique of the Delhi BRT betrays a wariness towards experts. Planners, on the other hand, defend the BRT – or not – by turning this critique back on the populism that questions their expertise. The result is a standoff that leaves everyone stuck in traffic.

Expertise Indicted

The press conference that inaugurated the BRT’s demolition was not the first time the corridor had been accused of lacking planning. The expertise of the corridor’s planners had already been subjected to judicial scrutiny in a court case brought by car owners against the infrastructure. In this case, the petitioners called into question the expertise of Delhi’s planners, arguing that their forecasts of future traffic had been off, that the BRT was an ill-conceived and poorly planned system, and that it was contributing to the city’s traffic congestion. They further argued that those who drive cars are wealth creators in the city,
whose time is more valuable than the time of those who ride buses. Therefore, those
driving cars should be given priority on the roads.

Ultimately, the Court decided that this was not an issue of car drivers versus bus
riders, or of some criminal negligence on the part of policy-makers. What was at stake,
rather, was a broader vision of transportation planning and policy, which the Court
recognized is a long-term, future-oriented effort. “In the context of the ever changing social
scenario,” argued the Court, “the expertise of people dealing with the subject should not be
lightly interfered with.” In other words, the Court deferred to the expertise of Delhi’s
planners. It even seemed to suggest that expertise becomes all the more important when a
city is undergoing rapid social change.

The Court went on, in its decision, to offer a more philosophical lesson in urban
development: "Nobody likes to eat bitter things or be pricked with a needle. But when sick,
bitter medicine has to be consumed or an injection needs to be administered. A person may
become sick when a particular body organ is overstressed. Similar is the situation of a city.
It becomes sick if any system is over-choked. If roads get over-choked, there is bound to be
traffic congestion and air pollution as also individuals getting stressed while either idling or
moving slowly in cars. They must then realize that it is their compulsion to consume the
medicine, which may be bitter, i.e. use public transport for the reason this is the only long
term solution to their problem” (WP (C) No.380/2012, 19). Planning, in the Court’s view
then, is a necessary evil; a bitter pill to swallow for the sake of a better future. Its decision
acknowledges that planning and its effects may not be popular but that they can be useful
and productive.
How the BRT Came to Be

The idea for a BRT in Delhi emerged and evolved out of concerns over Delhi’s air pollution problems. Planners and policy-makers have for a long time recognized that cleaning Delhi’s air will require a significant mode shift: getting more people out of private vehicles and onto buses. In the early and mid-1990s, the Central Pollution Control Board appointed transportation planners from the Indian Institute of Technology-Delhi (IIT) to do a broad study of international practices in urban policy, including transportation, and their effect on air quality. Dr. Dinesh Mohan was one of these IIT transportation planners who served on the Central Pollution Control Board and led its study of international practices. The study resulted in a report titled *Delhi on the Move: 2005 Future Traffic Management Scenarios*. Its introduction begins with a quote from the chairman of the Royal Institute of
British Architects in London, Mr. Harley Sherlock. But the report’s authors are quick to make clear their intentions: “We have not quoted Mr. Sherlock because we want to internationalize the problems of Delhi and wish them away, but because we are convinced that modern urban problems of traffic, housing, and pollution cannot be tackled sensibly unless we learn from the experiences of large cities around the world. The growth of Delhi has not followed the same patterns as London,” it continues, “and our problems are also very different. However, it appears that most large cities in the world have followed pro-car policies after the second world war. It is these policies which are largely responsible for the pollution and congestion in such cities.”

In other words, the report begins from a premise very much like the one Delhi’s Deputy Chief Minister put forward at the inaugural demolition of the BRT in January 2016: it is good to learn from other cities, but ultimately, transportation planning must “keep Delhi in mind.” The IIT study from 1997 offered best practices as potential policy alternatives. Its objective was “to examine the traffic problems of Delhi and to suggest conceptual guidelines for reducing the adverse health effects of road transport.” They concluded that Delhi’s air pollution could not be resolved “by just improving the flow of traffic on the roads.” The city would have to use its roads more efficiently. The report therefore recommended what it called a High Capacity Bus System for the city. It was this idea that became the BRT.

At the time he was working on this report, Dinesh Mohan traveled to Rome, where he met the city’s Transport Minister, who talked about the challenges they faced extending Rome’s underground metro system: they were constantly digging up something historical that had to be preserved. As an alternative, Rome was investing in algorithms to rationalize
its bus routes and make the system more effective. He told Dinesh about a Bus Rapid Transit system in Curitiba, Brazil.

Known locally as the RIT (an acronym for the Portuguese phrase for Integrated Transportation Network), Curitiba's BRT was implemented in the 1980s, though by 1979 the city had already built some designated bus streets completely separate from private vehicle traffic. The RIT was built as a more affordable alternative to a metro system and as a reliable alternative to private vehicle use. It features tube-like stations where tickets are purchased in advance of boarding and platforms are level with the bus floors so as to make boarding and alighting as easy and efficient as possible. Most importantly, the exclusive bus lanes make the RIT more reliable than regular bus routes, because buses don’t have to weave in and out of traffic with other vehicles. In 1996, the United Nations Conference on Human Settlements declared Curitiba “the most innovative city in the world.”

In their 1997 report for the Central Pollution Control Board, the planners at IIT-Delhi wrote about Curitiba’s system as an effective demonstration of “bus convoying,” the idea that multiple buses running together like a train or “platoon” are able to handle ridership rates that rival metro systems, while increasing bus speeds and saving fuel. They concluded that such a bus system was preferable to a metro system in Delhi because of its cost effectiveness and flexibility. Such a new bus system, they noted, was only made possible by new computer and communication technologies that hadn’t previously been available to cities building metro systems.

The city of Bogota, Colombia began planning its own BRT system about the same time that IIT released their report. Whereas Bogota quickly followed through on its plans, putting into operation a network of Bus Rapid Transit corridors in 2000, Delhi’s BRT
planning stalled until 2002. By that time, Bogota’s BRT was already getting attention from policy makers in cities around the world as a model mass transit system. In 2002, Delhi hosted an international conference on urban transport, where the mayor of Bogota spoke about the Colombian capital’s experience.

At this time, the planners at IIT began planning for a network of BRT corridors in the city. They traveled to Bogota in 2003 to learn from that city’s experience firsthand. They came away with a clear vision for what could easily and effectively be copied and pasted from the Bogota model in Delhi and - importantly - what was not likely to succeed in the Delhi context. Delhi already had a much more robust bus system than Bogota had before its BRT. What was needed, they determined, was to improve the existing bus service rather than build a new and competing system. The first corridor – connecting Ambedkar Nagar to Moolchand through the southern center of the city – was chosen because there were already a lot of buses using that stretch of road, so a relatively large proportion of existing bus routes would benefit from the infrastructure upgrade; namely, the designated bus lanes.

By this point, their plans had begun to deviate from the Bogota model. They convinced auto manufacturers to produce low floor buses, for example, which one now sees in cities across India. Bogota, by contrast, uses high floor buses and raises their bus station platforms to meet that height. The IIT planners also made adjustments to the bus station designs, proposing parallel stations for each direction rather than a single shared station, as in the Bogota model.

The IIT planners carried out elaborate “activity surveys” along the proposed corridor, in order to plan for all the various users along that stretch of road. Sandeep Gandhi, who
was working on the project at the time, told me that they wanted to look at the dynamic aspects of space rather than just its fixed and physical aspects. Hawkers who come and vend for only certain hours of the day, for example, wouldn’t be accounted for in a typical survey. They carried out data collection and statistical analysis to forecast the number of hawkers who would ply their wares at the new bus stop terminals. Based on the frequency of buses and the wait time between buses, the planners predicted how many passengers might be waiting at any given time and therefore how many hawkers could be expected to loiter and sell their snacks and goods. Then they built bus terminal platforms large enough to accommodate both waiting passengers and the hawkers who serve them. It was “very detailed planning,” said Sandeep, “very complex. Not straight lines. And not what PWD was used to,” referring to the city’s Public Works Department. Ultimately, they identified 22 different categories of users and tried to plan accommodations for each one in the corridor design.

In almost all of this work, they were innovating not only the designs but sometimes the methods as well. In planning the corridor’s cycle track, for example, there were no guidelines. They analyzed socioeconomic data, of course, and also just tried to keep the user in mind, as Sandeep told me. They worked with NGOs to hold meetings in local slums in order to understand cyclists’ needs. When the cycle track opened adjacent to the BRT corridor, though, nobody was using it. According to Sandeep, cyclists had the idea that “it’s a planned thing, so it’s not for us. It’s somebody else’s space.” So again with the local NGOs, they held several cycle rallies to deliberately invite cyclists to use it. They did not do such extensive outreach work with others who would be affected by the new infrastructure: car
drivers. And it was these users who would ultimately doom the system and its future extensions.

