

## INTERACTION IN URBAN MOBILITY NETWORKS

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### ABSTRACT

*City movement systems are not just structures of roads and avenues but social and cultural avenues on which communication, perception and security are intertwined. This paper will discuss the potential of site-specific sculptures and murals to convert unnoticed or underused urban nodes dead corners, under-flyover, chowks, building lobby practices into areas that facilitate community engagement, cultural practice, and human interaction. Centring on the examples of installations in Mira Road, Borivali, the study builds the picture of field observations, case studies, and user survey to analyse the impact of these artistic interventions on the sense of ownership by the residents, as well as the change in perceiving space, social behaviour, and perception of space. The results reveal that public art is an agent of social connectivity that promotes the usability and aesthetics of informal urban areas and enables the safety, inclusivity, and cultural continuity. Through the inclusion of art in the networks of urban mobility, cities can transcend the purely functional infrastructure to make the neighbourhoods alive, socially resilient, and culturally enhanced.*

**KEYWORDS:** Community Interaction, Social Connectivity, Urban Mobility, Murals, Sculptures, Urban Art.

### INTRODUCTION

The urban mobility networks are generally seen as systems that assist in the efficient movement of people and goods in the city. The roads, flyovers, subways, junction, and pedestrian pathways are usually designed based on speed, connectivity as well as safety. These spaces however in the day-to-day life are far beyond simple movement paths. They are inhabited spaces that people stop and meet, see and come to an everyday relationship with the surrounding city. In Indian cities with the high population growth rate like in Mumbai, most of these transitional spaces, including areas under flyovers, dead corners, chowks and building lobby were usually neglected or in poor conditions. As time passes, they end up being attached to discomfort, insecurity, or even social neglect. Nevertheless, these very spaces have enormous potential to emerge as living and working components of the city that is re-enacted. Activation of such underutilized urban nodes has progressively been achieved by intervening in them through dominantly public art, especially in sculpture and in murals. Through introduction of visual narratives, cultural allusions, and creativity, civic art can alter the perception and utilization of such spaces among the people. The place that used to be neglected can serve as a place to relax, communicate, photograph or have a feeling of belonging. These pieces of art do not merely fulfil the functions of aesthetics but initiate movement patterns, social conduct and attachment towards place. The study examines the sociospatial perception of site-specific sculptures and murals embedded in the urban mobility networks in Mira Road and Borivali to determine how they influence the perception of space, social interactions, and ownership in Mumbai. Investigating the daily user experience, the research relocates the public art as part of the city, not merely as decorative value, but as an active component of the city, which serves to make the city safer, more open and inclusive, and more culturally relevant.

### LITERATURE REVIEW:

- The importance of the role played by the public spaces in generating social cohesion and daily interaction has been an issue that has been highlighted by scholars of urban design and sociology (Jane Jacobs, 1961).
- Jane Jacobs pointed out the value of the visual, pedagogical streetscape in promoting safety by means of natural surveillance and Jan Gehl relied on the value of human-scaled urban intervention at promoting lingering, interaction and social existence in the public space.
- Place-making has been recognized as a process by which local narratives and cultural meanings are integrated into daily spaces using murals and sculptures as examples of place-making by the literature of public art (Miles, Malcolm, 1997; Zebracki, Martin, 2017).
- Murals have been linked with sense of community, political expression and neighbourhood renewal and sculptures in transit-oriented neighbourhoods serve as visual anchors, which aids wayfinding and spatial memory.
- Research on under-flyover and deserted urban areas demonstrates that artistic actions lead to a decrease in fear and neglect and promote walking and social interaction (Sharma and Kothari, 2019).
- Indian case studies also show that place attachment is enhanced through culturally based public art, which is based on the local mythology, crafts and histories, encouraging the community to become informal stewards of public space.
- Although there is a significant amount of theoretical discourse, there are few empirical studies directly connecting the intervention of the public art and urban mobility systems and pedestrian daily behaviour, and thus there is a gap in research.
- The current work bridges this gap by synthesizing spatial observation, visual analysis and user survey data to look at the contribution of the public art in urban mobility networks.

