

# Role of Adjoining Edges in Supporting Pedestrians in Public Places

Rahul Bhise, Akshay Patil\*

Visvesvarya National Institute of Technology, Nagpur, Baramati, India

## Abstract

*The public realm is one of the important elements of cities, having physical access for all its inhabitants. The decline of public realm is a major concern. The public realm is physically defined by the adjoining edges of built environment in the surrounding. Adjoining edges act as a contact zone between built spaces, and pedestrians related activities, also affect success of public realm. Pedestrian supportiveness of built form is one of the important characteristics of a successful public realm. The pedestrians, who are dynamic in nature, generate different patterns while interacting with the elements of the adjoining edges. Many times the bleak frontages express built form. This study is aimed to identify & understand different types of adjoining edges, their elements, composition and possible coherence with pedestrians. Adjoining edges of all typologies are vital, though this study is limited to commercial typologies considering its importance in quality of public realm. The study is supported by an identified case of commercial precinct, presented as part of analysis. The study is structured in three stages. First, identification of types of adjoining edges based on built environment, composition of elements. Second, understanding the general pedestrian behavior in public realm. Third, explores the possible coherence among adjoining edges and pedestrians, to identify pedestrian supportive elements and their composition. Adjoining edges vary greatly within the identified precinct, based on their elements and composition. Overall Adjoining edges are found to be complex, owing to its elements being entwined. Also it was observed that pedestrians are adaptive while interacting with different edge types. Temporary activities supported by adjoining edges attract a lot of pedestrians. The public realm is far more complex to gain insight into, but this study helps in identifying commonly observed composition of elements helpful in pedestrian supportiveness. Selected Case study provides some patterns in use of adjoining edges by pedestrians. The outcome can aid Architects and Urban Designers to address the issue of decline of public realm.*

**Key words:** Adjoining edges, Pedestrians, Public Realm

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\*Corresponding Author: e-mail - [r2rahulbhise@gmail.com](mailto:r2rahulbhise@gmail.com)

## ADJOINING EDGES

Attractive Public Places of cities always engender high quality of public life. We use Public realm every time we walk out on street, when we shop and do many things. Such an important part of city has seen decline in its quality. This decline has been result of unfriendly streets, congestion, parking problems, bleak building frontages and there is so much to add in the list. Advancements in technology are faster than the changes in built environment so, it really has come down to what exactly can we do to make our cities look beautiful as they were once? And how can our built form response to modern public activities?

It is evident that public activities in cities exist with variations in scale. Public activities are confined, divided and connected by various elements in the public realm. Built spaces limit such activities at building boundaries while; temporary or natural elements help in separating them in the open areas. Built boundaries, temporary elements or natural elements act as edges. Elements of public realm with their physical existence discrete adjoining areas, producing variations in character, users and use can be considered as adjoining edges. Building edges, linearly parked vehicles, Vegetation are all types of adjoining edges. Adjoining edges are not a single elements but compositions of number of them.

Use of adjoin edges vary with every typology but they are inseparable part of built environment of any kind. For residential typologies they divide private and public spaces providing privacy for residents.

Composition, quality and type of adjoining edges depend on context. Variations in use and user make it more difficult to generalize concept of adjoining edges. Adjoin Edges are vital to success of any typology; although commercial building types have more public activities related to their built and open spaces than any other typologies. And more ever commercial typologies influence imagery of a city on larger scale. Considering the importance of these typologies this study is limited to adjoining edges at commercial typologies only. Vastness of public realm limits the study to fewer cases for analyzing concepts explained. This paper is focused on study and gives example from Indian context. Manner of use of public places vary greatly in India as compared to other country, this study is an effort to produce local concepts to understand complex problems Edges have been part of studies about urban areas in modern times. Streetscape designs, storefronts are some of such studies. Kevin Lynch explained edges in the context of the city as one of the elements that creates imagery.

This study considers edges on small scale relating to size of small areas than of city.

Simply these are the boundaries which we cross, look at and meander while we use public places and streets. The composition may include repetition of same elements.



Edge example  
Source: author

## **Use of Adjoining Edges in Public Realm**

Adjoining edges have limited uses when there are a few users, but when it comes to large public activities these edges are used for numerous purposes. In residential typology they are used for privacy. As the use is limited variations in composition are also limited. Commercial typologies & public places have numerous users and variations in composition.

Commercial typologies use edges for storage of products, display of products, for visual access, for signs and advertisements, to create semi-open spaces like open restaurants with awnings on ground floor. They also use it for temporary activities of various scales right from a small vendor to street performances. Indian context reflects so many variations in temporary activities with change of climate, region and economy.

Apart from typological usage pedestrians use these edges to shop, to walk through, to eat, to talk, to interact, to sell products, to perform some art form and what not!. We really do not realize the importance of interaction that we have at these edges in our day to day life. We talk about philosophies, business and things in life when, using edges. Cities have produced urban poor but these edges have become home to many of such people. So edges mean something for everyone in the public realm. People spend their lives at adjoining edges!

## **Physical Qualities of edges**

Dynamic elements of public realm like adjoining edges have certain physical qualities. These qualities improve their overall appearance to attract more users. Some elements of edges act like background to public activities and some elements are integral part of interactions. The aspect of wallscape implies a greater degree of visual ingenuity (Cullen, 1971).<sup>26</sup> According to Cullen wall is the first aspect of any display and there are possibilities of various surface treatments. Carefully designed edges will surely improve the visual experiences of user.

Aesthetic, homogeneity in use of elements, placement of elements, materials, repetition of particular elements, visual scale of elements such as signs are some of qualities those help in imagery of a place. Use of color, texture in appropriate way enhances the physical setting. Walls act as background to the public activity so these aesthetical qualities are important there. Anthropometry is really important to any elements of these edges, like steps, railings, platform heights etc.

Temporary elements are inseparable part of these edges, but many times we neglect these points and it results in to use of shabby temporary elements disturbing the whole picture. So it is up to designers to understand the future use of built edge also the temporary activities those might be generated.

Use of materials for various surface treatment, their durability and visual appeal has to be considered. Today Glass has replaced conventional materials with its ability of direct visual access, but sadly these were only to be part of the edge now have become edges.

It is common in developed countries to have specific guidelines for their storefronts; it is difficult to generalize such ideas in Indian context.

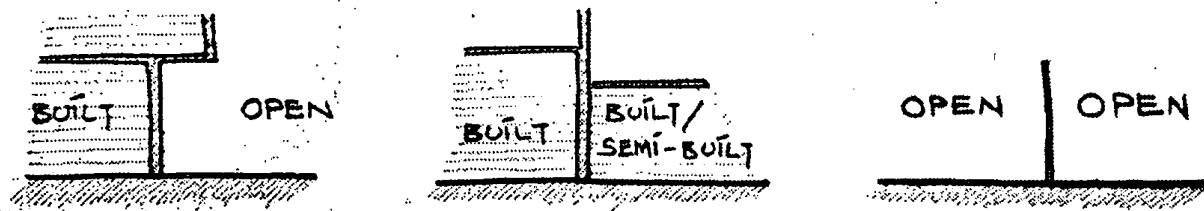
Such interventions help in maintaining quality of public realm.

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<sup>26</sup> The concise townscape. [Book] / auth. Cullen Gordon. - New York : Van Nostrand Reinhold Co. , 1971

## TYPES OF ADJOINING EDGES

Public realm is very vast to understand. It is difficult to generalize adjoining edges. Adjoining edges, as they are called here connect spaces and activities. We can see much of variation in activities, and so, they can be differentiated on the basis of types of space they connect. Include edges connecting Built – Open, Built – Built & Open – Open spaces in public realm.



types of adjoining edges  
Source: author

It is not necessary that these types would exist in isolation only. They can exist with ordered combinations.

**Built – Open Edges:** Most commonly observed type. They clearly divide spaces and activities. Both parts are permanent but include some temporary elements. Open areas are more active than the built one. Any shop opening on street is a good example of this edge.

**Built – Built Edges** Built forms act like a container but these type connect two built forms, and as a result they are not very common except for residential typologies. In India we see that small temporary built shops are placed next to the walls of shop.

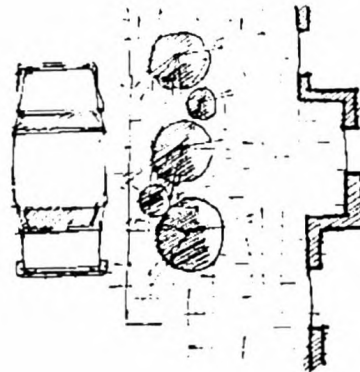
**Open – Open Edges:** These types of edges are very common but, they are not evident like the built-open edges. They vary greatly with their composition. It is very hard to find homogeneity in them, unless designed. Some boundary walls support activities on its sides like Tea stalls in India. Elements like vehicle parked in linear manner with close distance can also be included in these.

Adjoining edges at front, back and sides of built form behave differently. But considering the fact that front edges of any building support public activities than other, this study is based on front edges itself. Fronts act more or less bluntly as a buffer between public and private worlds. The back edge is the inside transition of the building which is away from the public face or front (Wohl, 1978).

