

TRANSITION FROM URBAN VOIDS TO URBAN REALM: UTILIZING ABANDONED SPACES BENEATH THE FLYOVERS IN DHAKA CITY

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Abstract

Even though flyovers are built to prevent congestion and be effective in reducing travel time, in Dhaka, the capital of Bangladesh, they often contribute to create infrastructural urban voids as a result of inefficient decision making and planning of the administrators and planners. These voids can be seen as spaces which distort the urban tissues neither act as private or public spaces rather they have been considered as negative spaces. Due to rapid urbanization and frequent expansion, Dhaka is facing scarcity of open and green spaces. It is very difficult to spare enough lands for public spaces in a densely packed megacities like Dhaka as lands are very expensive. In this situation, reclaiming the leftover space under flyovers can create better urban opportunities and they can act as a place for urban gathering, pocket parks and plazas or only just places for public activities. The research aims to find the potential of leftover negative spaces beneath the flyovers that can be revitalized through urban scale intervention and also to find out a suitable solution considering both environmental responses and public experience. This research was principally based on observation and field survey. Books, journals, documents from websites etc. are the sources of secondary data. The paper will be focused on the concept of urban voids, identifying and analyzing the types of voids and understanding how these voids have great potentials for turning into urban realm. The outcome will be presented as a prospectus for dealing with such infrastructural urban voids and turning them into new opportunities.

Keywords: *Urban Void; Adaptive Re-use of Abandoned Places; Negative Spaces under Flyovers; Urban Realm; Alternative Public Space.*

1. Introduction:

The growth of Dhaka, the capital of Bangladesh, is characterized by rapid urbanization and frequent expansion, due to which its urban tissues are transforming in a detrimental manner. Elevated pathways are often perceived as a symbol of development is aimed at eliminating traffic congestion, reducing travel time, establishing economic growth and upgrading connectivity with distant communities overlooking underneath urban voids. In recent years, the emergence of new flyovers in the dense framework of Dhaka city certainly represents the technological development of urban and transport planning of Dhaka however camouflages the life beneath such advancement. It is highly observed that most of these places are often forgotten, inaccessible and become a heaven for anti-social activities. Due to rapid expansion of population, motor vehicles and traffic congestion in Dhaka city; amazing flyover, overpass and elevated expressway projects are seem interlaced with the cityscape. The principle aim of elevated pathways is to provide high speed transport facility for the high to middle income group without concerning about the public life roaming slowly below. At present, mushrooming elevated highways are creating spaces under and along them and these areas have high possibilities to generate alternative urban pockets by integrating them with surrounding communities through proper urban planning that enhances the functionality of spaces while improving safety and aesthetic quality. This study aims to identify the existing haphazard situations of these urban voids and the possibilities to find out probable alternative re-use for such voids.

2. Literature Review:

• Urban Voids:

Urban voids are often known as neglected or forgotten spaces of an urban area. They are the frequent results of poor urban planning and infrastructure designing. Roger Trancik was one of those who first wrote about lost or under-managed spaces. According to Roger Trancik (1986), "Urban voids are undesirable urban areas that are in need of redesign making no positive contribution to the

surroundings. They are ill-defined, without measurable boundaries and fail to connect elements in a coherent way.”

“Lack in planning, consideration of people’s need, forecasting of demand, urban sprawl, haphazard development, change in trend with development is the primary cause of generation of void spaces in an urban area.” (Azhar & Gjerde, 2016; Ruchita, Bhaskar & Jagruti, 2019)

“The usual process of urban development treats building as isolated objects and sites in the landscape, not as part of larger fabric of streets, squares and viable open spaces. Decisions about growth patterns are made from two dimensional land use plans, without considering the three dimensional relationship between buildings and spaces and without a real understanding of human behavior.” (Trancik, 1986). From this quote from Roger Trancik, we can realize why people do not perceive urban voids during planning process. Being designed on the basis of two-dimensional plans, these spaces act a negative urban spaces as they fail to accommodate real requirements for the users and preserve quality of public life.

