

# Transportation for Social Happiness

## A Case of Street Design

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**Abstract**—This paper looks into the street, under what a street is by looking into its layers of formation. Eventually it discusses the transformation of the street and the street design aspects which are taken into account while designing the Karakkad railway station road or the present Vagbhatananda park. The transformations, this street experienced after the design implementation and the shift in the user group and their experience are the core of the paper.

**Keywords**—Street, layers, transformation, Karakkad, Vagbhatananda park, design.

### I. INTRODUCTION

Indian cities have undergone vast transformation since independence. It was the introduction of the motor vehicles which drastically transformed the formation and nature of the cities and its streets. But in recent years the majority of our projects and infrastructure developments are happening in the transportation sector. Most of the transport infrastructure projects fail to address the pedestrian population or underestimate their relevance. It is in this context that we need to look into streets beyond its primary function of conveyance.

### II. STREET

Majority of land in any city is occupied by streets and they have acted as spaces for public interaction. Presently other roles of the streets are negated while designing them, and the average vehicular velocity became the only benchmark. Even though movement of people and goods are the predominant role of streets, it in course of development creates unpleasant spaces for people, especially pedestrians.

Great street is memorable as a symbolic or ceremonial place in the city and a venue for events, parades, fairs and other civic events (Alan,1995).

A great street creates an outdoor room-a place where buildings and vegetation define the limits of the public realm, an extension of the private living. Some streets are better than others to be on, to do what one came to do... One goes back to some streets more than others, not just because the things you have to do is much closer, but because of its experience (Jacobs Alan B,1995)

“A street is the river of life of the city, the place where we come together, the pathway to the centre.” (William H. Whyte)

In India streets have always been a focal point for transport, eviction drives, festivals, bandhs, acts of love, violence, but have remained strangely absent as an object of concern.

If we can develop and design streets so that they are wonderful, fulfilling places to be-community building places, attractive for all people-then we will have successfully designed about one third of the city directly and will have immense impact on the rest. (Jacob Alan B, 1995).

So it requires a greater study which can trigger the results that are deeply rooted in the context. The continuing dynamic nature of the activities within the street defines the life of any place and that keeps on changing its experience every minute, every second.

But present transformations in the street are such that one finds it difficult to identify the same street, after a couple of years. It is these changes that need to be addressed and manipulated for arriving at a better life within the street.

### III. TRANSFORMATION

Transformation means to completely change the appearance or character of something/somebody, especially so that it is better; to completely change in appearance or character.(Definition, Oxford Dictionary)

It is a movement, especially for the people of fleeting faces and forms, changing postures and dresses, i.e., streets change. (Jacob Alan B, 1995)

The street is essentially considered as a link between two important entities, the linking functions acts as the traffic generator and they alone can't survive without the support of the interlinking street. In the case of Karakkad railway station road, the railway station and the bus stop are the activity generators. In the absence of this road each won't be able to connect with its users.

Each activity happening on a street creates an experience and makes an impact area during that period of time. These impacts are a result of the spaces created by the enclosure of the built form around, the streetlights and other features on the street below. The Karakkad Juma Masjid during Friday prayers creates a different experience, similarly the political gathering in front of the A.K.G. Smarak Mandiram also makes an impact and the evening get-togethers of the elderly at the Milk-booth. Each of these activities and many which are not yet mentioned defined the railway station road.

### IV. LAYERS

The ambience or the feel of the street is not made of just tangible elements, the width of the street, the buildings, their architecture, the spaces around, the street monuments etc., but also some intangible elements. All the activities have origins

linked to some other activity within the same vicinity and these together creates the street.

To understand or learn about any street, one has to look at the layers by which it is formed.

#### A. Layer 1: Infrastructure

This is formed by the road, paver, street furniture, lights, drainage systems, landscape etc. These remain constant for a certain period of time and this will act as reference point for the activities. These points define an area of action for the informal activity. For example in Karakkad railway station road one can find the cobbler stationed next to the old bus station. Most the vegetable stalls have their display area extended on to the streets making the ground level activities more vibrant and lively.