## What exactly can be considered as edges?

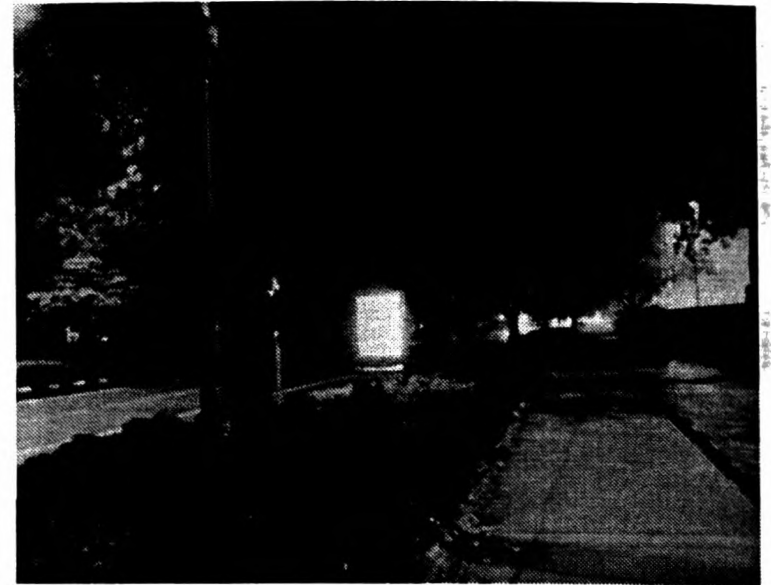
Built edges are only a part of Adjoining edges not edges itself. There are temporary, natural and non-built elements or group of elements which help in separating activities of public realm. Some of these include Vegetation, Group of elements (Parking), Level Differences, Activity (Street Vendors) and Built – Walls.

Vegetation as edges



vegetation as edges  
 source: author

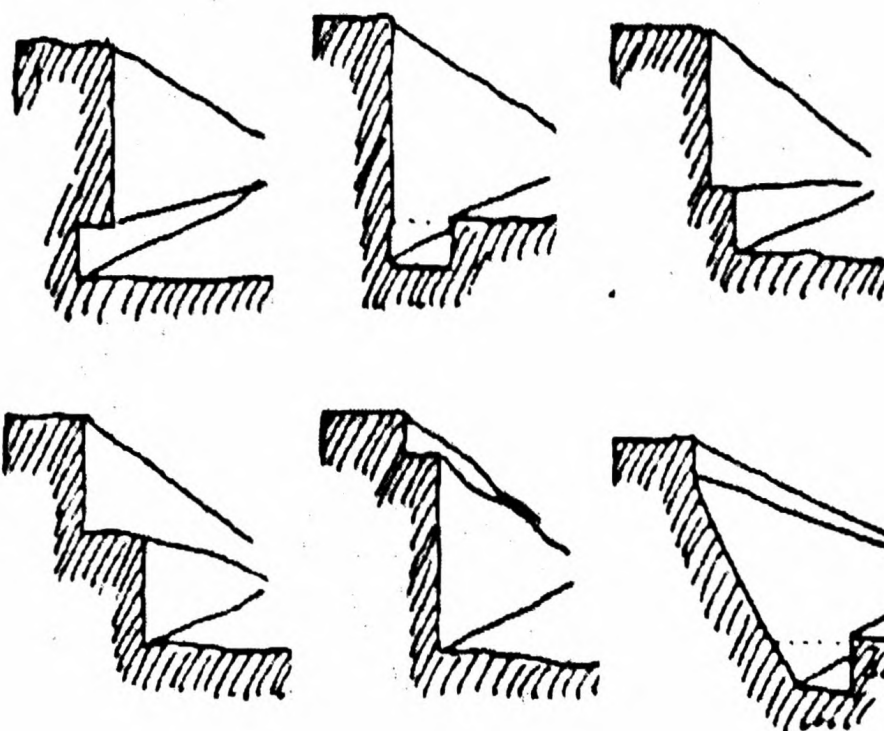
Here in sketch 2 Vegetation or rather some repetition of trees act as adjoin edges separating vehicular movement and pedestrians



vegetation as edges  
 source : author  
 A designed footpath depicts vegetation as edges

## Effects of variation in built form (building section)

Adjoining edges is not only about built edge relation at ground floor. Upper floor built form is important for the ground floor edge to work. Public places surrounded by closely spaced high-rise structures of glass would not generate comfortable environment for pedestrians, no matter how good are the edges. Variations at upper level generate visual scale effects, pedestrian friendly environment and ease of movements. Changes at upper floor may create some semi open spaces, arcades at ground level.



How building sections affect urban space?  
 (Krier, 1979)

Variations in front arcades, terrace heights, terrace placements, extended arcades

Type 1 here provides opportunity for arcades at ground level.

Building section variation  
 source: (Krier, 1979) urban space

Type 2 here distances pedestrians on lower level allowing few directly accessible points.

Type 3 here distances pedestrians from real body of building and creates pleasing human scale.

## **ELEMENTS OF ADJOINING EDGES**

Elements of adjoining edges are fundamental additions in open spaces. Categorization is possible in different ways considering the diversity of elements. In Indian context people always look for temporary solutions to be added on these edges, which result into chaotic compositions. Here they are classified as permanent and temporary elements.

### **Permanent elements**

Elements which are present for considerable time at the same location can be included in this type.

Wall – Walls form background for many public activities. Also they are base planes for other elements. Qualities such as length, color, texture, scale of opening on it are important considerations.

Levels/Platforms – Levels at adjoin edges are used to access activities at different levels, to separate pedestrians from certain activities. Also extend some activities or serving areas in some case. Distances from one activity to other and height differences can generate attractive edges. Safety of users is also an important consideration.

Openings – Set on walls, these elements provide visual and physical access. They are important for pedestrians on the road even they are not being accessed because of their visual qualities. It is necessary to have human scale to these elements.

Glazing/ Shutters – Cover openings, hence aesthetical qualities should be considered. Choice of materials is dependent on activities inside and intended use of particular openings.

Vegetation – Trees, Shrubs are used effectively in many adjoining edges in public places. Providing functions like shading for temporary activities. But in commercial typologies vegetation is not preferred because it may obstruct views for pedestrians.

Lamps – These elements are important for safety in public places. They attract temporary vending activities during night time, hence pedestrians.

Pavements/ walking area – These are platforms or level differences used to separate pedestrians from vehicular movement. Eventually it is used as base plane for many pedestrian & temporary activities. Carefully designed paved areas are a world in themselves providing place for vendors, advertisements, seating and so much. These are probably the only elements in the list which are extensively designed throughout the world.

Projections – Permanent kind of projections are generally observed at openings. Length and widths may vary. Create comfortable covered spaces. Over the years there is decline in maintenance, results into shabby facades.

## Temporary elements

Elements which are present for a short period of time are considered here. The time period may vary like a day, only for day time, only in a particular season or for few hours in the evening.

Canopies/ Awnings – when shading of outdoor activities to certain commercial typologies is concerned these elements are used. Materials vary greatly. Like in India people also prefer to use simple thick cloths or plastic sheets.

Signs/Advertisements- In a digital world they are becoming elements of real concern. These are present on walls, over stands attached to footpath. They also vary greatly in size, color and shape. Unorganized placement and scale can create visually disturbing experiences.

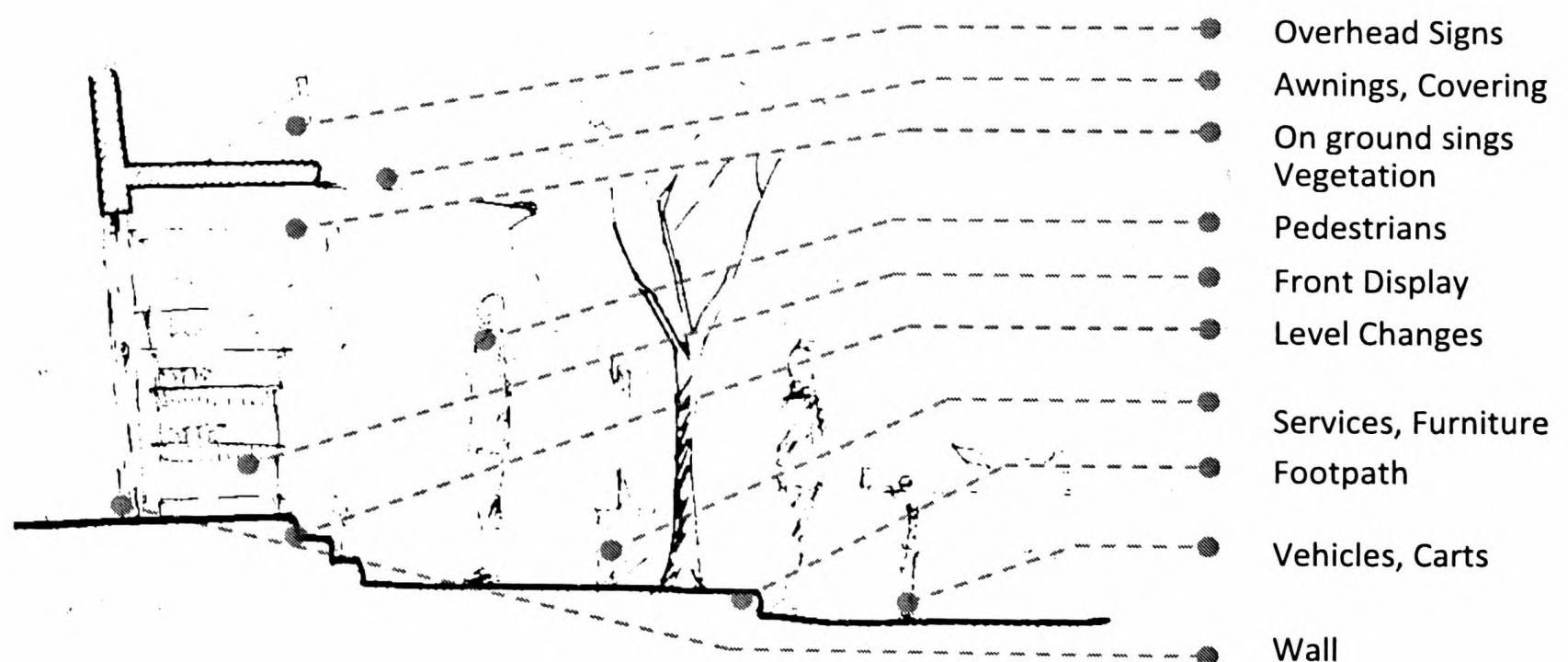
Display- Commercial building typologies have close contact with pedestrians at ground level. Such elements provide easy views, interaction opportunities. Displays are also present in forms of extended platforms. In India people hang products from ceiling at projections using them as displays.