The history of planning for Delhi’s BRT shows the extreme attention IIT planners paid to the local context of Delhi’s roads. They really had no option, because aside from models in Curitiba and Bogota, there were no standards or manuals for planning such a system. Eventually, DIMTS would take over operations along the corridor, but by the time it did so, the Bogota model had become a standardized system in itself with many advocates willing to travel the world to help implement replicas of the system. In fact, the Delhi High Court even quoted Bogota’s mayor in its decision defending the BRT, arguing that “a developed country is not one where the poor own cars. It is one where the rich use public transport.” Planning for the BRT helped build Indian standards. The IIT planners helped revise urban road codes, for example, for the Indian Road Congress. But the international standards for BRT design continued to diverge from the independent design decisions that Delhi’s BRT planners made. Over time, the Delhi BRT became more and more distinct from the design of other BRTs around the world.

In 2005, Sheila Dikshit was re-elected Chief Minister and put her support behind the BRT. Delhi hosted another international conference at which BRT experts gave their approval for the IIT designs, and, finally, the government floated tenders for its construction. Finally, in 2008, the first four-mile stretch of BRT was opened between Moolchand and Ambedkar Nagar. It quickly came under fire from car owners, who protested its redistribution of road space. The media ridiculed it, blaming it for increasing congestion, causing bottlenecks, and putting pedestrians in danger by forcing them to cross
to the middle of the road to reach the bus stations. A group of car owners even banded together to file the aforementioned case against it.

The Delhi High Court’s favorable ruling came in 2012, but the momentum of this public backlash against it was enough to make it a major issue in Delhi’s elections, when the new Aam Aadmi Party (AAP) beat out the incumbent Congress government. In 2015, Chief Minister Arvind Kejriwal officially scrapped the BRT, and in January 2016, AAP leaders doubled down in their determination to demolish the corridor and so posed with sledgehammers at the press conference described at the beginning of this chapter.

Figure 3.2 Cars in the bus-only lane of the BRT (Photo by Paroma Mukherjee)
Why the BRT Failed

One day, shortly after the inauguration of the BRT’s demolition, I was traveling by car through the corridor with Himanshu Rana, who managed the corridor’s operations for DIMTS. The Transport Department of the City had contracted DIMTS to manage the corridor before it even opened. Himanshu was in charge of a team of maintenance workers, pedestrian crossing guards, and others that ensured the corridor operated smoothly. As our car slowed to a stop heading north, we looked around at the veritable parking lot of cars that surrounded us. Motorcycles wove in between cars and sped off. Eventually, even they were blocked and began to line up between the parked cars. Green and yellow autorickshaws accumulated in clusters. We watched as a few cars passed easily through the former bus-only lanes, clearing the signal at the intersection of Chirag Delhi, while we waited. Twenty minutes passed. Cars driving in the bus lane also choked to a standstill. Cars even began driving up the opposing bus lane in the wrong direction. They pressed forward into the intersection, blocking the cross street. This cross traffic had a green light, but nobody could go anywhere. I could certainly see why Delhiites were so passionate in their frustration about the corridor. But was the BRT really to blame? It had been shut down, and still the congestion was horrific.

“Why does this happen?” I asked Himanshu. “Are there just too many cars?” He took out his radio and asked what was happening up ahead (“Aur agay kya situation hai, Siri Fort to wahan pur? Siri Fort ki kya situation hai?”) One of his operations employees responded. The radio crackled.

Himanshu turned to me to translate the crackling response. “There is some accident next to the road, so neither that traffic is going.” He explained how the Traffic Police had the
responsibility to manually operate the signal timings in such cases, in order to facilitate traffic through such congestion. Metal boxes positioned at each intersection contain a number of switches: one for each direction of traffic and its signal, including signals for pedestrians to cross. Because the Traffic Police habitually failed to respond to the high demands on this corridor, however, Himanshu had arranged for them to train his own operations team. Now his team manually operates the signals when necessary. He told his radio correspondent to release lane number one ("Ek number ko nickal do.") from the intersection at Siri Fort, ahead of us. “If he will be operating,” Himanshu told me, “I’m sure another 15, 20 minutes, he will regularize the timing. Traffic flow will get easier.” A few minutes later, the cars in front of us began to inch forward, and we passed through the intersection.

There are different ways in which the BRT's planning is held responsible for the corridor’s failure. And then, it’s not clear what failure actually means, and whether any kind of planning could possibly meet the expectations of those taking out their frustration on the corridor. What is clear is that criticisms of the BRT are about more than just bus lanes and backed-up intersections.

A conversation with a traffic signal engineer helps to illustrate the bewildering contradictions of any attempt to account for the BRT's failure. The Chirag Delhi intersection, where’d I’d sat with Himanshu in a seeming parking lot of traffic, is often held up as the worst part of the entire corridor, so I wanted to know whether those who design and operate traffic signals would have any useful insight on the BRT broadly and that intersection in particular. In one conversation, a signal engineer at DIMTS who’d spent half his career working in England and the United States pointed out that it was British
consultants who had designed the corridor’s signaling system. “It’s like asking you to make jelebi,” he said. “You won’t know how to do it.” Jelebi is an Indian sweet found in street markets and snack shops. His comment seemed to go even further than Sisodia’s critique that planning for the BRT hadn’t kept Delhi in mind; his comment implied that infrastructure should not only be evaluated for suitability in a given location but that you have to be local to know the recipe. Someone from England couldn’t possibly understand the Indian context. His comments implied that there is something unique about traffic in India and that it doesn’t follow international standards. Or maybe that the standards and methods are themselves biased by the context in which they’ve been developed: in the United States and in England.

In the next breath, though, this same signal engineer told me that nothing more could be done to improve the signal cycles along the BRT corridor. Technology simply can’t solve the problem, he said, which is that the intersection is “over-saturated”: there are just too many cars. He recounted a conversation he’d had with a British engineer about Delhi’s BRT. Wanting to get the other engineer’s perspective, he’d specified the vehicle volumes of the Chirag Delhi intersection. “How can you fix a junction with 100% saturation?” he had asked his British interlocutor. The British engineer said there was nothing that could be done.

In the first instance, the DIMTS engineer indicated that the culture of planning matters in getting infrastructure right. One has to know the local culture. But he immediately seemed to contradict himself in saying that the signaling system wasn’t the problem after all and by calling on the expertise of a foreigner to strengthen his point. In this seemingly contradictory vein, the standards and the methods that foreign experts
might prescribe are perfectly appropriate, but the problem is just too many cars. Rather than a failure to apply an appropriate technology for the given context, the problem was simply traffic that exceeded the design capacity of the roadway. It had nothing to do with the BRT or the signals.

His first point – that India is simply different and that international standards don’t necessarily apply – echoes comments I heard again and again throughout my fieldwork: that Indian drivers are particularly bad, that Indian traffic is particularly intractable, and that implementation is particularly unreliable in India. According to this readymade critique, India is just different. Others can’t know it. They got the BRT’s signaling system wrong, which infuriated local drivers and led to the corridor’s demise. It’s a critique that works as more than just rhetoric. It is the same critique that Delhi’s Deputy Chief Minister used to justify the BRT’s breaking: it’s good to learn from other countries, but infrastructure must be designed keeping the local context in mind. This critique helps deconstruct infrastructure. In this case, it helped deconstruct a system designed to empower buses. If planning has unintended consequences, so do seemingly anthropological critiques.

The fact that this signal engineer contradicted himself in the very next breath, however, shows how superficial this critique is. It just doesn’t hold up under any kind of scrutiny. But his waffling points to a broader trend in how infrastructure is understood in Delhi: even among experts, there is an impulse to blame experts first and foremost for the failure of a new system. To blame those who planned it. Especially if the planning or expertise can be externalized; to credit it to outsiders who just don’t understand the Indian
context. Or to a technology that was poorly implemented in the Indian context. But this easy critique evades hard truths.

