FROM the GROUND UP:

Reappropriation of Urban Infrastructure

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ABSTRACT: Most economic literature on the "Indian Growth Story" concludes with recommendations to increase the pace and quality of infrastructure construction, claiming that this is necessary to maintain the growth rate and keep up with other countries like China. With the added pressure of India's increasingly vocal and car-owning middle class, the government has tried to respond through programs like the Jawaharlal Nehru National Urban Renewal Mission (JNNURM). However, the resulting transportation infrastructure projects, such as flyovers, bridges, pedestrian overpasses, and railway tracks, are commonly appropriated by communities that have been largely passed over or even victimized by India's rapid economic development: the urban homeless. The creative uses of transportation infrastructure by India's urban homeless might offer lessons for future urban planners or designers seeking to build communities rather than dividing them, while meeting the needs of the diverse users of urban space.

ew Delhi, the capital city and the National Capital Region (NCR), is paradigmatic of economic development policies with an outlook towards urban transportation infrastructure. Since India began economic liberalization policies in the 1990s, Delhi has seen a massive growth in the number of privately owned motor vehicles,

substantially increasing demand for transportation capacity. The city is home to 1.4% of the nation's population and 7% of its motor vehicles, making it the most populous city in terms of both people and vehicles, and the area occupied by roads and related infrastructure is an unusually large percentage of the total area of the city (Padam and

Singh 2009).

A large portion of public funds in India is spent on these infrastructural developments, but this spending is "too often influenced by a notion of political prestige than by rational calculations of economic growth" (Padam and Singh 2009, 4). This is especially true for Delhi, where too much money is misallocated to politically appealing but expensive facilities such as elevated roadways (it costs anywhere between INR 50 and 100 crores (approximately \$10-20 million) to construct a flyover). The total approved financial outlays for the Tenth Five-Year Plan (2002–2007) for transportation infrastructure in Delhi was INR 544 crore (approximately \$100.6 million).

Most studies on the subject advocate for an increase in urban transportation infrastructure to meet the increasing demand of motor vehicles in the city, equating this type of development to economic growth. They blame encroachment by parked vehicles, roadside hawkers, and pavement dwellers on the lack of infrastructural ability to meet growing demands.

This sudden growth and the resulting social inequity highlight the contrast between small, affluent populations and large communities living in informal settlements. However, while new transportation infrastructure caters to a small, privileged fraction of the society, it creates spaces that are appropriated for everyday use by social

groups at the other end of the economic spectrum. An extremely large number of people use these spaces to live or work, residing on pavements, under flyovers, on underpasses, under over-bridges, etc. In fact, their lengths of stay in these spaces exhibit interesting and unique patterns.

A space like the pedestrian path of the Nizamuddin foot over-bridge opposite the New Delhi railway station (a major point of entry for rural migrants into the city) tends to be appropriated by "day-old migrants," en masse at night, roughly for the period it takes them to find a job in the city and start earning. Spaces under flyovers tend to be more permanently appropriated by older migrants who have found some sort of employment or business, however temporary. Interestingly, the latter comprise full-fledged communities, with definite notions of community and individual space and worship/sacred space (or niche). Due to the activism of NGOs and the decriminalization of the homeless, the children of these communities go to the municipal schools. These communities continue to lack important infrastructure, such as water, sanitation, and electricity. However, the municipal corporation does attempt to provide water to many of these communities by way of trucks that supply potable water once a day (although this supply is often erratic). Communities that have permanently appropriated these spaces tend to be constituted of members from the same community and even the same village in their native state.

THE SAFDARJUNG FLYOVER

One typical such appropriated space is the Safdarjung Airport Flyover, which lies on one of the busiest arterial roads of Delhi, Sri Aurobindo Marg. A variety of public, semi-public, and private spaces is located immediately in the vicinity of this flyover: the defunct Safdarjung Airport (now a "flying club"), a heritage structure (Tomb of Mirza Najaf Khan), the Safdarjung Bus Terminal, C- Block of INA Colony (a gated housing enclave), Sanjay Park, and the Northern Railway Nursery. A Northern Railway track passes under the flyover.