Storage – These are similar to display but vary in design. Many edges show indigenous solutions. Placements of such elements are an issue.

Pedestrians – Public places and related activities generate pedestrians on large scale. Freedom of movement allows viewing different elements and interacting with them. They are the dynamic components of this idea of adjoining edges. So these edges fundamentally are designed for them.

Vendors – Opportunities in public places attract vendors. They undeniably act as magnets for pedestrians. When these are present in groups they form evident edges.

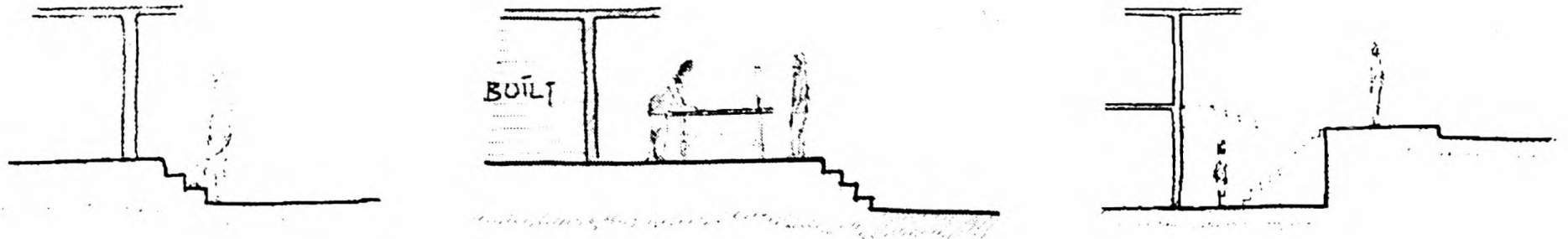
Vehicles – From small road widths of old areas to unofficial constructions lead to chaotic parking situation in our cities. Today apart from actual right of way they form part of edges as vehicle parks



Elements of Adjoining Edges  
Source;author

## Changes in use elements

If composition of elements is same throughout then it would generate a boring urban experience. It is necessary to have diversity in the way elements are put together. Certain parameters of elements are changed to create this diversity. Sketch 5 explains effects of changes in level, on pedestrians and activities. With extra width in front there can be other activities added to the whole set.



Variation in elements of adjoining edge  
source: author

## FACTORS TO BE CONSIDERED FOR DESIGN OF EDGES

It is very obvious that these edges are very much affected by the context (physical, social and economic) they are set in. Though there are some factors which remain same for most of the edges.

### Building typology

Color, texture – aesthetical qualities as explained before are important for experience. But these qualities tend to change over the years.

Setbacks – provision of other temporary activities or storage, easy pause for pedestrians

Level differences – These separates movements, create higher views, separate activities.

Articulations – Edges can be articulated with additional elements on walls and on footpaths.

Repetition of elements To provide character to edges, Image of place.

Location of elements (Planes) –Possible visual chaos with placement of elements on elevation

Ground activity type – Composition of the built and depends upon ground activity.

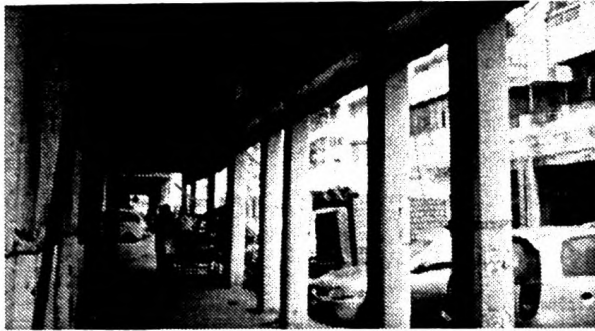
Pedestrian traffic – Density, type and time study, preferences would help in better design.

Climate – Edges should always respond to local climate, otherwise there are spontaneous additions of elements in the compositions.

Vehicular movement - Most important for pedestrians, less chaotic if thought out carefully.

Types of activity (temporary or permanent) – Designer should imagine the possible activities.

Proportion – Human scale of openings, coverings, platforms, signs is fundamental.



Use of shading elements  
 source: author



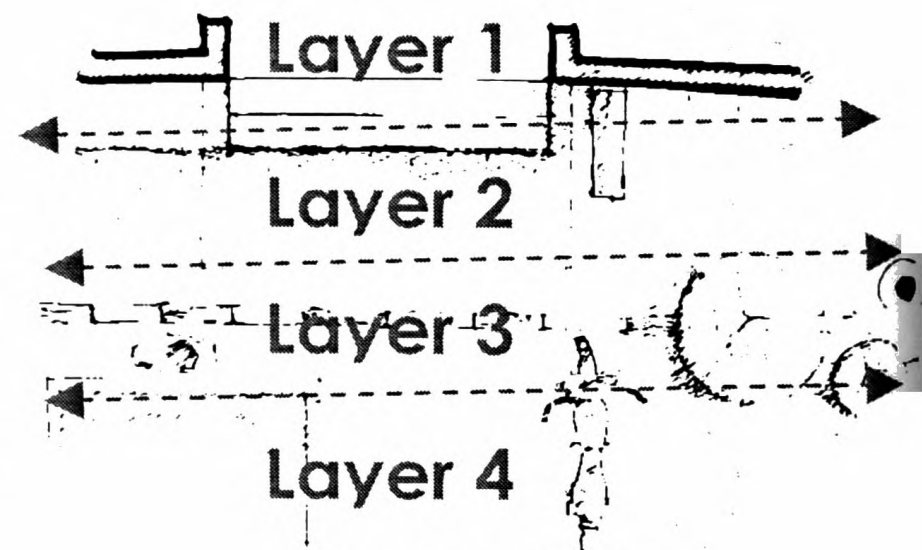
Street in Jodhpur Rohit source:Lahoti  
 photography

These are two different examples showing response to climate change. Photograph 3 show uses of temporary elements to shade activities while Photograph 4 explains use of *Paradi* in arcade to cut the sun rays

## CONCEPTS IN ANALYSIS

### Layering of Elements

It is generally observed that elements in edges are composed in a particular order forming layers. These layers consist of singular elements or Group of elements. Use and positions may change with the above mentioned factors. Some layering elements are common. It is observed that patterns of layering of elements may resemble other edges. In this example there are four layers identified.



Layering of elements  
 source :author

#### Layer 1

Walls, Projections,  
 Canopies, Steps, Levels,  
 Arcades, Openings,  
 singage

#### Layer 2

Footpath,  
 Furniture  
 Display areas,  
 Services

#### Layer 3

Vegetation,  
 Level difference

#### Layer 4

Carts, temporary  
 activities, parking

Some adjoining edges may have all the layer and some don't. Elements would also no be the same. They can be separately analyzed for edges like footpaths!

## PEDESTRIANS: GENERAL BEHAVIOR

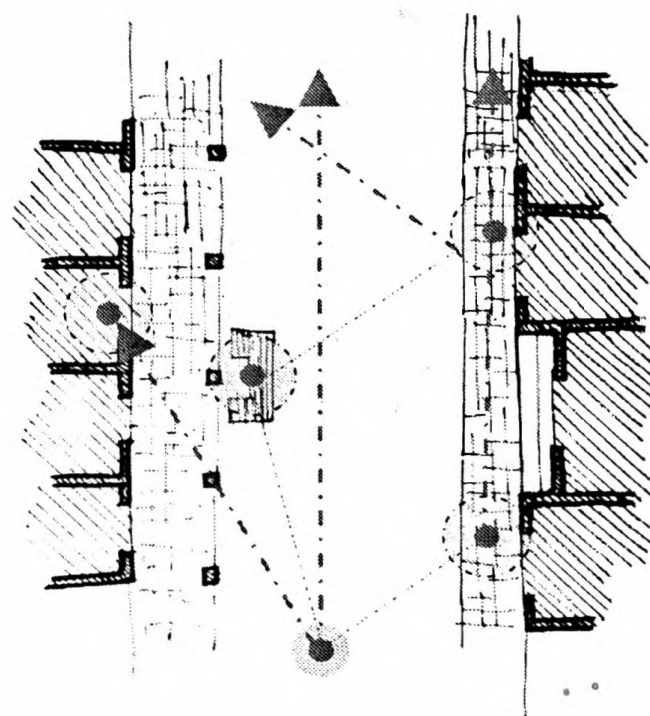
### Who are Pedestrians?