Many people blame the BRT’s failure on a failure of implementation. These arguments take a number of forms. One version places blame on Delhi drivers, who lack discipline. There was a problem with cars driving in the bus lanes. One traffic police officer told me that Delhi drivers are “more prone to violations” than drivers in other cities. In other words, they simply don’t follow the rules. Why? Because there are no locals, he told me. People come to Delhi from all the states and so many different places. Sheila Dikshit, the Chief Minister who’d pushed the BRT through, also blamed outsiders and their lack of discipline for the BRT’s poor reception. I spoke with her in 2010, when she told me, “People need to improve.” They were still working on discipline. Just because the BRT was failing in that one location, she wanted to make clear, didn’t mean it would necessarily fail elsewhere in the city. Each part of Delhi is different. One of the problems, she said, is that it’s on the border of Delhi, so there are lots of cars using the corridor from the neighboring states of Haryana and Uttar Pradesh that aren’t familiar with the system. It’s much better now, she had said. The difficulty is in “training” people.

Some planners attribute this indiscipline to a lack of awareness. They argue that the new system needed a social awareness and media campaign to get the city’s residents on board. As Sandeep Gandhi, one of the corridor’s planners, told me: the BRT didn’t have any natural or automatic advocacy groups to support and push for it. As a result, it lacked ownership. With a smart social media campaign, he said, even a bad project can be made to look good. This was a good project, but it didn’t have that kind of advocacy. Sheila Dikshit
told me that the car drivers opposing the corridor had been most “vociferous,” while those who actually benefited from it mostly kept quiet.

Another version of this argument has it that a lack of enforcement caused the corridor’s failure of implementation. Dinesh Mohan is fond of quoting the Delhi Police Commissioner at the time the BRT debuted, saying that he declared he would not enforce traffic laws along the corridor. In any other place, says Dinesh, such an officer would be sacked for insubordination. Himanshu substantiated this claim that the traffic police had abandoned the BRT: when DIMTS took over the corridor’s operations as a private contractor to the Delhi government, it had to hire a sub-contractor to provide guards, or marshalls, to direct traffic and guide pedestrians. DIMTS also installed cameras along the corridor to monitor vehicles driving in the bus lanes. When their reviewers identified such a violation, they recorded the vehicle’s license plate number and reported the violation to the traffic police. Himanshu claims the police never followed up on any of these reports.

When I met with Hatendra Singh, the Deputy Commissioner of Traffic Police for the Southern Range of Delhi that includes the BRT corridor, I could almost see one of the corridor’s defunct bus stations from his office. He wore a crisp white shirt and sat behind a large desk in an office filled with neatly maintained potted plants. Hanging on the wall next to his desk was a map of his jurisdiction, the Southern Range, divided into 15 shaded “Circles.” Scanning it, I commented that my own residence fell in R.K. Puram Circle, but he corrected me: Uday Park is in the Hauz Khas Circle. When I asked him about the role of the traffic police in enforcing jaywalking and cars driving in the bus lanes of the BRT, he cited the Motor Vehicles Act that guided their work as traffic police. Technically, he said, pedestrians were not under their jurisdiction. They couldn’t be held responsible for
pedestrians walking into traffic to reach bus stations in the center lane. And when the BRT opened, there was nothing in the Motor Vehicles Act that precluded private vehicles from driving in bus lanes. The Delhi government had to amend the Act to include that as a traffic violation. Even then, he stressed the difficulty of ticketing drivers. How can a traffic cop actually stop a car? He has to stand in front of it, pull it to the side, and write the *challan* (ticket).

A few days later, I joined Inspector Sanket Kaushik out on the road with a team of traffic constables to observe their work enforcing traffic laws. I asked him if it was physically difficult to stop vehicles for violations. He said that people have different mindsets. If they have to stop someone by force, it can cause accidents. Sometimes they just note down the number of a vehicle’s license plate and send a message to officers further down the road. If those officers can’t intercept the vehicle, they’ll call the owner and take action after the fact. There are also limits to who can actually issue a *challan*. Not every traffic cop on the street has the authority to write up a violation. And then sometimes they use civil defense volunteers to stand on street corners, looking like traffic police, to encourage drivers to follow the rules. The paid volunteers don’t have the authority to issue *challans* either.

As we were talking, one of his constables pulled over a vehicle. A middle-aged woman got out of her small Hyundai wearing black sneakers and a *salwar kameez* with *dupatta*. The constable explained that she’d run a red light, for which the fine was 100 rupees and a three-month suspension of her license. She apologized and began to explain that it was her first time coming to this side of town. Another constable told to me that the
most common violations they dealt with were cars driving on the wrong side of the road. The second most common were instances like this one; of drivers running red lights.

Planners, for the most part, offer more ambivalent explanations for the BRT’s failure. From their perspective, the infrastructure was not substantial enough to be conclusive. Some place the burden on public perception and human psychology. As a DIMTS engineer told me, “if someone is sitting in their car, knowing that they’ll have to wait more than one cycle of the signal [to get through the intersection], it’s ok if everyone around them is also sitting and waiting. There are ten crossings around Delhi where you regularly have to wait two or more cycles. But it’s different if you see a bus going ahead, through the signal, while you wait.” On this point, Sandeep Gandhi compared perceptions against the reality, as per the numbers. Cars traveling on the BRT corridor, he said, averaged one kilometer per hour slower than cars on other roads. Buses, on the other hand, traveled five or six kilometers per hour faster in the BRT lanes. Overall, the corridor was moving 50-60% more volume than comparable roads in the rest of the city. This was mostly due to the segregation of lanes, which moved the buses into their own lanes. The problem, he said, is that people felt resentful towards the new arrangement. They felt that the bus lanes slowed them down when, in fact, they simply sped up the buses.

Planners are also ambivalent about the BRT’s failure because they don’t see it as a large enough system to be conclusive. One DIMTS engineer told me the BRT failed because the density of cars was just too great. It’s a major arterial road between Delhi and Gurgaon, and after the BRT was planned, major developments came up around it. First several district court buildings. Then a large hospital. Then a regional shopping mall. With these developments, there was no widening of roads or other provision for the increased traffic.
Others point out that the corridor was only four miles long. It wasn’t a network. This is the basic principle in transportation, according to one engineer. Samir Sharma told me, “You can’t even say the BRT was a failure, because it wasn’t a complete corridor. You can’t complete a full journey along it. This also means that we can’t evaluate the system’s benefits either.” From a planning perspective, the BRT wasn’t concluded, so it is inconclusive. It didn’t offer any final assessment.

What many of these arguments point to is not a failure of the BRT but a reason for car drivers’ ire. They are attempts to explain public opinion rather than planning, per se. And while planners themselves are ambivalent about the Delhi BRT and what its failure means for transportation planning and for the prospects of BRT technology and infrastructure, many others in the city draw conclusions from the corridor not just about BRT design but about planning. The BRT shows how planning – as much as the infrastructure itself – becomes politicized.

With the rise of an expert class of planners comes a ready scapegoat for the fraught task of urban development and the persistent inequality that continues to elude both policy and debate. Planning comes to absorb the political tensions of development, while much tougher social issues go unquestioned.

Hard Truths

When the BRT was still a new infrastructure and I was just beginning my fieldwork, I heard a similar story from multiple planners and policymakers, all engaged in their own form of ethnographic work to understand “what was really going on” along it. They each individually told me about traveling up and down the corridor by various means of
transportation in order to get a full perspective on it. And each one told me about their experience sitting in traffic in a car, watching as buses whizzed by in their shiny new designated bus lanes. The people riding these buses, each storyteller independently told me, would make faces and gestures so as to mock the presumably upper classes stuck in gridlock in their cars. Some of these planners and policy-makers celebrated this scene. Others seemed more troubled by it. And the fact that they all told me the same story raises questions about whether this was, in fact, a common occurrence, or if it is simply apocryphal.