- **Classification of Urban Voids:**

Factors like topography, neglect and improper planning practice influence the formation of urban voids. According to N. P. Narayanan (2012), voids can be classified into three main categories;

- a) Planning Void:** Planning voids are the result of inefficient and faulty planning process. These voids are created due to planning in isolation without considering the urban fabric. Planning voids are the most visible one urban context. These voids can be perceived using figure-ground theory.
- b) Functional Void:** Functional voids are the dead vacant spaces created due to left over space or a built mass which has no functional use. When a space is not used according to its desired designed purpose the space becomes defunct. Such functional voids occupy precious urban lands and creates a gap in urban context.
- c) Geographical Void:** Geographical voids are created due to geographical feature of an urban context which are also the results of improper planning process. When city planners and urban designers do not consider the voids around a geographical feature (like river, nullah, etc.) unusable spaces are created around them.

But according to A. Ansari (2016), after refining according to scale and ownership, urban voids can be classified into four categories;

- Edge and Buffer Voids
- Infrastructural Voids
- Transportation Voids
- Large Scale Plots

According to these classification, flyover or Elevated Pathways can be classified as “**Infrastructural Void**”, an urban void which is the result of improper planning and design of urban infrastructures.

- **Definition of Infrastructure Void:**

Urban Infrastructure is the term for basic system of public works including transportation, communication, sewage, water, electric systems, etc. basically all amenities those are required for the operation of an urban context. Often these infrastructural system produce residual spaces in between them. Among all systems, transportation structures like flyovers, overpass, elevated pathways, express ways, etc. creates urban voids and residual spaces in urban areas which is defined as “Infrastructural Voids” or in short “Infra Voids”. Infrastructural voids are mainly the dead and negative spaces in and around public infrastructures. Such voids creates a gap within neighborhood context and becomes a space for illicit activities.



Fig 01: Infrastructural Void
(Source: Internet)

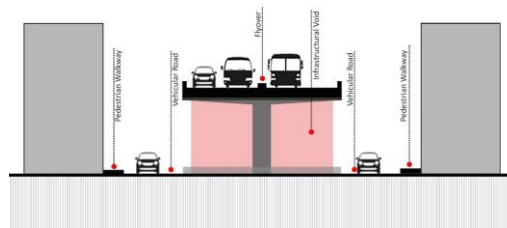


Fig 02: Infrastructural Void (In context of Dhaka City), Source: Internet & Author

3. Case Studies

Case study 01: (*Under Flyover Garden in Matunga, Mumbai*): Mumbai is a city starved of open and green spaces, and in recent year lots of public initiatives being taken forward to mitigate such scarcity. The residents of Matunga area, especially those residing near the flyover felt a need for space for walking and jogging. Soon after the flyover was made open to public, it became a hangout zone for the gamblers, hawkers, drug addicts. Over a period, unsocial elements had taken over the place and it became a den for illegal activities and also this place had become an eyesore due to dirty and unkempt places. But the residents of Matunga took an initiative to control such haphazard situation. The idea of converting the space under the flyover was a natural outcome and soon “one Matunga” resident’s group approached Brihanmumbai Municipal Corporation (BMC) with a proposal to convert the flyover into a garden-cum-walking park. Later, BMC sanctioned funds tor redevelopment of space under the Tulpule flyover as per design suggestions. BMC started to develop this area in June 2015 and it was inaugurated in 2016 as only encroachment free under flyover space in Mumbai.



Fig.03 : Under flyover garden in Mumbai, Source:The Better India,2016

The garden has been designed to look like Narmada River. The 600m pathway is blue in color with a replication of rock formations as found on the banks of Narmada. This garden has 300 lights and 11 rotatable CCTV cameras to ensure security. The lights installed in the garden are colorful and are strategically placed, which change the look and feel on the space in the evening. This park has been used for walking, jogging, skating, public gathering, gossiping, etc. It is quite an achievement for the residents to ensure that an open space meant for the public is transformed into such a fascinating garden.



Fig.04 : Under flyover garden in Mumbai, Source:Internet

Case study 02: (*Deyalkotha, a Community Lantern under Tejgaon Flyover, Dhaka*): Deyalkotha is a “pilot project” under the Tejgaon link flyover in Dhaka, Bangladesh. It has been built as a temporary education platform for the slum children living in the adjacent area. It works as a multi-functional stage where the children will get to learn through playful activities and others will get social education through cultural activities such as theatrical performances. The Tejgaon Flyover site was the first initiative to restore existing underutilized by giving them some purposeful meaning. The site was deliberately chosen due to presence of a large number of marginal people within this area. As the flyover stands next to a residential area, the underneath road devoid of traffic circulation and that creates some opportunity spaces under the flyover to be used for community service.