These are people preferring to be on feet to move, view, talk and other related activities. Their speed is limited and lowest in all the moving entities in public realm. The amount of freedom they have situates them in problems too.

### Factors affecting these patterns & generators

Activity choices made by pedestrian affect the pattern of their movement on large scale. Generally it is observed that there are sequences of doing activities which unknowingly many pedestrians follow. In many situations pedestrian generator is transportation facilities, even people using 2 - wheeler get down at some place that is where pedestrians are generated. Activities related influx generates pedestrians.

Sketch 7 explains activity choices and patterns generated.



Pedestrian behavior  
source: author

### Why only pedestrians are chosen in relation to adjoining edges?

Pedestrians are the most dynamic elements in public realm. Their behavior is comparatively similar in many public places. Anyone can access adjoin edges by only being pedestrians. Hence these are inseparable parts of public realm. So if adjoining edges exist there has to be pedestrians. And these edges would have to be designed for pedestrians ultimately!



Pedestrians at edges source: Rohit  
Lahoti Photography

## PEDESTRIANS & EDGES

### Contact Zone

Various elements are used by pedestrians. The quality of interaction is dependent on supportive elements, good composition of elements and the variety of activities. This interaction to a certain extent is similar throughout the world like activities on footpath but certain elements and their composition as explained before is context specific so the interaction is also specific.

### What do edges offer pedestrian?

Pedestrians can move, talk, seat, observe, buy and sell in public places using elements of edges. These edges offer opportunities almost to everyone in the public realm, right from a beggar to a passerby going to office or fro some other purpose. When pedestrians move without intending to do anything just to pass then also they view the surroundings put up by adjoining edges.

Pedestrians can be considered as creative elements in public realm when it comes to use of these edges. More pedestrians imply more interaction & more possibilities of use. Pedestrians exist for adjoining edges and adjoining edges exist for them.

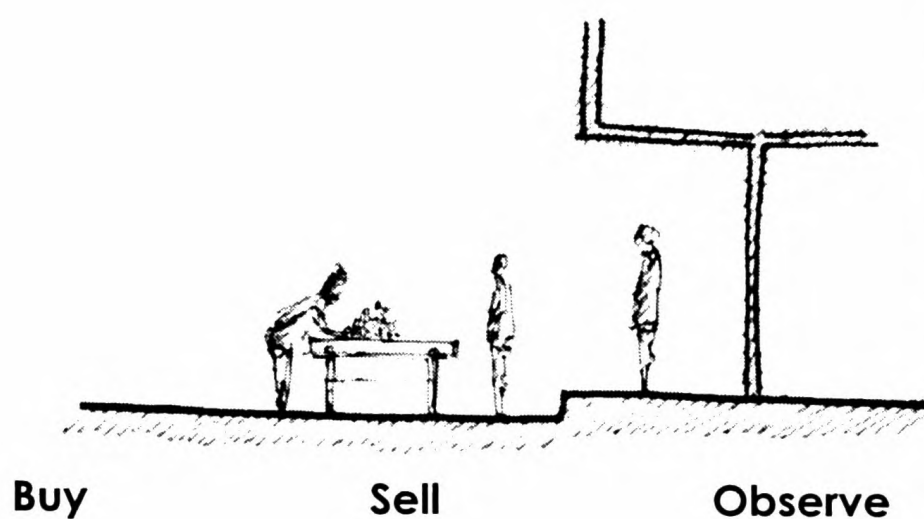
### **Suitable and attractive adjoining edges:**

Flexibility offered for pedestrians by edges definitely generates an excellent public realm. This freedom is not only about physical movement but the opportunities to seat, talk and view. Here physical quality of the built environment matters. Temporary and permanent elements explained above support pedestrians except the situation like when these elements attract too much of crowd, when they form rows of elements keeping pedestrians off some activity.

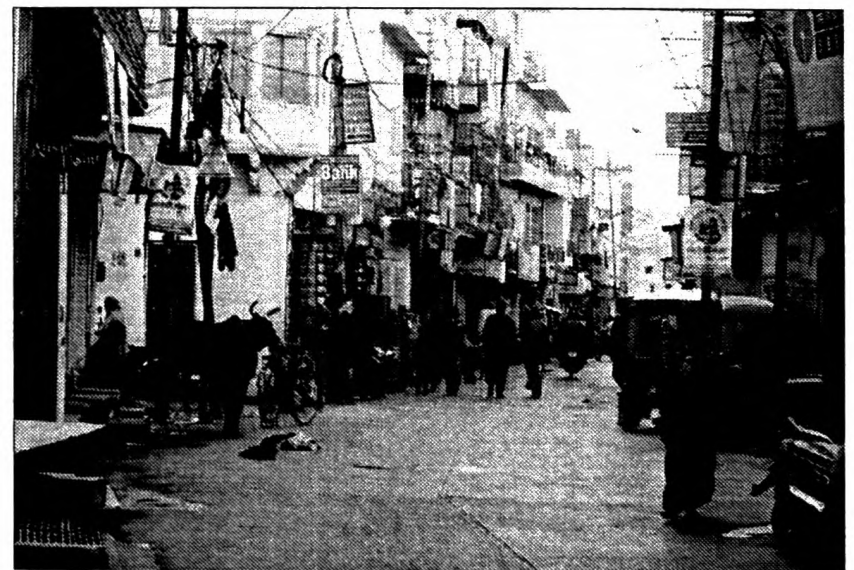
### **Adjoining Edge – Pedestrian relation: Indian Context**

Indian cities have large populations and classes are too many. Public realm is an earning place for far too many people. So many users result in to so much diversity. Indian context shows some particular qualities of this relation. This relation is greatly affected by temporary activities at adjoining edge. There are many examples where vendors come only for particular time period and eventually these places are so crowded that no one dares to take a vehicle through. Such a situation emphasizes this study very much.

### **Use of Edges by Pedestrian**



Use of adjoining edges by pedestrians  
source: author



Adjoining edges and variation in users  
Source: author

### **CASE STUDY**

#### **Selecting a Case**

Adjoining edges are present at any public places, streets and squares. Any public place is suitable to analyze the possible type of edges and understand different elements. There may be very similar patterns of these edges through a street and vehicular movement and road side parking are very large areas to understand. Streets of old settlements in Indian metros are very crowded leaving no scope for study, though there is a very large pedestrian footfall. An enclosed small urban space with medium pedestrian density would be an ideal object to study adjoining edges.

## Gandhi square, Sadar, Nagpur

Sadar is one of the most important commercial areas of Nagpur. Gandhi square is the node in Nagpur's urban fabric which is significant in the historic development of Sadar. There is a mix of buildings of different ages, styles.

### Study methods

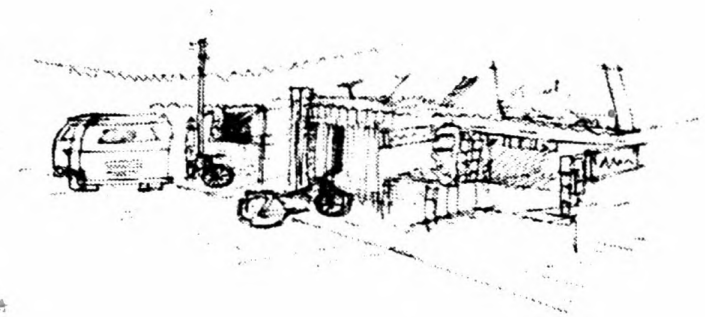
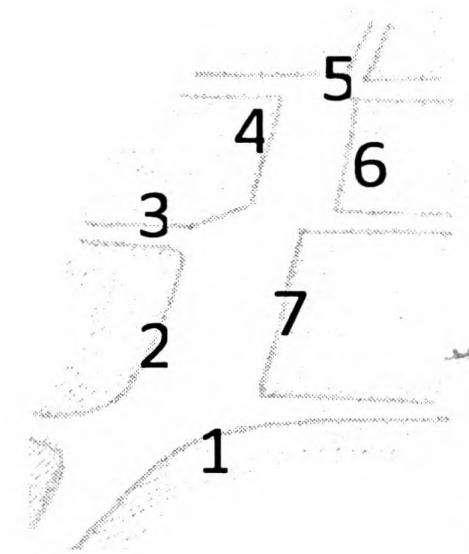
For analysis of edges a picture and video survey was done. The time period considered was for 2hr from 5PM to 7PM as maximum pedestrians can be observed during this period.

### Study considerations

There are 8 roads ending at this square. There are 7 identified edges for study. All of them vary in length and type of commercial activities. Study parameters are edge creating elements, characteristics, pedestrian activities, issues.



Source: Google satellite



Gandhi Square general Idea  
source: author

### Study of Edge – 1

This edge is marked by low rise single story pitched roof structures. The commercial activities supported are general groceries and a bakery.