#### B. Layer 2: Enclosure

This includes all the built forms, built fabrics. They also don't change often and gives a third dimension to the street. They act as the protecting envelope and define the functions happening within. This layer is the one which creates a backdrop for the street activities to happen and gives a definite area of operation for them.

#### C. Layer 3: Dynamics

This layer includes the activities which define the character of the space. These are ever changing and they never remain constant even for a short duration. It is partly formed



Fig.1. Comparative image of railway station area where the trees were conserved and open gym was proposed.

by the activities that gets attracted to the initial two layers. The major share of this layer is taken up by the people moving around, the informal activities and the vehicular thoroughfare, both being forever elusive.

#### V. UNDERSTANDING THE STREET

Karakkad Railway station road was formed when the Nadapuram road railway station was established. So this strongly defines the one end of the street, other end terminates at the national highway. The frequent railway commuters were the first major users of the street. Later the commercial activities along the national highway got extend to railway station road, especially towards the opening near the highway. In later stages many institutions also came along the road, making this place a commercial and institutional hub within the village.

The infrastructure layer at the railway station road was limited to 3 meter wide tar road, partially completed open drain, scattered lighting, overhead electric and data cables, dilapidated public toilets and presence of shade giving trees. The nature of activities happening the railway station road was predominantly diurnal. Most of the buildings had their operational time limited within day. The absence of light and the insecurity was the major factor behind this. The users of this street had something to do with its adjoining buildings and its activities. So it was the building and its related activities which became the generator for the trips.



Fig.2. Comparative image of night at the Karakkad railway station road.



Fig.3. Comparative image of the pedestrian zone in the railway station road.

## VI. REDESIGNING THE STREET

The design scope of railway station road was limited strictly between the buildings and their yards. Considering the transpiration as the core function the traffic within the street was segregated to pedestrian and vehicular zone. The alignment of the same was fixed after looking into possibility of conserving the existing trees. The underground infrastructure was developed to take the storm water and data cables. The exuberant cost for shifting the electricity cables, prevented it.

Lighting infrastructure was classified into two sectors, garden light; to enhance the ambience of the space and pole light; which does the function of efficient light all the night. The operational time of the garden light is limited from 6pm to 9pm. This became the first precursor to invite nocturnal activities to the street. The building envelope was scarce towards the railway station, providing scope for an adding activity there. Thus an open gym, badminton court and kids play area was placed there, under the previously existing trees. These supported activities like leisure, jogging. Street furniture were added along the way to promote a better street culture and segregated waste bins were also placed. Thus the street which once catered predominantly to vehicles, got more prioritisation for the pedestrian users. The design of the kerb was such that it shouldn't divide both sides of the road by means of railings, instead plants were placed along the edge and frequent table top humps were placed for ease of pedestrian crossings. Fig.

1to 4 shows the comparison of road before and after the transformation.

## VII. REACTION

The design itself is a never ending process, it keeps on evolving to cater to the change in user behaviour and practices. A street which once had users strictly limited to its adjoining buildings and its activities now started receiving more people from the vicinity, who comes here to socialise, to play, for health related activities. This triggered activities to support these crowds. For example a shop which leases out utensils and furniture for rent has started distribution of snacks and ice creams. New shops are emerging. The existing shops are undergoing a major redesign of their facades.

For a street which mainly had male users started having higher number of female and child users. This transformation from a male centric street to family centric makes its more accessible to society. The reprioritisation of the motorised transport below the pedestrians has increased the user volume and it has created more opportunity for commerce within the street. In fact this has helped in reviving the commercial activities within the street, in fact it can be seen as an alternate to the shopping malls which provides various experiences within one roof. Looking into the social economic aspects this kind of a solution is better viable and accessible to the public. Thus the entire process of transportation has become a means of happening and happiness while performing its core duty of conveyance (Fig. 5).