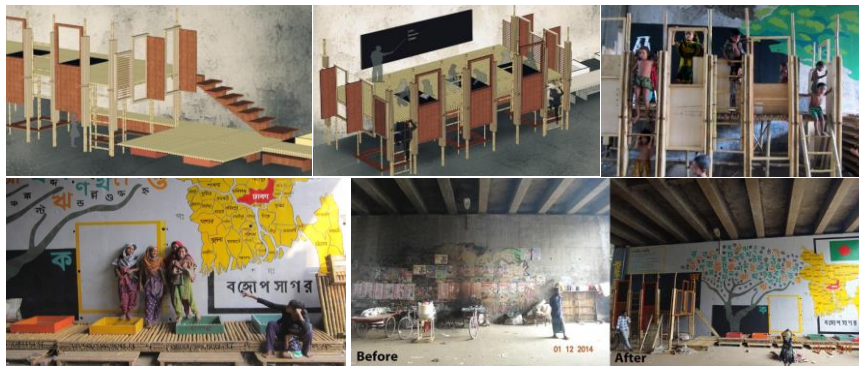


Fig.05 : Deyalkotha, Dhaka, Bangladesh

Source: <https://contextbd.com/deyal-kotha-wall-attic-a-community-lantern-under-tejgaon-flyover-avantgardes/>

4. Methodology

This is a generalized study and it is expected that the outcome of this study would be applicable in context of Dhaka city. Three major points of Mayor Hanif flyover have been selected for study. The study is focused on the prevailing activities that took place under Mayor Hanif flyover. The overall study has been conducted in several phases. The case studies are considered as the preliminary study on utilizing leftover spaces under flyovers. The primary data have been collected through visual observations, photographs, field survey, sketches and field notes. The paper represents the analysis of data that had been collected in site. Later computer aided drawings based on GIS map and field survey have been prepared. Finally, the analysis phase aimed to re-evaluate the potential uses of leftover lands below flyovers in order to convert infrastructural voids into vibrant public space.

5. Site Location & Context:

Jatrabari-Gulistan Flyover, one of the most significant flyovers in Dhaka city, also known as Mayor Mohammad Hanif Flyover, is an 11 km-long flyover opened on October 11, 2013 starting at Palashi near Gulistan Junction and ending at Kutubkhali. [06] This flyover is located at the confluence point of three important national highways Chittagong (N1), Sylhet (N2) and Mawa (N8) and also it is one of the major gateways to enter Dhaka. The route of flyover is marked in the following figure showing the route of flyover starting from Chankharpool and the pass through Bongo Market, Gulistan, Tikatuli, Wari, Narinda, Swamibag, Saidabad, Jatrabari and ends at Kutubkhali. In this research paper, we will consider three significant point including the starting point of the flyover (Chankharpul), Bongo Bazar and Gulistan point, of Mayor Hanif Flyover as our considerable site. Overall study and survey are conducted within these three points to understand the exiting condition of infrastructural voids in context of Dhaka. Again this study will find out strength, weakness and opportunity of this site and a suitable design intervention that will create an urban realm within this dense context.