#### Edge creating elements

Walls – Built edges.

Vehicles – though temporary but very evident

#### Characteristics

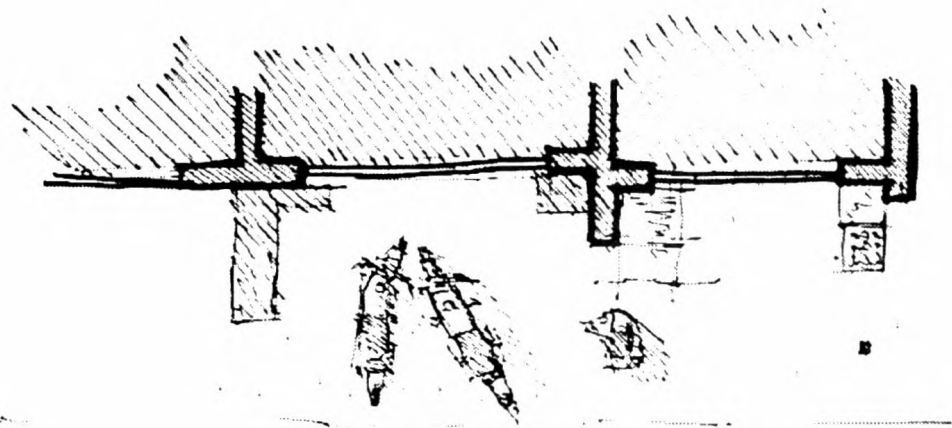
At this edge there are no level differences which eventually allow vehicles to be parked very close to the storefronts. And because of pitched roof there are no semi open spaces created, while the display is projected on the road leaving less distance between parked vehicles and store edge.

## **Pedestrian Activities, Movement**

Pedestrian who come to buy are mostly passersby. Many of them park their vehicles in front of shops and prefer to walk. Outside seating at some shops present opportunity to chat, read and discuss.

### **Issues**

Because of parked vehicles it is difficult for many pedestrians to gain direct access. They will have to move in between these vehicles. There are no covered spaces which can help pedestrians to take a closer look. Display areas are very small, covers most of the storefront. Shops are not visited very frequently hence this edge is preferred to park vehicles.



Sketch 1 section at the edge  
source: author



General idea of the edge  
source: author

### **Layering of Elements**

Layer – I : Walls, Projections, Openings, sills

Layer – II : Footpath, Seating, Display

Layer – III : parking

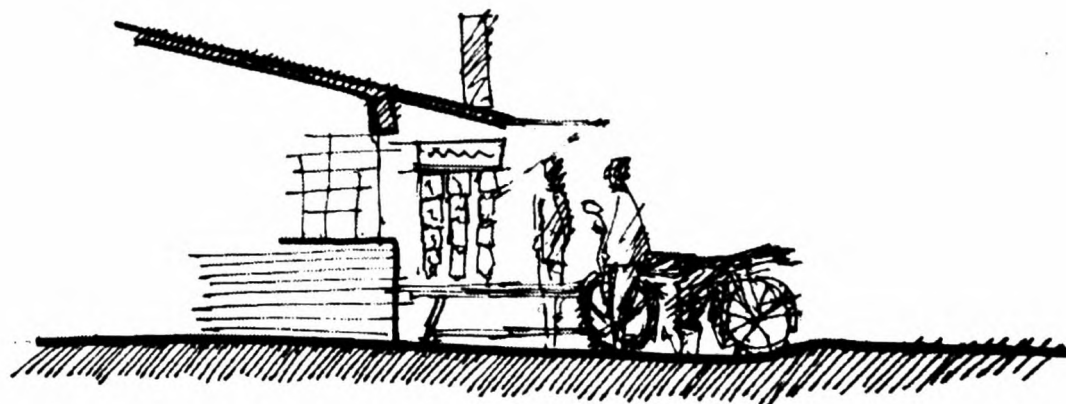
### **Elements Used by Pedestrians**

Footpaths – though is not very evident due to level differences

Seating in front of some shops,

Covered areas to stand – smoke – eat,

Parking to stand - talk



## Study of Edge – 2

This edge is marked by G+2 type structures with ground floors serving as shops. The commercial activities are general groceries and a bakery with some temporary activities.

### Edge creating elements

Walls – built edges.

Vehicles –temporary very few

### Characteristics

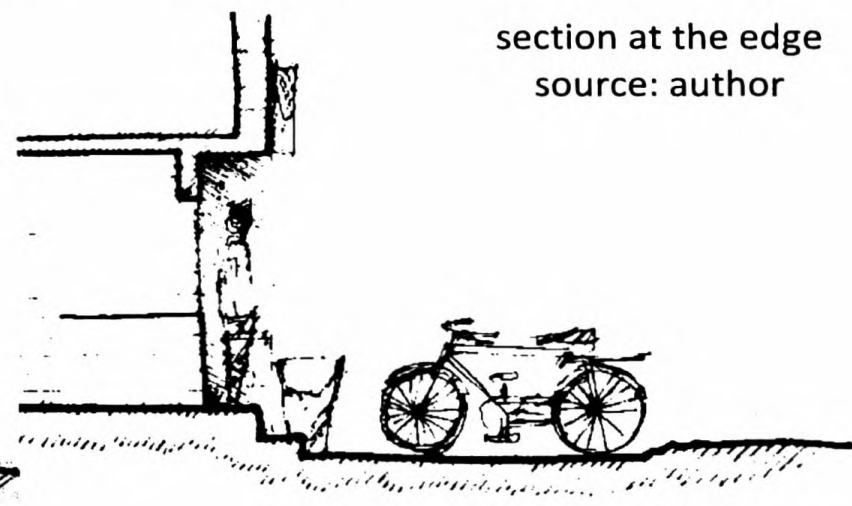
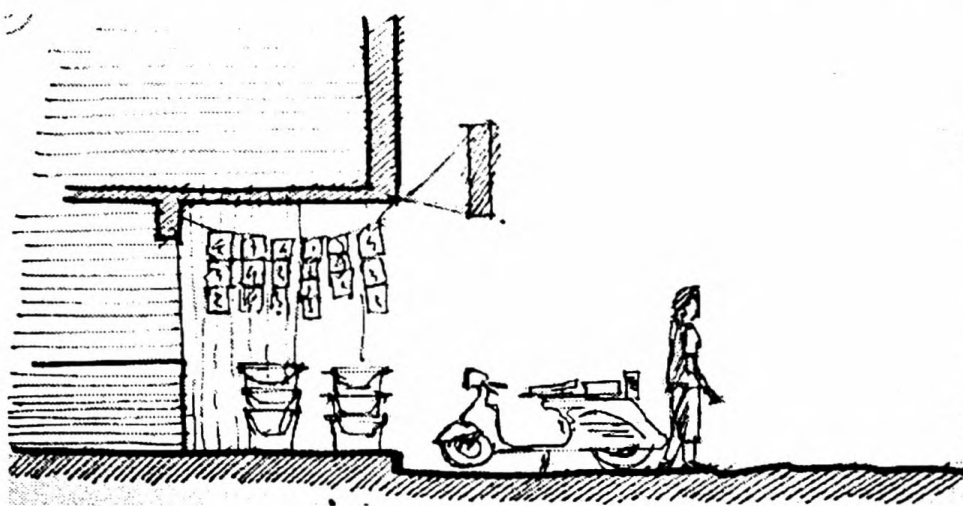
At this edge there are very subtle level differences (one to two steps only). Semi open spaces are provided in front of shops. These semi open areas are used for outside temporary display. It also provides an easy pause for pedestrians.

### Pedestrian activities, movement

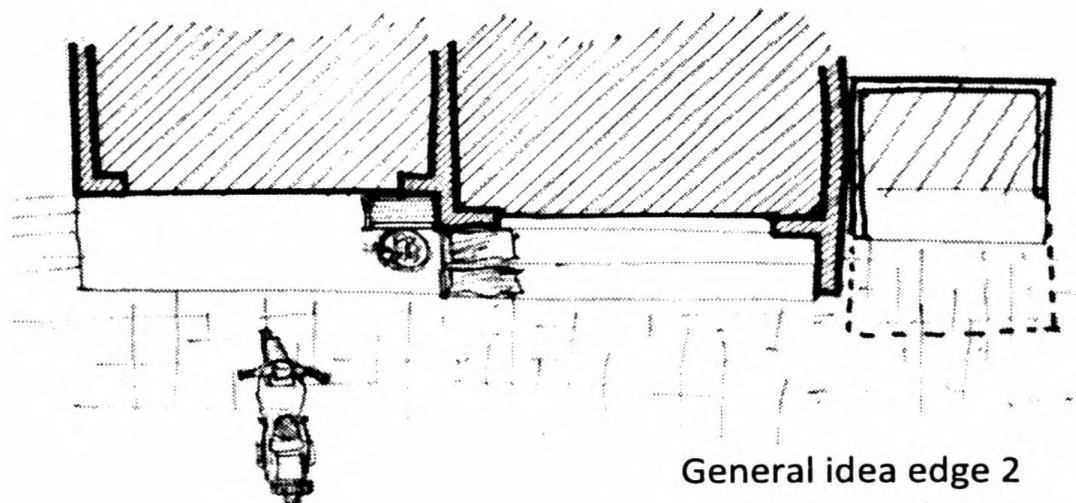
Commercial activities at this edge attract pedestrians regularly. The level difference play a very important role, providing standing room and viewpoints for pedestrians. Parked vehicles create problems but not very frequently. Some pedestrians who are passing by prefer to take a pause at temporary activity to smoke and quickly buy things.