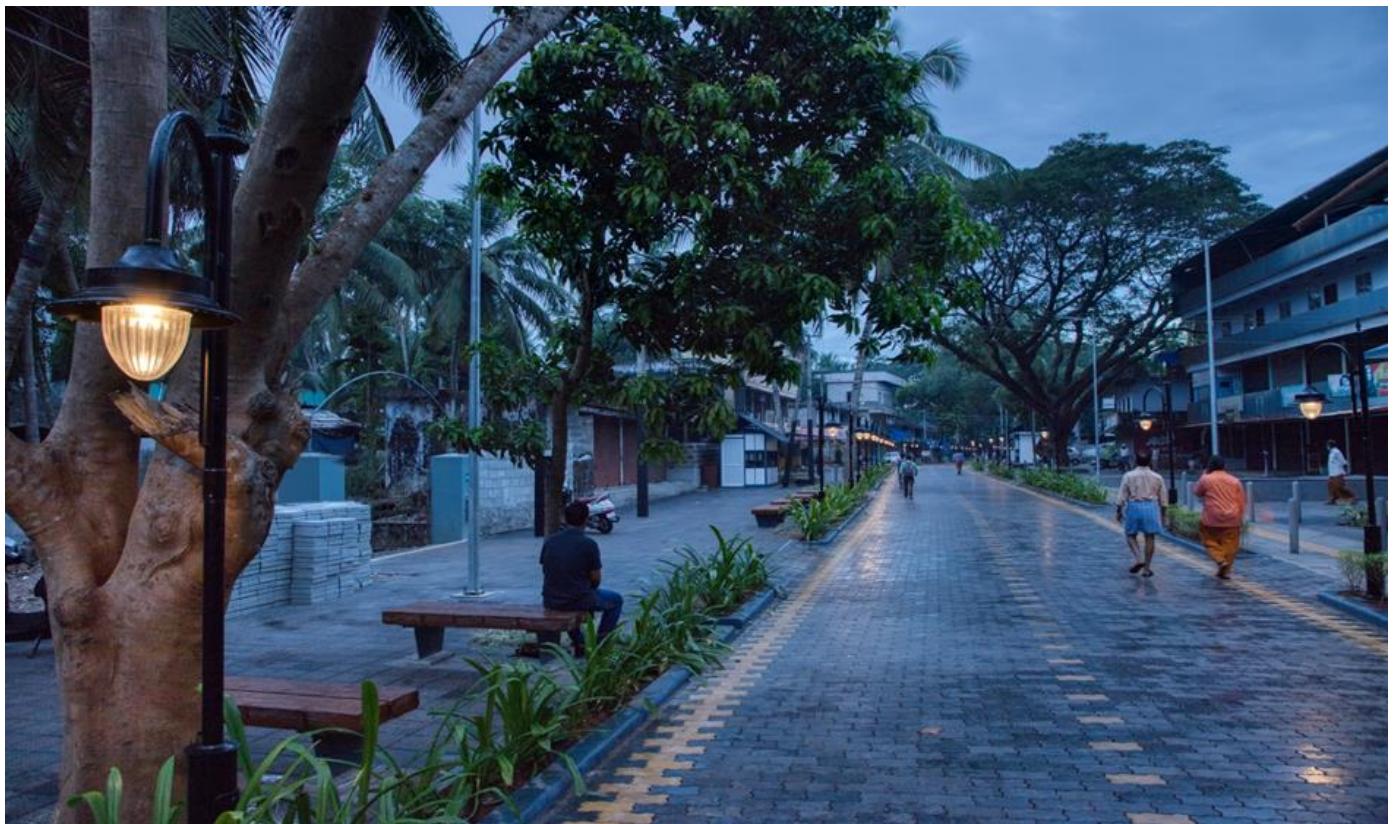


Fig.5. Image of Vagbhanananda park during typical mornings, where people come for morning walks.

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