Ultimately, the BRT failed because Delhiites who can afford to drive cars feel a sense of entitlement to the roadway, as well as a resentment towards those who ride buses and, in this case, were given special accommodations. Those who filed a court case to have the infrastructure scrapped made this logic plain in their own statements about the case. And while they may represent a small minority who were incensed enough to spend time and money on a legal battle, there was enough sympathy in the media and society more broadly that this sentiment gained political traction. So much so, in fact, that a party whose name literally translates to “the common man party” (Aam Aadmi, or AAP) would move to scrap it. The case of Delhi’s BRT shows how fraught planning can be and how easy it is to write off planning and internationally informed expertise as the culprits when nobody is willing to initiate a more difficult public debate about the root causes of inequality and underdevelopment in the Indian capital.
Near the busy shopping area of Lajpat Nagar one day, I spoke with a woman, Maria, who appeared to be in her early- to mid-thirties. It was early evening, and she was waiting to catch the bus home from work. She lived in Azadpur, a two-hour journey north, but had worked at a nearby bank branch for the past seven years, commuting the four hours, round-trip, every day. Sometimes, she said, if she was rushed or had to make a meeting, she took the metro. Presumably, she relied on the bus otherwise, because it is cheaper than the metro. We were standing on the side of the road, at a makeshift bus stop along the main road. Just across the travel lanes, a decrepit-looking BRT station lay dormant and dirty, in the process of being dismantled. Workers were in the process of breaking up the platforms with sledgehammers and pickaxes. No accommodation had been made to mark new bus stops on the roadway, but people seemed to know where to gather. Maria complained that
her morning commute was particularly bad. Sometimes it's a problem to get a bus, she said. There just aren't buses. And bus drivers can be unreliable. Sometimes they're in a hurry to finish their shift and won't stop at every place. Then it's a waste of money, she said, because she'd have to get down and wait for another bus. The buses aren't frequent enough, and then they're crowded. People rush in. As it is, she has to transfer at Daryaganj. I asked if she'd seen much of a difference when the BRT corridor was in operation. A puzzled look crossed her face. That? She asked. She shook her head. Gesturing towards the bus lane under deconstruction, she said it hadn't made any difference at all in her commute.
CHAPTER 4: A Goddess’ Eye View

Vision

On a cold and misty day in December, Shashwat huddled over the trunk of a white Tata Indica, pointing with his index finger at a stack of papers secured in a clipboard. We were in the small Himalayan town of Naina Devi, in the northern state of Himachal Pradesh, where the state’s Tourism Development Board had contracted DIMTS to develop a Comprehensive Mobility Plan (CMP) for the town, whose Naina Devi temple attracts upwards of 600,000 Hindu pilgrims during the nine-day festival of Navratri each fall and large crowds during other Hindu festivals throughout the year. The town itself is home to fewer than 5,000 residents (according to the 2011 Census) and its narrow, winding hilly roads and staircases leading to the temple pose logistical and safety concerns during popular festival times. During Navratri in 2008, a stampede in the temple complex resulted in over 100 deaths and injuries to many more. Some 40 of those killed were children.

In addition to improving safety during the popular pilgrimage, officials at the local, regional, and state levels saw opportunities to develop the town’s infrastructure and promote tourism to the temple as a form of economic development. Outside of busy festival times, couples, families, and local devotees often visit the temple for daily offerings or as an outing and an excuse to travel and picnic. The Tourism Development Board secured a loan from the Asian Development Bank to fund DIMTS’ comprehensive mobility planning in Naina Devi and two other temple towns in the state. The broader effort, of which DIMTS’ work was one part, aimed to “enhance economic growth and the provision of livelihood opportunities for local communities through tourism infrastructure development,”
according to one of their reports. DIMTS was charged with improving transportation infrastructure for the hilltop town and its temple complex.

In 2014, India’s Ministry of Urban Development updated its toolkit and guidelines for the preparation of CMPs. The update was a response to a lack of uniformity and consistency in how such mobility plans were being carried out across the country, and the Ministry wanted to ensure a minimum standard of quality and comprehensiveness. Central government funding schemes for infrastructure and urban development are increasingly dependent on such planning efforts. The toolkit’s introduction describes a CMP as “a vision statement of the direction in which Urban Transport in the city should grow. It should cover all elements of Urban Transport under an integrated planning process.” This chapter charts the course of developing one such CMP, and the challenges of reconciling vision with data and standards.

Having taken an overnight train from Delhi, Chirag, Shashwat, and I checked into a hotel in nearby Anandpur Sahib and hired a car and driver to take us up the mountain to Naina Devi. After meeting with police and temple authorities for permission and cooperation in the survey work to be carried out over the next few days, we also met with the survey coordinator, who had also come from Delhi to supervise a team of almost 20 locals in data collection for the planning effort. Finally, we visited the temple, where Chirag explained to me its mythology. The Naina Devi temple is one of 51 hilltop temples scattered across the foothills of the Himalayas, where pieces of the goddess Sati’s corpse are said to have fallen after Lord Shiva, enraged that Sati had killed herself, began a dance to destroy the world. Lord Vishnu intervened by cutting Sati’s body into pieces and scattering them
across the mountains, saving the world from destruction. Naina Devi is believed to be the site where the goddess’ eyes fell.

In the face of criticisms leveled against urban planners, and transportation planners in particular, that their work is insensitively copied and pasted from other places without taking local context into consideration, it is worth investigating just how local knowledge and resources are mobilized for planning efforts, as well as how planners develop vision for a city’s planned future. Ethnographic investigations of planning and development have often focused on the work of making local context and data legible to planners and state actors. Shashwat and Chirag’s interactions with locally hired enumerators, as well as local police and temple officers, as well as other officials, do illustrate acts of translation that render local conditions into data for their analysis and planning, according to national standards and guidelines. But their conversations with locals, and their own ethnographic experience in the town, ultimately informed their recommendations and planning more than the quantitative data they collected through hired enumerators.

This chapter portrays the friction and resistance planners face in collecting data for their work, especially when it requires hiring locals as data collectors, and the sometimes ambling, iterative process of developing a vision for a town’s future. Chirag explained to me that they typically sub-contracted such data collection work. If the data they receive is incomplete or flawed in any way, it is the sub-contractor’s responsibility. DIMTS can simply request that the counts and surveys be re-done. But for this project, they were supervising the data collection themselves. And the inconsistencies and errors of the untrained enumerators would plague their efforts over the next three days and follow them back to the office in Delhi, where they struggled to reconcile the flawed data with their customary
methods of analysis. They also, at times, felt lost in the data collection process: both unsure how the data collected would be useful and also literally lost in the town’s winding roads and unplanned staircase paths. What this chapter shows is that planning often resembles something more like ethnography than engineering, per se. As their team meetings in Delhi would reveal, the data mattered less than holistic solutions to the problems faced and articulated by their clients: in this case, the local officials in Naina Devi. And rather than recommending big, visible new infrastructure, they would ultimately focus their recommendations on smaller improvements to the existing network, as well as better management and maintenance, with special efforts for the busiest festival season.

In the course of preparing a CMP for Naina Devi, there were moments of reflection and conversation about the meaning of planning itself. These moments and conversations reveal planning to be a process of reconciliation and compromise. Chirag and Shashwat struggled to reconcile the mandates of their contract and scope of work as consultants with the standards and guidelines for preparing a CMP and the limits of their data and knowledge of Naina Devi. In the end, however, they fell back on conversations with insightful individuals on the ground more so than preconceived plans, an inflexible ideology, or special interests. In the face of grand and ambitious plans for the town, they proposed instead humble solutions to solve only the problems they actually observed. Their work demonstrates that even planners can struggle to keep a planning perspective in mind in the course of their work; rather, the planning perspective is itself a form of work. And in contrast to the goddess, whose temple attracts so many pilgrims, and who sees the small sacrifices of every individual devotee, planners do not begin their work with a
goddess’ eye view of the place they are tasked with planning. The planning perspective is as much a product of their work as a condition of it.

**Data Collection**

On the first day of survey work, we left our hotel at 6am and drove to the first checkpoint, Toba *chowk*, at the foot of the mountain, where the main road from the small city of Anandpur Sahib (and the nearest train station) leads up the mountain to Naina Devi and intersects with a smaller road leading to the nearby village of Kot Khas. There, a handful of survey workers, or enumerators, was surveying vehicles headed in either direction from Anandpur Sahib and Naina Devi about where they were coming from and where they were headed. The enumerators were local, unemployed men who DIMTS had hired for the few days we would be in town to complete field survey work. It was 37 degrees Farenheit outside, and we all cupped our hands to our mouths to warm them with our breath as we stood and waited for a vehicle to pass by. Once Chirag and Shashwat were content that the enumerators knew what to do, we headed up the mountain.
At Ghuwandal chowk, where Naina Devi Road intersected a more local street leading through the temple town, Shashwat pointed at the clipboard in his gloved hand. He was speaking to two other heavily clothed enumerators. A fog hung in the air, reducing our visibility to a few hundred feet. Chirag had done preliminary fieldwork in Naina Devi a few months prior, at the tale end of the Navratri festival. He’d learned the roads and most of the walkways up to the temple. But Shashwat and I were still disoriented by the town’s winding roads and switchbacks. Cell phone reception was spotty; we couldn’t rely on GPS to orient us. As a result, and because of the fog, Shashwat and I struggled to envision how each of the checkpoints connected and how they reflected the town itself and in relation to the temple.
The top sheet on Shashwat's clipboard was a road survey. Written in English, it offered an inventory of road and other infrastructure facilities and conditions, with formulaic space and numbered response options for the enumerators to fill in. Shashwat was struggling to translate the form's terms from English into Hindi, as well as from engineering jargon to common sense and colloquial terms. “First, chainage,” he told them, using the English word and engineering terminology. He explained that this meant choosing a starting point to measure the length of a road segment. “You count your starting point as zero and then walk 50 meters. That is your segment. Its chainage is 50 meters.” He spoke in Hindi but continued to use the English word, chainage; unable to come up with a direct translation. The two enumerators looked uncertain but also eager to please. They said nothing, and Shashwat continued his training.