### Related issues

Parking is certainly a problem, though the number of vehicles is less as compared to other edges. There is no proper storage or display area for products on the outer side creating a chaotic situation. Signs and advertisement boards can be placed in much better way as major part of building façade is covered with large flex boards and advertisements



section at the edge  
source: author



General idea edge 2  
source: author



### Layering of Elements

Layer – I : Walls, Projections, Openings, Overhead Coverings

Layer – II : Signs, Levels, Display

Layer – III : Parking

### Elements Used by Pedestrians

Footpaths, Semi- open areas in front to stand, view, talk, parking

### Study at Edge – 3

This edge is marked by G+2 type structures with ground floor serving as shops. In this edge there is particularly less activity as the permanent commercial activities are not used very frequently. But the kind of temporary activities this edge support attracts many pedestrians on regular basis.

### Edge creating elements

Walls – Built edges.

### Characteristics

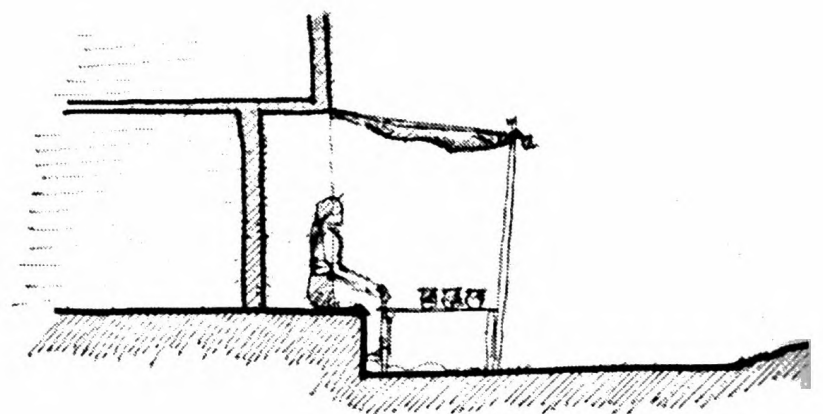
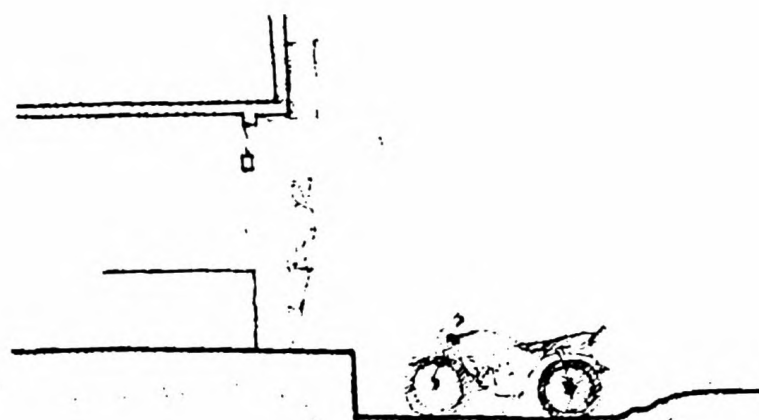
There are distinctive level differences observed. These create interesting views from ground level, though temporary activities are not placed with any level differences. Because of level changes there are possibilities to extend semi open spaces as well with some temporary coverings. Small displays adjacent to platforms attract pedestrians at very close level.

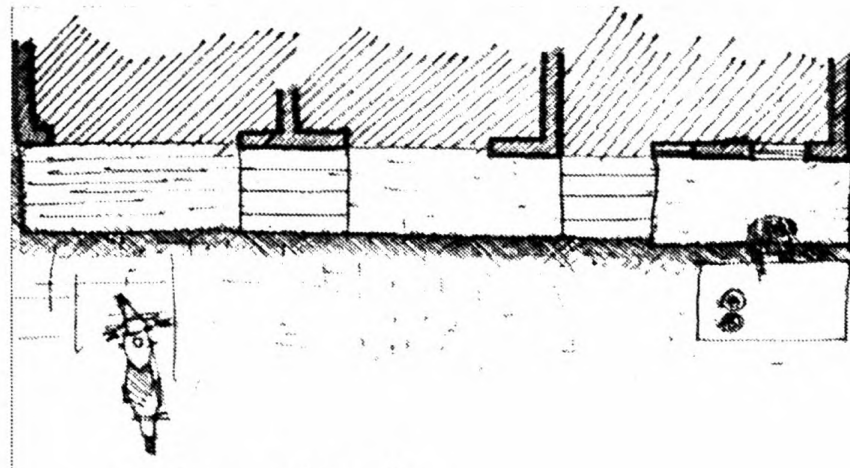
### Pedestrian Activities, Movement

There is very less pedestrian traffic at this edge. People prefer to park vehicles in front of shops and walk around as well as climb steps. Generally these stepped platforms are used to view, buy and talk. Temporary activities support pedestrian for easy pause and provide an observation platform. Actual access to permanent shops is from small steps hence pedestrian movement is very linear and easy.

### Issues

There are very less opportunities for display of products as the extended platforms are short. Less semi open spaces are observed and whatever provided are temporary in nature. Temporary activities such as selling carts, tea shops create chaotic situations with unorganized parking. Corners are occupied by these temporary activities.





section at the edge  
source: author



edge 3  
source: author

### Layering of Elements

Layer – I : Walls, Projections, Openings,  
Layer – II : Sings, Levels, Display  
Layer – III : parking

### Elements Used by Pedestrians

Front Levels, Steps, Semi open temporary area for Viewing and buying.

### Study of Edge – 4

This edge is marked by G+3 type structures. This edge is most visited of all. Probably because of the activities it supports including temporary activities such as tea shops, vegetable shops etc..

#### Edge creating elements

Walls – Built edges.

Activities – Temporary activities with elements such as carts

Vehicles

#### Characteristics

There are very subtle level changes. This particular edge is characterized by extended temporary activities as there is large setback from actual movement of vehicles. This additional layer is composed of carts selling daily use product and vegetable. These temporary activities are brought forward providing pedestrians a comfort level to view these products.

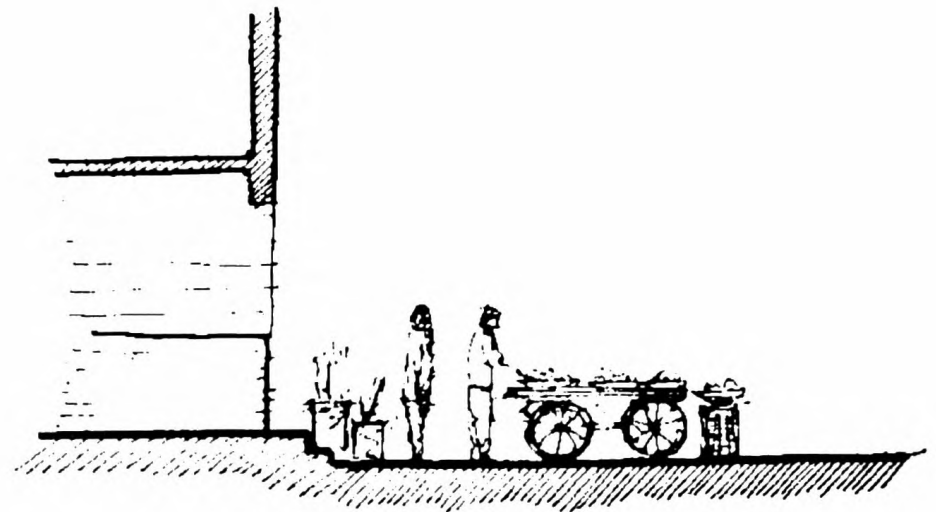
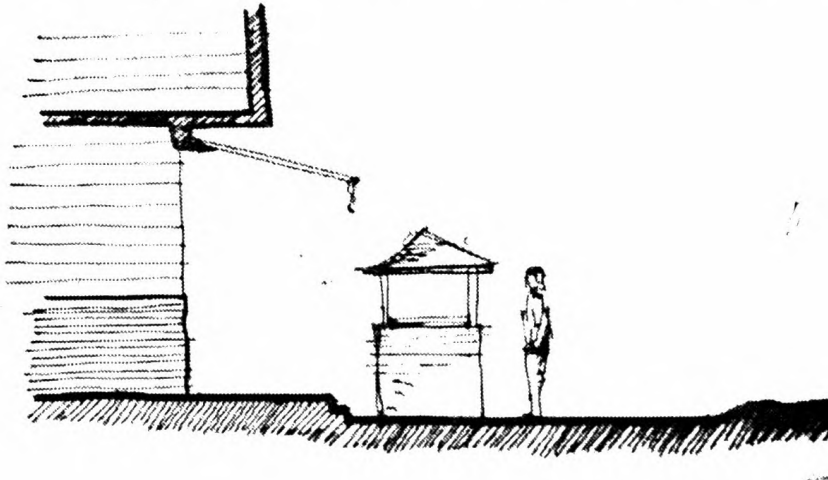
### Pedestrian Activities, Movement