Fig.06: Mayor Hanif Flyover, Source: Google map

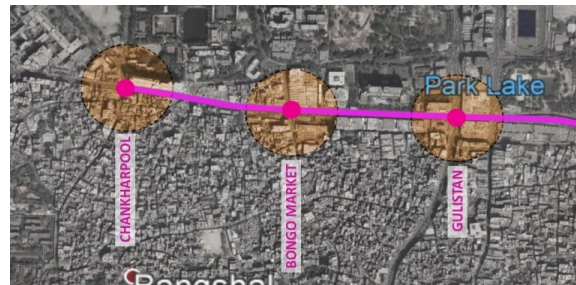


Fig.07: Indicating study areas, Source: Google map

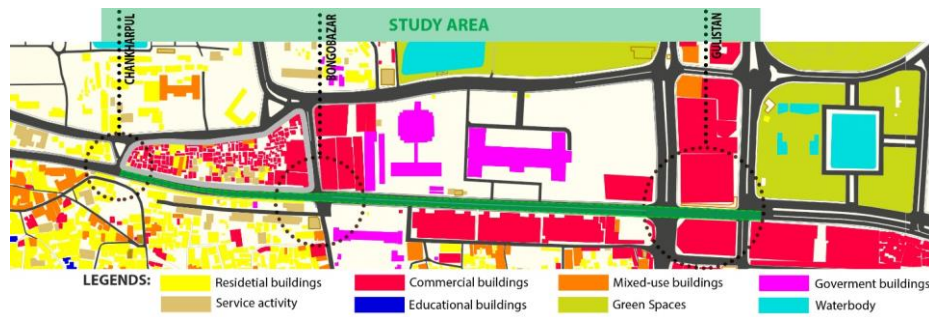


Fig.08: Land use map of study area, Source: GIS Map of Dhaka

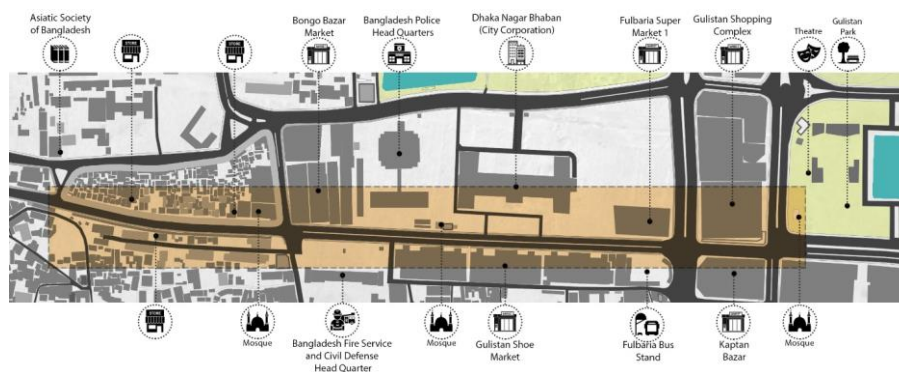


Fig.09: Infrastructure map of study area, Source: GIS Map and Survey data

6. Existing Situation around Flyover:

Study Area 01, (Chankharpul, starting point): Chankharpul is the starting point of Mayor Hanif flyover, a mixed-use area including residential buildings, markets, small business areas, restaurants, service activities. Chankharpul is the place for young generation as it is close to Dhaka University, Dhaka Medical College and BUET. People around this place do not understand the value of leftover lands below flyover. These spaces remain abandoned in most areas. Most of places are used for waste disposal areas, storage areas for surrounding shops and

as illegal van and horse cart parking areas. The existing situation of Chankharpul area can be understood from the following figure;



Fig.10: Existing situation of Chankharpul Area, Source: Author

Study Area 02, (Bongo Bazar): Market places always attract public activities. Bongo bazar is one of oldest and prominent markets of Dhaka city. But due to lack of public amenities and pedestrian friendly environment and also narrow pathways make it difficult to roam around the vicinity. There are two mosques, Police Headquarter and Bangladesh Fire Service and Civil Defense Head Quarter located within this area. As a result, many people visit this areas on regular basis. The places beneath flyover at this point should be planned properly to facilitate the existing public gatherings. But from our survey, it is evident that most of the places are illegally possessed by local vendors and for parking. At this point, most of the spaces remain abandoned and dirty. The existing situation of Bongo Bazar area can be understood from the following analysis;



Fig.11: Existing situation of Bongo Bazar Area, Source: Author

Study Area 03, (Gulistan): “Gulistan”, a very busy street of Dhaka city as several important streets are connected to Gulistan. It is a place for crowded trade and commerce, public gathering and recreation. The land value within this area is too high. So it’s high time to rethink alternative uses for leftover spaces below flyover in this area. But such vital void space remains occupied with illegal hawkers, vendors and homeless people without creating any urban relationship with its surroundings. The existing situation of Bongo Bazar area can be understood from the following figure;