“Then land use,” he said. “What kind of buildings are on each side of the road, along each segment?” The survey gave options that included “commercial,” “residential,” and “commercial/residential mix.” Next was parking. How are vehicles parked? Perpendicular? At an angle? Parallel? Each of these options was coded: 1, 2, 3, respectively. The enumerators were intended to write the appropriate number in the box next to Parking for each road segment. Then, type of road: bituminous asphalt? Concrete? Condition of the road: good? Fair? Street lights? Lane markings? Edge line marking? Pedestrian marking? He glanced down the road from where they stood. “Nahin hain” (“No, there is not”), he said, registering the absence of any such pedestrian markings on the roadway. He continued translating English to Hindi and Engineering to Everyday: Traffic signage: informatory? Prohibitory? And so on.
Having completed the entire page, he asked one of the enumerators to translate the form back to him. Wearing a sweater of blue, green and cream-colored stripes, the man paused for a long time. Nearby, Chirag was training a different enumerator on another survey form. This one, a tourist opinion survey, was written in Hindi. “Parking,” said Chirag. “Was there enough? Was it cheap?” The enumerator, who looked to be about 20 years old, began to fill in an open-ended question as practice, and Chirag saw that he was having trouble writing. His handwriting was slow and awkward, childlike in its uneven scrawl. He left the enumerator to find someone else with better writing skills. They were hoping to collect 300-500 of these tourist opinion surveys over the next three days. Just then, Shashwat walked over to us, having left the other enumerators at the car where he’d been explaining road inventory. That particular survey was “not happening,” he said. They decided they would have to do the road survey themselves, and we moved on to another survey location: the bus stand.

From this small, square lot, we could occasionally catch a glimpse of the temple perched overhead, when there was a break in the fog. We watched as tourist and local buses double-parked, one in front of the other and side-by-side, optimizing their use of the small space. Coming and going, they backed in and out with surprising efficiency, guided by a conductor of sorts with a whistle, who directed the bus traffic like a landing crew at the airport. There, one of DIMTS’ hired enumerators was carrying out a bus passenger survey. Shashwat asked him to demonstrate how he was asking each question on the form. Then he checked over the answers the enumerator had filled in. He had misunderstood “boarding” and “alighting,” Shashwat realized, reversing them in his recordings. Shashwat explained that boarding meant “bethna,” to sit. He went through the survey, demonstrating how each
question should be asked in Hindi. For example, “kiske liye aya hain?” (Why did he make this trip?)

Just nearby was another enumerator carrying out the parking survey. Chirag asked him how he was doing and reviewed his clipboard. There was some confusion about his recordings. He had only been recording how many new vehicles came and parked every 15 minutes, whereas Chirag explained that he needed to count how many vehicles were parked, in total, every 15 minutes. As Chirag and Shashwat continued on their rounds, checking on the enumerators, this became a common problem with those surveying parking. They began referring to it as “the accumulation problem,” because so many of the enumerators weren’t recording the accumulation of vehicles correctly. Chirag walked with
this enumerator through the parking structure and talked him through the survey. How many total vehicles are parked? How many of those are taxis? How many are two wheelers? At one point, Chirag asked him where he was from. Naina Devi itself, he said.

We drove further up the mountain’s switchbacks to another parking area. Just outside the lower station of an overhead cable car, or gondola, that offered an alternative means of transportation from this point midway up the mountain to the entrance to the temple, there was a two-story parking structure, as well as a surface parking area just off the roadway. Shashwat and I both felt queasy from the car ride. It was cold, and we were tired. But the fog was beginning to clear, and I was beginning to get a lay of the land and to understand how each of the switch-backing roads connected to each other. Nevertheless, it was difficult to see the forest for the trees: each survey seemed to have some minor mistakes. Chirag and Shashwat were preoccupied with how to correct for these mistakes without having to re-do the surveys entirely.

At this parking location, the enumerator had numbered each page with the hours of his recording, beginning with the hour from 7am to 8am. Flipping through the pages, Chirag saw that he was currently marking the page labeled 12noon to 1pm, but it was just after 11:30am. The enumerator had skipped 8am to 9am. Chirag relabeled the pages to correct for this mistake. He and Shashwat spent some time trying to figure out what to do about the fact that the enumerator had been counting parked vehicles in both the structure and the lot and recording them on a single sheet. If they had him split it up now, how would they disaggregate the data already collected? Because both parking places charged Rs. 50, they decided to have him keep doing it as he was. In the trees around us, rhesus macaque monkeys jumped from branch to branch and sat, eating and grooming one another.
Shashwat warned the enumerator to be careful not to let the monkeys steal his survey sheets.

Later that day, we drove all the way down the mountain to the intersection of Toba chowk, the first checkpoint, where the main road out of Naina Devi leads to Anandpur Sahib and intersects with a smaller road leading to the nearby village of Kot Khas. Shashwat drove to avoid making his car sickness even worse, and our hired driver sat in the passenger seat. At Toba chowk, the first group of enumerators we’d checked in with early in the morning was surveying vehicles headed in either direction from Naina Devi and from Anandpur Sahib about where they were coming from and where they were headed. They were easily stopping vehicles headed up the mountain to Naina Devi, but vehicles headed back down were more likely to blow past them, anxious to get on their way. Shashwat entreated the police officer stationed there (who was busy attending to other matters among a group of men milling about at the police stand) to be more involved in helping them stop these vehicles. “Everyone goes back the same way they come in,” said the officer. In other words, if you count them once, then you can count them twice. “That might be true,” said Shashwat, “but we still need the proof. We still need to collect that data.” Reluctantly, the police officer stepped out into the road to help the enumerators stop oncoming vehicles. It was clear that he saw his role as one of compliance: his supervisor instructed him to assist the survey workers, but he wasn’t interested in the planning process, per se. Similarly, the hired enumerators saw the work as a relatively easy source of money, as well as something different. But they had a hard time understanding how the information they were collecting would be used, or why the survey work was being done in the first place. They didn’t know what planning was.
We drove next to the Kot Khas police station, down a narrow road from Toba chowk just wide enough for one vehicle. The road was rutted and unpaved much of the way. An old man draped in a shawl walked with a small boy and two cows along one side. The police station was located at the top of a small hill overlooking the village, in a nineteenth century fort with red brick turrets. Naina Devi rose up behind it. Shashwat and Chirag hoped to collect records of vehicle accidents from the District Commissioner of Police (DCP). In an open-air courtyard that housed an immaculate temple around a peepal tree, we sat with the DCP, who asked how the work was going and what they were finding. Shashwat said they were seeing 30-50 vehicles in an hour. Not such high numbers, he said, but the greater
problem was circulation, especially during the busy festival season. He also mentioned illegal parking on the side of the road at the base of the overhead cable car. The DCP corrected him, saying that the parking wasn’t exactly illegal. None of the on-street parking is authorized, but it didn’t make sense to follow the laws exactly. “We are liberal, because our primary job is to manage and facilitate without parishan,” or bothering people, he said. He said they would compile the accident data tomorrow, because they were in the midst of preparing an election announcement. As we sat and sipped tea, he told us that ten years back, the narrow road through Kot Khas was the preferred route up to Naina Devi. People would stop at the police station to visit the small temple along their way. Because of this temple, they built the fort here, he said. Most of the accidents also happened in August, during Navratri, he told us.

We left our car near the police fort and started walking along the narrow village road, which led into a forest and quickly diminished to a narrow footpath. With the village behind us and nothing but the forested greenery of Naina Devi’s mountain around and ahead of us, we came upon a temple to Hannuman with a golden roof and saffron colored flags all around it. The sun was beginning to set, and under a canopy of old trees, the temple and its setting was a welcome respite from the stress of driving and survey work that had consumed our day. Shashwat and Chirag, who’d been so serious and focused throughout the day, began to lighten up and relax. After so many check-ins with enumerators up and down the mountain, posing as figures of authority to inspire fear and hard work, and negotiating with actual authorities to enlist their cooperation, Shashwat and Chirag could be themselves and explore a beautiful place; one of the small perks of their work. We saw nobody at the temple, which was silent save for the bells ringing melodiously to announce
the *puja*. We kept walking. As the light waned, we walked in single file along the trail until we reached a creek. There we turned around. When we got back to our car near the police fort, it was dark, and the stars were shining.