High amount of pedestrian activity can be observed here as compared to other edges (Impact of other activities in nearby area), though there is considerable amount of disturbance in the pedestrian movement caused by vehicles parked. Mainly pedestrians are attracted towards both temporary & permanent shops of sweets and tea. At some steps of some of the shops there are single vendors selling for which pedestrians have to approach through parked vehicles. People

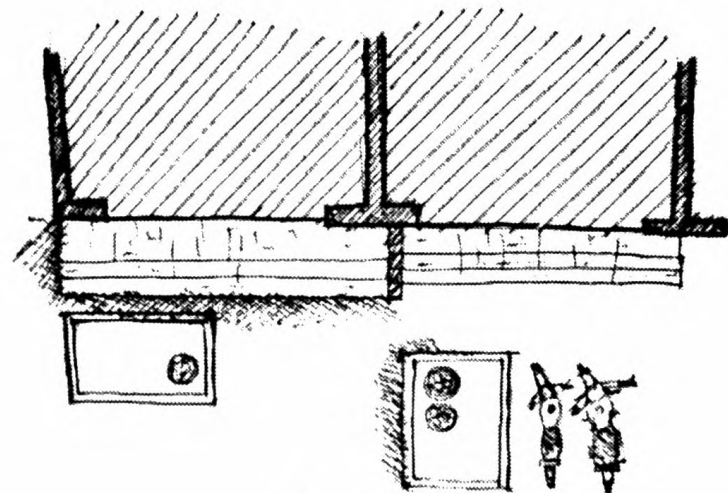
do not tend to stop here for very long at the edges they either prefer to seat inside or move along.

### Issues related

The kind of activities are layered together provide opportunities for vendors to sell product at a better point though so many elements are added tighter with high pedestrian activity makes the whole scenario chaotic. There are no semi open space created and the temporary covering is very short which doesn't allow pedestrians to stay longer.



Edge 4  
source: author



Section at the edge  
source: author

### Layering of Elements

Layer – I: Walls, Projections, Openings, Overhead Coverings, signs

Layer – II Levels, Display

Layer – III: parking, Vendors

### Elements Used by Pedestrians

Steps – to sell & buy Temporary activity – open Setbacks for parking & to stand view Temporary Display areas – to view

### Study Edge – 5

This edge is marked by G+3 type structures. Commercial activities supported by this edge, does not seem to attract many pedestrians.

### Edge creating elements

Walls – Built edges.

Activities – Temporary activities with elements such as carts Levels

### Characteristics

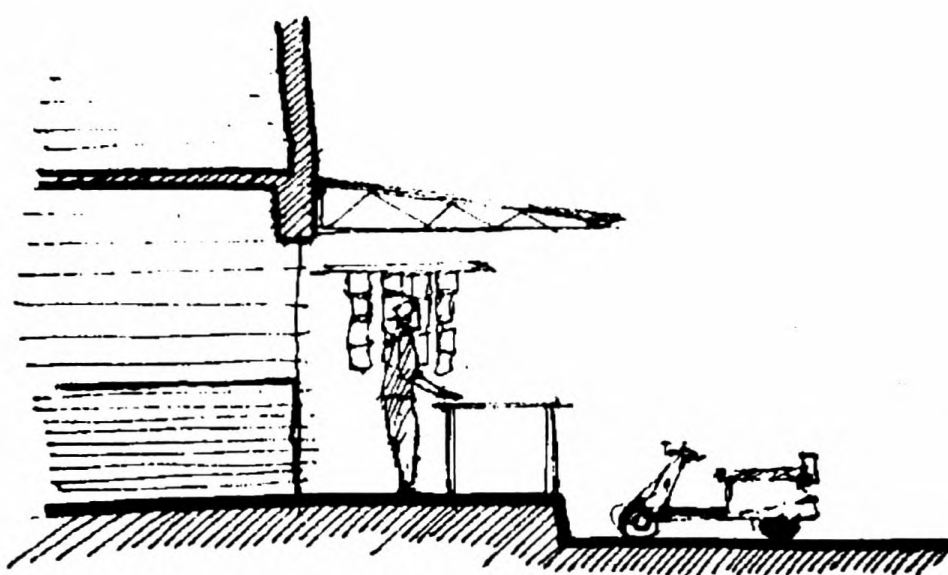
There are very subtle level changes almost not recognizable. These edges particularly have little long semi open areas which are either attached to shops or houses. These semi open areas are used either for display of product or are extended with temporary covering for small display tables. There is very less vehicular movement as well as parking. Semi open spaces are again extended with another layer of vendors. This particular edge doesn't have all the ground floor as commercial. Shops are not continuous.

### Pedestrian Activities, Movement

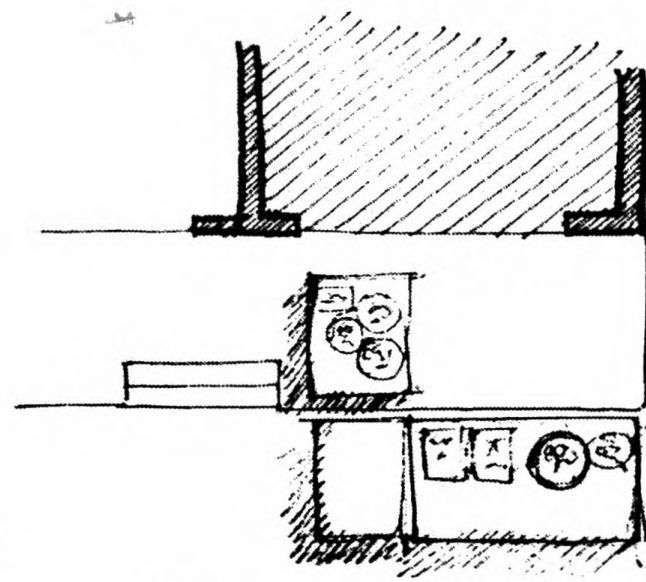
Very few pedestrians are observed at this edge and the activities do not provide many opportunities for them to stop at the edges. There are some points creating pauses in the movement, though is greatly affected by non-uniform level changes. There are no prominent display areas which can attract pedestrians. Parking affect pedestrian at very few points.

### Issues

Temporary storage outside at some parts covers most of the storefronts. Large semi open spaces are not very visually attractive as most of them are used for storage and displays. Level differences and platforms are present but do not offer any support to pedestrians to stand or move.



section at the edge 5  
source: author



edge 5  
source: author

### Layering of Elements

- Layer – I : Walls, Openings
- Layer – II : Sings, Levels, Display , Platforms, Overhead Coverings
- Layer – III : Parking

### Elements Used by Pedestrians

- Steps and platform – Only to move inside
- Temporary display areas

## Study of Edge – 6

This edge is marked by G+3 type old structure. Commercial activities supported by this edge are very less and primarily temporary as most of the part of building is abandoned.

### Edge creating elements

Walls – Built edges.

Activities – Temporary activities with elements such as carts.

Levels & Arcade Columns

### Characteristics

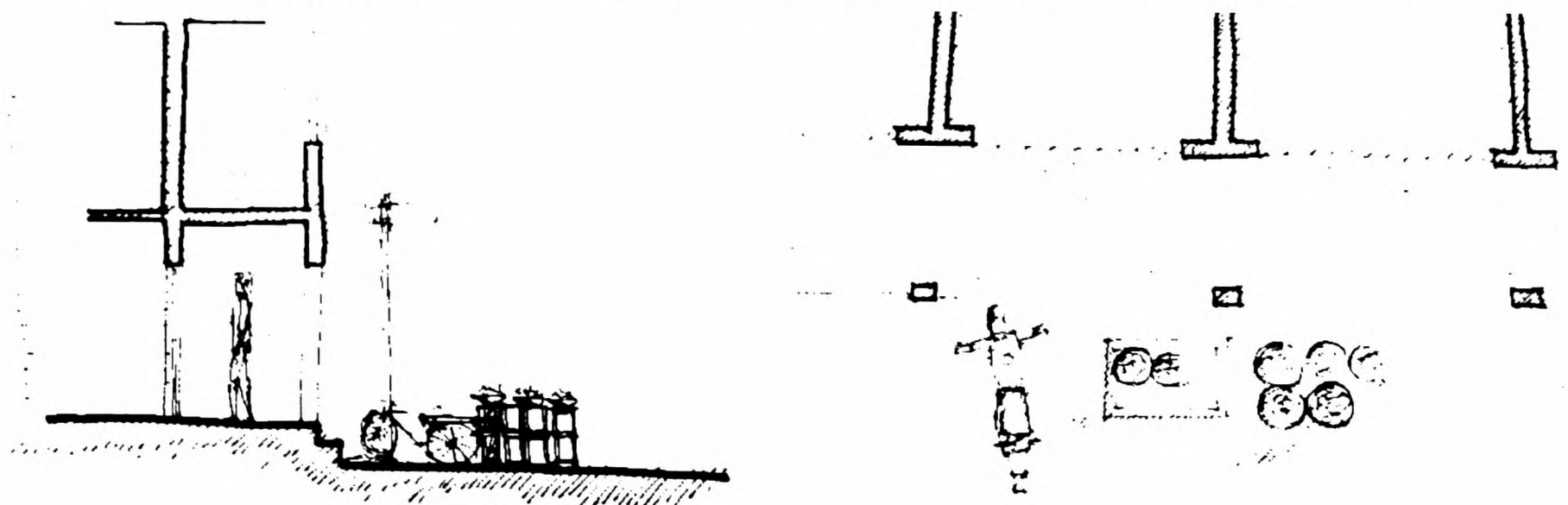
There is only one building that forms the overall edge. This edge is characterized by an arcade in front of shops. There are some platforms and steps provided and are used for displays only. There is less commercial activity as most of the parts of ground floor are not being used. Hence the building setback is used for parking and temporary activities. These temporary activities are layered in such a way to attract moving pedestrians

### Pedestrian Activities, Movement

There are very few pedestrians observed near to the actual built edge. Pedestrian activity is observed majorly near to the temporary activities which are not so effective to attract. Although these activities are very close to moving pedestrians providing good closer view also opportunities to ask and buy from vendor easily. There are no pedestrians who would prefer to take a pause. Though it seem whenever this building was used extensively it might have created positive environment for pedestrian with its human scale comfortable arcade.