Fig.12: Existing situation of Gulistan Area, Source: Author

7. Public Life around Flyover:

According to survey data and study, it is evident that the places beneath Mayor Hanif Flyover are definitely underperforming and the places have failed to create any kind of urban realm within its context. The places beneath flyover in Chankharpul, Bongo bazar and Gulistan areas have an appropriate urban setting along with diversified public activities for integrating them with surrounding communities through proper urban planning that enhances the functionality of spaces. Dhaka’s one of the most

important bus stands, Fulbaria Bus stand is located here. This urban void has a suitable urban fabric as it is well connected with its surrounding settings. The presence of mosque, ground floor retail shops, market, restaurants, Dhaka Nagar Bhaban, Public Park, informal vendors within the area creates different public activities within this area. Almost thousands of people gather here for their work and recreation purpose. Most often people overlook the opportunity of reusing leftover spaces. A densely populated city Dhaka, can hardly keep any land as an abandoned one. It is evident from the study that these places are the active spine area of Old Dhaka. Life of people in Dhaka evolve around these streets. These voids are an integrated part of day to day public life around flyover. So it is high time to rethink the leftover places below flyover and create more integrated public life with modern and aesthetic public amenities.



Fig.13: Public gathering below flyover.



Fig.14: Horse and horse cart parking



Fig.15: Public interaction beneath flyover



Fig.16: Tea stall & food cart below flyover



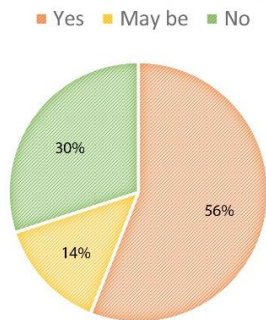
Fig.17: Temporary vendors at Gulistan



Fig.18: Police box below flyover

8. Survey Data:

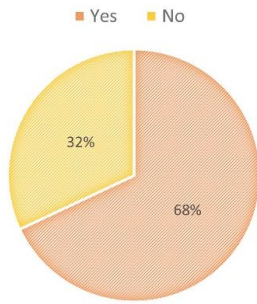
It is very important to shape the city according to people’s need as cities do not exist without people. Public opinion is an essential part in case of rethinking urban space. The walking environment in cities, pedestrian priorities and well accessible urban pockets are a vital features of a well-planned city. During our study we conducted a survey among people in this area to understand public problems in this area.



Do you believe that this place has an opportunity to become a public

According to survey; out of 50 people, 34 persons don’t consider this road as a pedestrian friendly one and 16 persons are ok with the present situation.

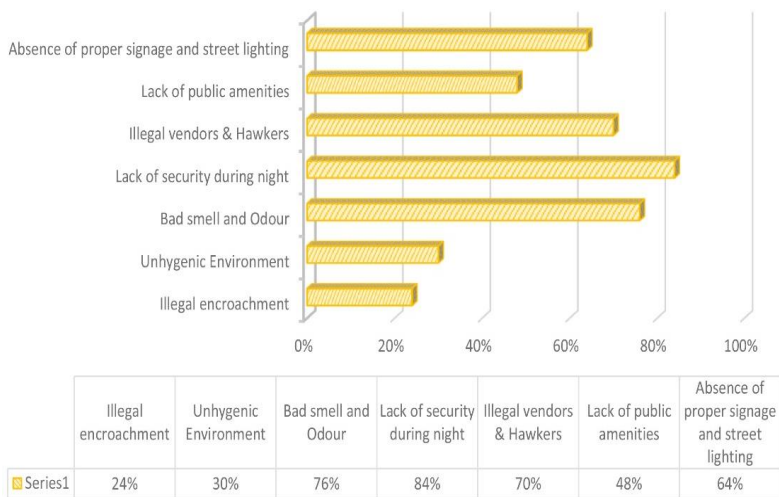
A survey has been conducted within this three study point (Chankharpul, Bongo Bazar and Gulistan). During survey, people identified several issues that are responsible for deterioration of quality of urban spaces in this area and spaces below flyovers. The survey was conducted among a group of 50 people.



Do you consider this road as a pedestrian friendly one?

According to survey; out of 50 people, 28 persons believe that this place has an opportunity to become a public space and 15 persons gave a negative feedback. Among them 07 persons are not sure about the consideration.