Figure 4.4 Shashwat and Chirag hiking from Kot Khas village (Photo by the author)

The next day, we were up and out again by 6am, and the sun was already beginning to shine. It was still cold, but not as bitterly cold as it had been. The air was clear. For the road inventory, Chirag and Shashwat used a measuring tape to measure the widths of roadways and their shoulders. They documented land use and pavement type, but, in the interest of time, they skipped measurements of chainage. For the speed tests, Shashwat drove every road in and out of Naina Devi, as Chirag watched a timer and the speedometer.
It was clear that there wasn’t much space to widen these roads, and then, they wouldn’t be used most of the year. We didn’t see many other vehicles. What was more important to the study, it was becoming apparent, was how to manage and accommodate all the pilgrims who visited the temple by walking. Most pilgrims walk up the mountain to the temple; the journey is part of their prostration before the gods. Many also walk barefoot. But others come by chartered bus, private car, motorcycle, or taxi. During the festival times, a limited number of vehicles is permitted to drive up the hilly roadway, but those vehicles then contend with crowds of pedestrians walking up to and down from the temple. A concrete staircase, separate from the roadway, provides an alternative – and more arduous – path up the mountain, but it had not been maintained. Its uneven steps were narrow and crumbling, lacking handrails in most places.

We parked in town and began walking one of the staircases leading to the temple. The stairs led us up and through town. The few roads only provided rough access to most of the homes in Naina Devi. Houses and shops lined narrow staircases sometimes just wide enough for two people to pass each other in either direction. Larger staircases were ten or fifteen feet across. Chirag poked his head into shops or people’s front doors to ask where various staircases led. How can we get back to the shed wala rasta, the covered staircase that led to the temple? With directions from a couple of residents, we found the way. Then, walking this covered staircase, passing beggars and vendors selling knickknacks, we suddenly came across another covered staircase, paralleling our own for some time, but which appeared to lead in a different direction. Chirag stopped a hawker selling plastic toys and asked him where this new path led. His face brightened. Returning to Shashwat and me, he said, “here’s the answer. We can use this path to make the route one way,
circulatory. Cars can drop off in one place, and people will go up to the temple, down again, and get picked up at a different place.” We followed the newly discovered staircase down to its intersection with the roadway, where Shashwat called our driver to pick us up.

Figure 4.5 A staircase in Naina Devi, with the temple in the distance (Photo by the author)

Having stumbled on a means of organizing foot traffic into a single one-way circulatory path, we drove down the mountain once more, to the police station in the Kot Khas fort. It felt like the fog had lifted not just off the mountain but from the entire data collection effort. Exploring the staircases, I’d felt lost. But, talking to people along the way, we’d found direction. At the police fort, the DCP we’d spoken with the previous day, who’d told us about the path through the forest up to Naina Devi, called his subordinate to bring us the accident data Shashwat and Chirag had requested. He offered us tea, and, when the
officer returned, he looked at the data and asked the officer to mark the road segments so
Shashwat and Chirag would know where the accidents had happened. Shashwat asked if
the severity of the accident was noted, and the DCP rattled off the various Indian Penal
Codes for light injury, fracture, death, and property damage. While we sat, Chirag put the
finishing touches on a hand-drawn map of Naina Devi that he’d been doodling in his
notebook. Slowly, all the pieces of the puzzle were coming together: the surveys were
wrapping up, however flawed they might be. Accident data was collected. And, importantly,
we’d found a few paths to the temple that we hadn’t known existed that could be used to
manage the crowds of pilgrims visiting during Navratri.

![Figure 4.6 Chirag’s map of Naina Devi (Photo by the author)]
The Data Isn’t Necessary

“Actually, the data is secondary,” said Anand, in a team meeting a few days after our return from Naina Devi. We were sitting in the sixth floor conference room at DIMTS’ Kashmere Gate offices. Outside, a young woman sat at a cubicle piled high with stacks of surveys brought back from the trip. She spent several days entering the data into Excel spreadsheets, coding responses and crunching numbers. “We should focus on schemes,” continued Anand. “Road widening and that kind of thing is not going to help. They are expecting something new.” He pointed out that they should not be looking to build infrastructure just to accommodate the crowds at Navratri that would otherwise lie unused the rest of the year. New parking structures, for example, would be used just three or four times a year during the festivals but would otherwise go unused. Instead, they should be focused on circulation schemes for crowd management, using the existing infrastructure as efficiently as possible during the festival season. He was interested in the vision that their CMP would offer.

They spoke about the roadways, the overhead cable car, and the many staircases. A Master Plan had recently been developed for the district, and it proposed a new cable car from Anandpur Sahib directly to Naina Devi. Everyone at the table agreed that that was a bad idea. It was just the kind of expensive, capital-intensive infrastructure that wouldn’t address the root of Naina Devi’s transportation problems. What was needed was not big, shiny new infrastructure but better management and maintenance of what already existed. They didn’t think there was any quick and easy solution to the town’s problems, or one simple solution that would unlock the town’s potential as a tourist destination. They didn’t think a flashy new overhead cable car was the answer. Their approach reflected their
perspective as planners: what was needed were small improvements and adjustments here and there to improve circulation through the network. Crowds and stampedes were a systemic problem that demanded a systemic solution. In the midst of this discussion, Anand said again, “For all of this, data is not necessary.”

Remembering how concerned Chirag and Shashwat had been in Naina Devi about the mistakes and shortcomings of the survey workers and the data they were collecting, I wasn’t sure what Anand meant when he said the data wasn’t necessary. Shashwat questioned him: “How do we make the projections? We have to offer some phase-wise projections.” How would they forecast future growth and account for such growth in their proposals for improved infrastructure and management? Their data was limited. Anand responded that the new Master Plan had done future projections of population and traffic increase. “These projections have already been done,” he said. Shashwat was still concerned about following the normal course of their analysis for a CMP. “How to distribute those trips? And by mode?” he asked. “There will be lots of assumptions.” He was referring to the methods by which planners distribute traffic counts across a road network for future forecasting. In this case, they did not have reliable data on traffic from the busiest days of Navratri. Instead, their data was limited to those counts that Chirag collected on his first trip to the down, just after Navratri, when the temple was still flush with pilgrims but the worst of the crowds had already departed. And then there was the data I had seen them collect, during a normal week in December. Shashwat and Chirag worried about how they could make proposals for future infrastructure without an accurate picture of traffic during the festival season and, therefore, the ability to forecast traffic into the future. Anand brought the meeting to a close by deciding that they would use the forecasts developed for
the Master Plan. "The Master Plan is based on elaborate surveys and multiple analyses," he said. "We can use those forecasts."

Little Data, Lots of Understanding

A few days later, I sat with Shashwat as he copy and pasted data from the spreadsheets that had been compiled into a pre-formatted spreadsheet for analysis. He wasn’t too interested in the outputs. From the survey spreadsheet, he copied columns of data under the headings of Direction, Type of Vehicle, Origin, Destination, Length of Trip, Time, Cost, Frequency, Purpose, Occupation, Occupancy. Once pasted into his analysis spreadsheet, the data auto-filled several forms reporting origin and destination zones and Average Daily Traffic. Shashwat was quick and confident in this work, adding separate tabs for each data collection site: Toba, Nangal Road, Ghuwandal. In the midst of this work, he began getting calendar reminders that Samir was holding a meeting on Preparing a CMP. “Professor Samir Sir,” said Shashwat, and we got up to walk to the conference room.

Sixteen of us filed into the room, followed by Samir wearing a brown plaid blazer that only enhanced his usually professorial look. He began by saying that they had several more CMP projects in the pipeline and he wanted to build everyone’s capacity and focus in order to target their data collection. “What does CMP mean?” he asked. “What do we want to come out of this?” The room was silent. Then he asked how many of the planners had read the Ministry of Urban Development’s CMP toolkit. About half raised their hands. Then a few more. “So most of you have seen it,” continued Samir. “I just want to gauge the level of awareness.” He called on Sarmistra to explain what a CMP does. “What are its components?” he asked. The most recently graduated from planning school and the only
woman planner on the team, she responded nervously.