It is under this flyover that a community of approximately 50 families, all immigrants from the Sitapur District of Uttar Pradesh, has chosen to establish its homes. According to the dwellers interviewed at the site, the settlement was established nearly two decades ago, in the early 1990s. Although the land technically belongs to the Northern Railway authorities, who have attempted eviction in the past, NGO support has allowed these dwellers to continue living in this space.

Physical characteristics and access

The site is defined on one side by a relatively low-traffic road, and on the other by a railway track serving mostly freight trains,



FIGURE 1. Railway line passing under the Safdarjung flyover.



FIGURE 2: View of flyover and settlement wall from Flying Club Road.

both passing under the Safdarjung flyover. These two channels of thoroughfare constrain the appropriated site, although spill-out zones exist to one side of the flyover and between the road and the railway line.

The site is separated physically from the road by a brick wall; the settlement is accessed through two gaps that have been made in the barrier. These makeshift "entrances" to the space create a sense of enclosure that seems apt for the kind of appropriation taking place in it. The other connection between the settlement and the outside world is to one side of the flyover, along the railway track, where an informal path can be followed to the Safdarjung Bus Terminal (this involves crossing the tracks). There is no access from other sides, where

the space is bounded by the Nursery and Public Park

The physical isolation of the space is evident; most traffic simply passes over the flyover unaware of the settlement below, and the wall along the road under the flyover shields the settlement from view of the occasionally passing cars. All three entrances are located and exist in such a way that is it clear no one would accidentally walk through this space. A sense of territory, therefore, is clearly established.

Users—socio-economic standing

The inhabitants of this space are migrants who travelled to New Delhi because of the



FIGURE 3: Access to the settlement



FIGURE 4: Semi-private and public spaces: earthen demarcations separating individual dwelling units.

poor state of the rural economy and lack of employment opportunities in their native village. Most of the inhabitants (including some of the women) now make a living working at a variety of jobs, predominantly selling wares at the nearby Sarojini Nagar Market. The average monthly income of most "households" is under INR 5,000 (less than \$100). Many of the residents have had some schooling, but few, if any, adults have attained any higher education. However, about 30 children who live in this settlement have been enrolled in the nearby New Delhi Municipal Council School at Ali Ganj, with the help of an NGO. The organization also provides informal tutoring outside school hours.

The men and employed women are absent



FIGURE 5: *Internal 'streets': dwelling enclosures under the flyover.*

from the settlement for most of the day, when they are working. During this time, the space is dominated by women and children.

Spatial organization

Although home to almost 100 inhabitants, the settlement under the Safdarjung Flyover does not have any formally defined houses with the typical "four walls and a roof" arrangement. Instead, the flyover itself functions as a collective roof of sorts. and each family is spatially segregated solely by means of a makeshift enclosure, formed by simply tying ropes across the columns of the flyover and hanging a variety of materials (cloth, sheet, plastic) to create screens that give a limited measure of privacy. Perhaps because there is some degree of tenure security, and because of the amount of time the families have been living here, they have made some investment in terms of material and capital. Because of their limited economic means, however, most of these materials are flimsy scrap materials that require some amount of upkeep and barely function as protection against unfavorable weather conditions. Individual enclosures are approximately five square meters. Because of their tiny size and the number of people that inhabit them, no space is left unused. The functions of the same space change throughout the day depending on the needs of the users.

On a slightly broader scale, the spaces out-



FIGURE 6: Dwelling units made of found/miscellaneous items and with ample storage for more.

side of, around, and in between these enclosures become delimited open spaces for community use and resemble street-like spaces. These spaces are extensively used for a variety of activities, including laundry, cooking, bathing, resting, and playing—becoming a shared space where socializing occurs throughout the day. The amount of "open" space is small, but is used extremely efficiently as a social and active space, and is heavily in use at almost all times of the day.