What Issues are Responsible for Deterioration of Quality of Urban Spaces in this Area?



9. Outcomes of the Study:

The overall outcomes of our study is presented below through a detail SWOT analysis report of each study point areas;

❖ SWOT Analysis for Chankharpul Point:

<p>Strengths:</p> <ul style="list-style-type: none"> • The starting point of Mayor Hanif flyover. • Important educational infrastructures like Dhaka University, BUET and Dhaka Medical College are located near this road. • A place of restaurants and hotels. • Diversified activity point. 	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Illegal van and horse cart parking. • Storage of boxes and containers for surrounding shops and vendors. • Low height areas are used as waste disposal areas. • Absence of public amenities.
<p>Opportunities:</p> <ul style="list-style-type: none"> • School and play areas for poor children • Food court and tea stalls for public gathering. • Storage for surrounding shops. • Landscape zone and nursery. • Pocket parks and public plaza. 	<p>Threats:</p> <ul style="list-style-type: none"> • Illegal encroachment of lands under flyover. • Lack of security for woman and children during night time.

❖ SWOT Analysis for Bongo Bazar (Market) Point:

<p>Strengths:</p> <ul style="list-style-type: none"> • Bongo Bazar (Market) is one of the prime market places of Dhaka city. • Important infrastructures like Bangladesh Fire Service and Civil Defense Head Quarter, Bangladesh Police Headquarter, etc. are located beside this road. • A place for trade and commerce. • Easy access and well connectivity. • Presence of mosque and mazar. 	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Illegal bike, rickshaw and van parking. • Storage for surrounding shops and vendors. • Most of the spaces remain abandoned and dirty due to lack of proper waste disposal system. • Spaces below flyover are converted into horse firm for horse carts. • Discourage pedestrian movement & void of public interaction. • Absence of public amenities.
<p>Opportunities:</p> <ul style="list-style-type: none"> • Recreational facilities for public. • Food court. • Small kiosk for books, fruit traders and other local vendors. • Dedicated space for bike parking & Rickshaw stand. • Green pockets for absorbing road pollutants. • Dedicated zone for horses and parking for horse cart. • Landscape zone or urban garden or nursery. 	<p>Threats:</p> <ul style="list-style-type: none"> • Excessive noise and air pollution due to Bongo market. • Illegal encroachment of lands under flyover. • Lack of security for woman and children during night time. • Smell for waste disposal and horses.

❖ SWOT Analysis for Gulistan Point:

<p>Strengths:</p> <ul style="list-style-type: none"> • Being Dhaka's one of the most vibrant public space along with easy access and well connectivity. • A place for trade and commerce. • Presence of public spaces like mosque, park and market. • One of the largest bus stand (Fulbaria Bus stand) is located here. 	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Illegal vehicle parking. • Illegal shoe shops and vendors. • Lack of proper waste disposal system & Unhygienic environment. • Lack of pedestrian interaction. • Absence of public amenities like toilet, pure drinking water facilities and street furniture. • No Proper road signage for roads.
<p>Opportunities:</p> <ul style="list-style-type: none"> • Waiting areas for bus passengers and public. • Food court & plazas. • Shops for local vendors and kiosk market. • Urban Park with landscapes. • Strategic parking zone for rickshaw and vans. • Proper road signage and street lighting facilities. • Maximizing green areas to reduce urban pollution. 	<p>Threats:</p> <ul style="list-style-type: none"> • Excessive noise and air pollution due to Fulbaria Bus stand. • Illegal encroachment of lands under flyover. • Lack of security for woman and children during night time.

10. Conclusion

In Dhaka, flyovers are being built without considering its consequences on its surrounding environment and community. Nowadays Dhaka is constantly facing scarcity of urban parks, plazas, playgrounds and recreational spaces. So proper utilization of these void spaces can help to develop better living condition in a dense city like Dhaka. Detail studies on infrastructural voids below flyovers and its impact on urban

life will help to develop a better framework for planning urban voids. It is expected that this study will help urban designers, planners, city authorities and policy makers to understand the impacts of leftover spaces on its neighborhood and planning fallacies that occurred during flyover designs and also will help them in developing an improved framework for future designs of urban voids.

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