Samir continued: “smaller cities are looking for these mobility plans,” he said. Summarizing Sarmistra’s answer, he said, “there is the existing situation, and there are new proposals.” He moved on to Shirish, who also became nervous, talking about data collection and taking a visual assessment of the city to identify infrastructure gaps and make proposals to fill those gaps. Abhijit added that CMPs include cost estimates for each of the proposed improvements. Arun added proposals for public transit, or “PT,” and parking.

“That’s all micro,” responded Samir. “A CMP is a strategic plan that needs strategic vision. The first task of a CMP is to develop vision.” He spoke about the difference between auto cities, or those that have chosen to build infrastructure to support traveling by private vehicle, and transit cities that have chosen to prioritize public transit infrastructure instead. As examples he spoke about Bangkok and how difficult it was to reach an office there from his hotel just nearby: he’d had to take a cab and multiple highway interchanges just to travel half a mile because there was no pedestrian infrastructure to accommodate the trip by walking. Zurich, on the other hand, had made different choices, investing in trams, buses, and trains, along with pedestrian infrastructure. “That’s their choice,” he said. Their role as consultants was to show their clients how their choices would play out over time. If a city’s leaders wanted to invest in public transit, it was their responsibility as consultants and planners to do the analysis and show them the quality of life they could expect. This is different than the traditional approach, which he referred to as the forecasting approach. The forecasting approach, he explained, took the status quo and calculated what would be necessary to maintain that status into the future. “If you have two million vehicles today, you will have four million vehicles after some period of time,” he
said. “If the road is so wide now, in the future it should be this much wider. That is the forecasting method.”

By contrast, he continued, CMPs required “backcasting. The opposite.” He explained that backcasting meant figuring out what needed to be done in order to achieve a desired state or goal. “If I want a safe city, or if I want a trip length of less than 20 minutes, how do I reach these goals?” he asked. This approach differs from the traditional planning method, he explained, because your analysis and priorities will differ depending on the vision. “We don’t tell them to go this way or that way,” he clarified. “We give scenarios. Then we tell them, it’s your choice.” He wanted the planners to remain focused on the bigger picture of their planning efforts; what all their data collection and analysis added up to: the macroscopic vision of a city. Their role was to communicate to clients the consequences of different development choices, as well as to communicate what was needed to achieve a certain goal. Based on our foggy experience in Naina Devi, this didn’t seem so clear cut.

Perhaps thinking similarly, Ram Krishna asked, “Will the client provide the vision? What should be done if the client isn’t clear about his vision?”

Samir’s response seemed to contradict the simple framework he had just articulated. “They know nothing,” he said. “You’re the expert. You have to go and present the consequences.”

Then Kiran asked, “What do you do if the client wants to do something, regardless of your recommendation or better judgment?”

“In those cases,” said Samir, “you take their ideas as one scenario for analysis.” He gave an example from their work in the eastern city of Ranchi, where city leaders wanted to build a monorail. I was reminded of the Naina Devi plan to build a second overhead cable
It’s so much easier to think that big infrastructure is the answer, because more diffuse, systemic solutions are harder to envision for someone untrained in planning and its many possible interventions. Samir explained that their analysis found there wasn’t enough demand to support a monorail in Ranchi. “So we analyzed it as a transit corridor,” he said. They compared the costs and benefits of monorail with other transit options, such as Bus Rapid Transit. In order to make monorail viable, they determined, the city would need to actively develop the corridor, to cultivate the demand for it.

The task of comprehensive mobility planning was to set a vision and then figure out what was needed to reach those goals. “On a strategic level, it’s simple,” said Samir. “Create a vision. The technical comes later.” In this view, planning is a two-stage process: figuring out goals and planning how to achieve those goals. Ram Krishna and Kiran’s questions, however, point to the uncertainty they felt about their role in setting those goals. Their questions also reflected the reality of their experiences, in which many local officials don’t know what they want and defer to them as experts. And then there are local leaders who simply aren’t educated about planning or aren’t aware of what their options are. They might default to some big, concrete infrastructure as the solution, when really, a series of more cost effective but less flashy solutions might be more effective. In these cases, Samir was suggesting, the role of the consultant and the expert is to offer different goals and to show, as options, what it would take to achieve each.

What their questions reflected, furthermore, and what my experience in Naina Devi with Chirag and Shashwat had shown, was that developing vision is a challenge. It takes time to get to know a place and its networks of transportation infrastructure, not to mention the many ways people use those networks in their daily lives. In the process of
collecting data, so as to know the place better, Chirag and Shashwat each, in their own ways, lost sight of the overall picture of their planning effort. It is perhaps a necessary step in the process. Returning to Delhi and to the office, where their data was cleaned and digitized and they had some distance from the place itself, they were able to speak more confidently from the planning perspective. I was beginning to understand what Anand had meant when he said the data wasn’t really necessary.

Samir continued, bringing his discussion down to the level of the office. “What I see now in the plans we are doing, it’s a lot of copying and pasting. But copying and pasting the vision from one report to another is not the right way to do it. Every report has to be different. I notice, when I’m reading and editing these reports that Chapters 2 and 3, where you analyze the data, are being done without too much of the brain. These are the existing conditions and the analysis of the current situation.”

On the white board at the front of the room, he wrote:

1. Vision
2. Existing situation
3. Improvement plans

“Data analysis comes in the second step,” he said. He circled this second step and talked about the need to be aware of the site and to know why each piece of data is being collected, as well as why it’s in the report. He also talked about how this data could be used to inform and persuade local leaders. As an example, he cited a recent traffic survey in Delhi that found that 49% of people didn’t have access to a motorized vehicle, of which 47% were poor. “We need to keep these users in perspective,” he said. To a Minister who said, “We will build the metro everywhere,” Samir imagined responding with such data:
that fifty percent of the population could not afford to take the metro. “I’m not saying this,” said Samir to the Minister in this hypothetical situation. “The data says this.” His point was that data analysis of existing conditions, when done well, could be rhetorically persuasive.

Samir next talked about what would be changing for these future CMP projects. What used to be a seven- or eight-month project, he said, they would now need to do in just three months. “What I want your team to do,” he said, “is to make the plan in the city itself. If we’re clear on what we want to achieve, the data can be used to support that later.” To clarify, he spoke about his own experience in the profession: “My 20 years of experience has shown that you need to be in the city as a user. The data will come later.” What he was arguing for was more attention and awareness to the unique features of each place. To get a feel for a place and its problems, as well as its potential. And to let that drive the planning process. Data was important and could be used persuasively, but it couldn’t replace a certain attentiveness to the place itself. “Planning requires passion and understanding,” he said. “It requires knowledge of the basic principles of planning, but you have to be passionate about the city.” Over and over again, he emphasized this point that data is less important than vision. That understanding precedes proposals. He was arguing against the rote replication of plans from one place to another. “A CMP requires very little data,” he said, “but it requires lots of understanding.”

The point of this story is to show how data is locally sourced and dependent on the local context. At the same time, there are challenges to understanding what a place envisions for itself. Junior planners, who are doing the bulk of the work that goes into planning, are given mixed messages: on the one hand, they need to work more efficiently and more quickly. On the other hand, copying and pasting is discouraged, because they
should treat every place as unique. Shashwat and Chirag struck a pragmatic balance: struggling to collect standard data as best they could with the resources at their disposal, while also relying on old-fashioned conversation with locals in order to understand the place, its history, and its potential. It was these conversations, as well as the repetition of driving and walking through the town, that slowly mounted into this passion or sense of the city that Samir was calling on as the driving force of planning and vision.

A Vision of Various Futures

A month after we returned from Naina Devi, and a couple weeks after Samir’s lesson in mobility planning, Shashwat was putting the finishing touches on a map for the Naina Devi report. He copied and pasted a red clipart arrow, dragging it into place over a roadway, in line with the other red arrows he’d placed, marking a one-way circulatory pattern for pedestrians during festival times. Finding another clipart icon depicting an overhead cable car, he changed its colors and resized it, copying and pasting to mark the top and bottom of the overhead ropeway. Reading through the report, I saw another map depicting the locations of accidents that had been provided by the DCP in Kot Khas, along with a table displaying the number of accidents according to their Indian Penal Code number. Among its findings from the other surveys conducted, the report’s Existing Characteristics chapter noted that 91% of the total traffic entering Naina Devi from Anandpur Sahib was made up of private vehicles. Two-wheelers, or motorcycles, made up the largest share of the private vehicles. The road inventory survey had found that about 90% of roads in the area were less than 15 meters wide. The parking survey had found that most vehicles that parked in the town – whether on-street or off-street – did so for less
than one hour. In other words, tourists and temple visitors might spend a considerable amount of time getting to the temple, but they spent very little time in the temple complex itself. The tourist survey showed that, while buses made up a very small percentage of vehicles traveling in the town, they carried almost half of all tourists visiting the area. A pie chart illustrated this modal split. A majority of tourists raised the lack of sidewalks and the disrepair of the staircases leading to the temple as safety concerns.