### Issues

Part of edges in front of abandoned shops is being used for storing and parking. Vendors are seen after these dead edges only. Eventually these divert pedestrians from actual built edge of the building. There are no usable semi open areas for pedestrian probably to stop and view.



section at the edge 6  
source: author

## Layering of Elements

Layer – I : Walls

Layer – II : Sings, Levels, Arcade

Layer – III : Parking, Vendors

### Elements Used by Pedestrians

Arcade- To move, watch and buy

Open temporary activity – majorly by passerby

### Study of Edge – 7

These are most vibrant edges of all, with mix of old pitched roof building and new G+3 kind structures.

Permanent as well as temporary activities are also quite evident at this edge.



edge 6  
source: author

### Edge creating elements

Walls – Built edges.

Vehicles

Carts

### Characteristics

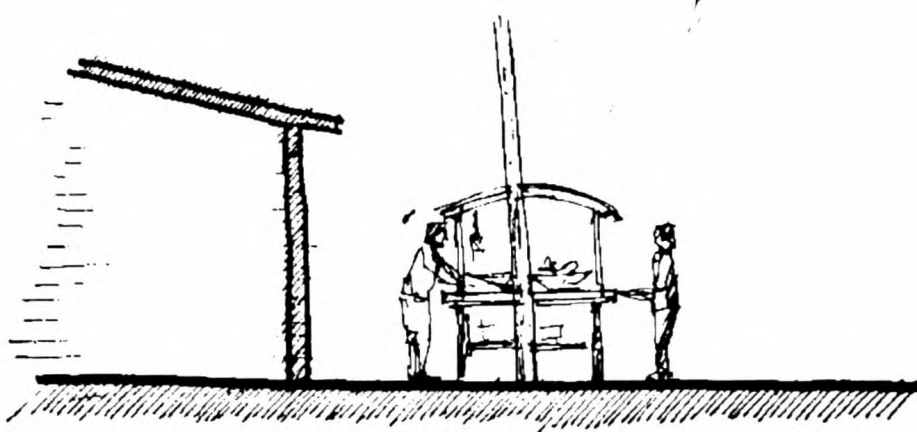
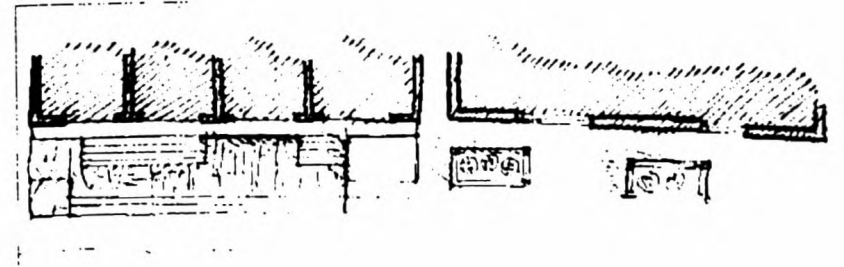
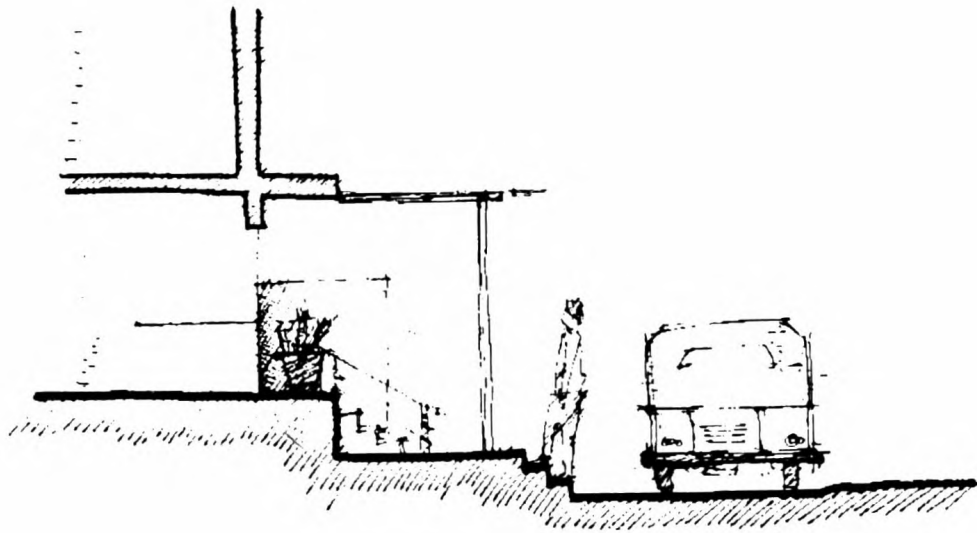
At some parts there are level changes with varying widths of platforms also at some edges there is no level differences. These level differences are very well used for display of product. Not all of the buildings at ground level are related to commercial activities. New buildings have some semi open spaces in front with slick steel structure providing covering above with unobstructed views. There are closely spaced temporary activities at the end of platforms which are accessed from lower levels of platform.

### Pedestrian Activities, Movement

Medium Pedestrian activity can be observed at these edges. Permanent shops offer very usable platforms to pedestrians. These level differences are also used to only seat and observe type activities. Some parts show additional layers of parked vehicles which force pedestrians to change their path but these are not very evident. Temporary activities attract pedestrians who are passerby, as these activities are easily approachable.

### Issues

There is no continuity in the use of adjoining edges as the physical character of these buildings varies. Vehicular parking and Medium carrier vehicle obstruct visual and actual access at the time of loading unloading. Though level differences increase usability of the overall space there are some corners created which cannot be accessed by pedestrians.



section at the edge 7  
source: author



edge 7  
source: author

### Layering of Elements

Layer – I : Walls, Projections, Opening

Layer – II : Signs, Levels, Display, Steps, Overhead Coverings

Layer – III : parking, Vendors

### Elements Used by Pedestrians

Steps and platform Temporary structures – semi open

## CONCLUSIONS

### Findings

- 1) Adjoining edges are ever evolving as a part of greater public realm. Great variations in composition of adjoining edges limit them to be similar. Though there combined results vary, there are certain elements which are common.
- 2) Layering of different element plays vital role in the overall development. The principles for planning such layers vary with context.
- 3) Homogeneity in layering of elements certainly improves quality of the overall setup.
- 4) Pedestrians react differently to different type of edges. Edges offering freedom to pedestrians are more successful.
- 5) Temporary activities attract maximum number of pedestrians. Pedestrians get attracted to edges which are diverse in nature offering many activities at the same time.
- 6) Design of edges in today's context is seen as designs of individual parts so it lacks the perfect harmony at many places.

## How Can We Respond?

- 1) Vastness of public realm and its ever changing physical qualities in contemporary context must be answered with built forms based on study of elements, interaction at existing edges.
- 2) We should look for ideas of place making not as separate parts but as a whole where every element is thought out carefully and planned so. Meaning of built and open space shall be designed together as much possible. ( Though it might be difficult considering administrative constraints )
- 3) Study of adjoining edges in particular areas and comparison between them would help to develop guidelines for architects (individual building designers) and urban designers.
- 4) To maintain homogeneity or character of a particular area, there should be regulations about design of facades, use of material (not only for built form) and design of elements in open public areas.
- 5) It is always seen in India that we try to import western solutions but in case of adjoining edges the traditional qualities would help in development of a more responsive built form.
- 6) Adjoining edges must be designed for pedestrians, and not for cars. We need to strictly follow DCR in designs of new buildings to avoid problems like on-street parking.
- 7) The existing policies do not really deal with problems of such small scale. We need to think about policies, regulations which would deal with individual components of the city.

In studies of urban areas, issues related to edges have been explained as part of much larger context of the city. This study has made it clear that edges could be parts of small urban spaces which shall be a module for study of many such areas. Further research may explain the idea of adjoining edges and relation between other elements of public realm. Further, this study has not covered larger urban problems like encroachments, spontaneous housing, safe & healthy environment for which adjoining edge act as background. This study shall act as basic theory to analyze physical efficiency of public realm.

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