There is ambiguity between public and private space in this settlement, as the same space may take on multiple functions, and, because the whole community itself is isolated, it may be considered private in its entirety. Within the settlement, areas have

varying degrees of privacy (which may also depend on the time of day)—private, semi-private, and open.

The settlement as an appropriate urban space.

As an example of urban space appropriation, the Safdarjung Airport flyover settlement clearly demonstrates how "real" lived space is a product of the social (and spatial) practices of the inhabitants of that space. For instance, social characteristics carried over from migrants' previous lives in villages, such as a distinctive communitarian life style and centrality of religious beliefs, are evident in the spatial configuration. Moreover, the nature of their livelihoods



FIGURE 7: A few of the younger inhabitants of the settlement.



FIGURE 8: Daily activities carried out in the open.

and day-to-day existence necessitates very close cooperation and a certain kind of "living together" that the settlement reflects.

The nature of the appropriation taking place therefore, is both material and social—it is not just the occupation or seizure of the physical place, but also the "sense of place" that has been established. The surrounding urban infrastructure forms the physical basis for the appropriation, together with the various materials and possessions that the appropriating user group have introduced, which give the space its characteristics and qualities.

The "claim" that has been laid on this site by its inhabitants is of a somewhat permanent nature, in spite of some instances of contestation for the space. In addition, the cascading effects of increasing recognition of illegal settlements by the Delhi government, admission of children to municipal schools, and attempts to provide basic amenities give this settlement a further degree of permanence and inevitability. Although from the point of view of the government and the affluent class, this space may be seen as a marginal, less frequented, and unvalued site (as compared to the much more upmarket residential surroundings), the marginalization of the site only makes the permanence of appropriation easier.



FIGURE 9: *Community temple*

RE-IMAGINING URBAN INFRASTRUCTURE

The study of seemingly minor and unimportant occurrences in a city described here does not provide grand explanations or the basis for large urban housing schemes. But it certainly provides multiple possibilities for reimagining specific urban typologies. Can we not harness the power of these massive investments to give this transportation infrastructure a new social purpose? Rather than waiting for such spaces to be appropriated by users for social purposes, could we not conceive public infrastructure with intentional, positive socio-cultural dedications nested into design criteria, rather than considering only their transportation functionality? Doing so, can we not as urban designers and planners find a way to use urban infrastructure as something that knits the city together as continuous neighborhoods, rather than physical structures that divide existing settlements? There is a strong case to be made that with small changes and tweaks, inspired by modest acts of re-imagining that are based on an understanding of the existing nature of use, however informal, a major impact can be made. The Highline in New York offers a parallel. It has shown us that the reimagining of a defunct infrastructural system, as a social function, inspired by its real state (abandoned, wild imagery), cannot just be successful, but can also reshape the mental and cultural meanings/images associated with old typologies.



FIGURE 10: Material investments and personalization: A (power-less) refrigerator and Bollywood posters.

This need not necessarily result in the political aspect of appropriation getting defused by "design." Instead, Indian cities could have a "Right of Action" plan that ensures the primacy of lived space by enabling the (silent) majority of the city dwellers to play a significant role as planners, designers, and builders. Such a plan would deem that certain users have the right to transform specific urban spaces and typologies in the city. The static, mono-functional program of urban infrastructure could then be envisaged as a dynamic spectrum. In the case of flyovers, this could mean that passive users (like motorists) might act along more clearly defined design conditions, while active social groups (such as the urban homeless) could have the possibility to creatively use and transform them, thereby decisively and visibly staking their claim on the city.

Padam, S. and S. Singh. 2012. Urbanization and urban transport in India: The sketch for a policy. http://www.deas.harvard.edu/TransportAsia/workshop_papers/Padam-Singh.pdf.