The Plan’s recommendations for managing traffic during festival times included three overarching approaches: Business as usual, access for all buses only, and access for only state-run buses and shuttle buses. Just as Samir had advised in his tutorial on comprehensive mobility planning, Chirag and Shashwat chose to present possibilities in the form of scenarios. If the town were to continue to widen roads and provide additional parking for private vehicles (business as usual), all modes would continue to have access to the temple, without having to transfer at the base of the mountain, but “the demand supply gap may increase further and lead to congestion and delays in travel time. The parking and road capacities may exhaust leaving limited scope for future expansion to cater the increasing demand.”

The second approach would include the provision of parking and tourist registration facilities at the base of the mountain. Only buses, whether private or public, would be allowed to drive up the mountain to the temple town. Those who arrive by private vehicle would park at the bottom and ride a shuttle up. Local residents would receive special passes to drive to their homes in town. The benefits of this approach included “the optimization of roads on hilly terrain” and “reduction in the pedestrian and vehicular conflict,” while parking would be managed in more spacious areas rather than
the confined areas of Naina Devi. The disadvantages of this approach include providing for parking chartered buses in Naina Devi and managing pilgrims at that location.

The third approach would require all pilgrims, whether arriving by chartered bus or private vehicle, to park and register at the base of the mountain. Only state-run buses would be allowed through and up to the mountain directly. All others would board shuttle buses up the mountain. The advantages of this approach were articulated as follows: “this approach shall contribute to filtering the vehicular traffic and moving people to the desired destination. ... The load on existing infrastructure may highly be optimized and the approach shall allow sustaining the system for longest horizon.” The disadvantages of this approach included requiring all pilgrims to transfer at the base of the mountain, though this would also facilitate better management of pilgrims accessing the temple. The report also went into detail about facilitating the movement of pilgrims in numbered batches, so as to prevent overcrowding in the temple complex. Those walking up the mountain would benefit from improved pedestrian facilities, including upgraded stairs with handrails, as well as service stations offering water, shade, and seating, along the way.

Finally, the report concluded with long-term proposals for developing capacity for pilgrims, in the form of alternative routes to the town. Here, the report cites conversation with the DCP in Kot Khas directly and recommended developing the path we had hiked past the Hannuman temple and up to the creek “as an eco-friendly walkway for pedestrians. The green surroundings with ramp to walk up-hill shall create aesthetically pleasant and attractive environment for pedestrians.” A photo accompanies this recommendation: the same one that I took on our hike of Shashwat and Chirag walking the forested path as the sun began to set.
CHAPTER 5: Planning in Ethnographic Perspective

Planning and Cultural Preference

In 1978, a graduate student in Anthropology at the University of Chicago, Douglas Goodfriend, wrote his Masters thesis about the Delhi Master Plan of 1962. Subtitled “An Anthropological Analysis,” his thesis reviewed the Ford Foundation’s efforts and recommendations for the capital city, relying on the same archive of letters and memos that I have used here in Chapter 2. He also interviewed several of the team members, who were still alive at the time. Many had gone on to become well known in American urban planning. With the hindsight of 16 years since the Plan’s adoption, Goodfriend critiqued its spotty implementation. Citing Indian scholars of urban studies and planning, he argued that this failure of implementation was a result of the Plan’s culturally insensitive recommendations. For example, its emphasis on decentralizing Delhi’s industry and residences seemed to contradict “a cultural preference for high density living” (Goodfriend 1978, 12). The Plan’s call for a more rational organization of urban land uses, furthermore, betrayed a cultural bias for “rationality” and “balance” (Goodfriend 1978, 17).

In sum, Goodfriend argued that the Delhi Master Plan had tried and failed to impose a western conception of order and symmetry on the Indian capital, without consideration for indigenous understandings of urban space and its organization, as in urban neighborhoods. Their vision also failed in its utilitarianism. It had assumed rational behavior from urban residents, who had proved in the intervening years to value something more than pure economy in their travels and shopping patterns, in their movement around the city, as well as their preference for living and work. “As dynamic an
attempt as it was,” wrote Goodfriend of the Master Plan, “it was not Indian” (Goodfriend 1978, 35).

Planning and Ethnography

Goodfriend’s analysis serves as an example of the kind of critiques that ethnographies of cities and urban planning have often espoused in the years since 1978: such ethnographies have viewed planning with a wariness that anthropologists apply to engineering and related fields of expertise. Planning and engineering have been seen as cold, rational disciplines that act as foils for the warm, cultural analyses of ethnography and anthropology more broadly. Planners and engineers, in turn, have been treated as hubristic authorities, playing god with the lives of those they seek to rationalize or otherwise alter. What the chapters here have demonstrated is the planning perspective built into such expertise: a way of seeing cities as networks and aggregates of human activity. Such a perspective creates an inherent distance from the individual experiences of urban residents. But it is a perspective that deserves its own ethnographic understanding.

Nearly thirty years after Goodfriend wrote his critique of the Delhi Master Plan, the capital city’s Deputy Chief Minister stood in front of news cameras and made a very similar argument: Delhi’s sole Bus Rapid Transit corridor was culturally inappropriate, he said. Its planners had copied and pasted the concept from other cities around the world without taking the local context into consideration. In this case, recounted in Chapter 3, seemingly anthropological arguments about the cultural appropriateness of an urban infrastructure became weapons in a political battle over the support of elite Delhi residents and their private automobiles. In the course of investigating why the Delhi BRT failed, many people would claim a certain cultural exceptionalism for the city and its residents. They would tell
me that Delhiites had a particular preference for driving without regard for traffic laws, or even red lights. And that the BRT had failed to consider a cultural preference for driving over public transit.

Perhaps more difficult to grasp, however, was the BRT's effort to retrofit an existing infrastructure and improve the efficiency of existing roads by cost effective means. If there is a cultural preference in Delhi, it seems to be for large-scale, capital intensive infrastructure projects rather than smaller-scale improvements and regular maintenance. Planning does not exclusively favor new infrastructure; rather, the planning perspective, more often than not, takes umbrage with costly new ventures. Those who helped developed Delhi’s first Master Plan, as recounted in Chapter 2, took inspiration from the Netherlands and its reverence for the humble bicycle. Because the bicycle was also the predominant mode of travel used in Delhi at the time, it seemed a natural fit to plan the city's future around safer and more efficient bicycle infrastructure, as well as a mix of land uses that would accommodate short trips by bicycle. In implementing the Master Plan, however, another perspective prevailed. Or, perhaps more accurately, many perspectives prevailed. And together, these many perspectives amounted to something less coherent than the vision outlined in the Master Plan.

This dissertation has sought to explore what makes planning vulnerable to the kind of critique leveled by Goodfriend and Sisodia. One answer is that, as a form of expertise, planning is obscure and intimidating to many urban residents, as well as elected officials. As illustrated in Chapter 1, planning expertise is difficult to reconcile with more everyday understandings and interpretations of urban life. The planning perspective entails a network approach to the city that necessarily discounts individual experience. This
perspective on the city can seem distant. And it is. But the story of data collection and comprehensive mobility planning recounted in Chapter 4 also demonstrates the limits and challenges of thinking this way, even for planners. Chirag and Shashwat espoused a planning perspective in their work for the Himalayan town of Naina Devi, but such perspective is not constant and unwavering. Rather, it is a temporary state and an aspiration; one that is frequently interrupted by the gritty complex reality of getting to know a place, collecting data with which to analyze complex travel behavior, and the need to make reasonable recommendations for a place where many in positions of power might be more inclined to big, visible infrastructure improvements, rather than small, incremental changes in how existing infrastructure is managed and maintained.

Even when planners do bring optimism and enthusiasm to their work, as those who worked on Delhi’s first Master Plan did, their efforts are often foiled by political pressures, or a lack of political will. As demonstrated in the history recounted in Chapter 2, even with a bold vision, planners often find their plans escaping them; taking on a life of their own, or else being used towards ends unintended or unexpected by those involved in the planning process. There is a way in which plans betray their planners. Such betrayals reflect limits of planning power; that, as Samir instructed in his tutorial to the DIMTS Planning group, analysis can be rhetorically persuasive, but planners have just that: rhetorical power. Their plans and visions exist, imperfectly, on paper and in maps.
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