## RESEARCH OBJECTIVES:

- To examine how sculptures and murals can change unused urban spaces of mobility.
- To investigate the effects of the public art on social activities and the walking patterns among pedestrians in transit-oriented communities.
- To determine the shifts in the perception of space, security, and belonging to the neighbourhood by the residents.
- To assess how well art interventions contribute to the maintenance of culture in urban neighbourhoods.

## HYPOTHESIS:

The positive effect of site-specific sculpture and murals integration in urban mobility networks affect the interaction of the community and interaction with pedestrians in the under-utilized parts of urban space. Such governmental art interventions enhance the sense of belonging, spatial quality, and the feeling of safety among users. Additionally, art that is culturally contextual increases the level of social connectivity and residents' attachment to neighbourhoods.

## METHODOLOGY:

This paper employs the qualitative case study methodology to discuss the way in which the intervention of public art can turn vacant areas in urban settings into social spaces. Mira road, Mumbai is the location of the research where the study is carried out on some of the previously unused or abused spaces that include dead walls, road dividers, gardens, and inactive corners. Four projects of intervention of the public art (murals and sculptures) were chosen according to their accessibility, cultural orientation, and location in the daily urban movement paths. The information gathering was made using the visual records (photographs), observations during the fieldwork, and contextual analysis of the artworks and their environment. The theoretical framework is supported by secondary literature on the topics of public art and urban placemaking. Analysis is conducted on thematic basis to comprehend spatial transformation, interaction of community and cultural influence of art in the public spaces.

## DEFINE OBJECTIVES:

- To analyse the impact of site-specific sculptures and murals in the physical and perceptual re-development of under-used urban areas in mobility networks. This goal aims at determining spatial character, visual identity and usefulness of spaces including dead walls, road dividers, inactive corners and garden edges following artistic interventions. The paper examines the way such artworks rebrand the previously neglected or abused spaces into familiar and useful urban spaces.
- To examine the degree of the impact of public art interventions on the city interaction and behavioural patterns among pedestrians in transit-oriented space. This involves the monitoring of changes in walking habits, stopping or lingering behaviour, informal social groups and daily activities like photography, resting or interaction amongst the users. The aim is to get a clue

about the way in which art transforms movement-based spaces into socially active spaces instead of passages.

- To determine the effect of the presence of sculptures and murals on the perception of safety, comfort, and sense of belonging by the users in urban public spaces. The aim explores how artistic interventions decrease a sense of neglect or insecurity, or fear that often accompanies dead corners and areas under flyovers and how they increase inclusivity and psychological comfort, specifically among daily commuters, residents, and pedestrians.
- To determine whether culturally contextual public art helps to strengthen local identity, historical memory, and cultural continuity in urban neighbourhoods. This aim investigates how the themes that are based on regional history, sport, health, and daily life are related to emotional attachment and group space ownership. The researchers investigate how culturally grounded works of art stimulate the residents to belong to and take care of their urban space.

## SITE ANALYSIS AND VISUAL EVIDENCE:

It will provide visual records and field records of chosen public art interventions that can be found in the urban mobility networks in Mira Road and Borivali, Mumbai. The images depict the strategic location of site-specific murals and sculptures in locations that were poorly used before like dead corners, road dividers, and gardens. The visual evidence provides the field observations about the spatial perception changes, pedestrian behaviour and community engagement after the artistic interventions. Even though the pre-intervention conditions could not be documented by photos, the observations made at the site and user narratives prove that these spaces used to be viewed as abandoned or inactive. The images thus serve as qualitative value of spatial engagement, formation of cultural identities and improved functionality in the daily urban settings.



Figure 1: Relief based mural with cultural and historical stories, fitted into forgotten corner of the urban space and changing it into a pedestrian walkway in Mira Road, Mumbai.



Figure 2: Figurative Sculptural relief, built into a dead corner, supports cultural memory, and adds to the visual appeal to the urban mobility network



Figure 3: Thematic public sculpture that is a representation of knowledge and learning, which is in a vacant space in the city so that it can be used to create social awareness and attach place identity.



4. Sculptural installation inspired by yoga put into a road divider, bringing in the themes of balance, wellness, and visual test on a high-mobility urban path. Figure.



Figure 5: Figurative sculpture to represent strength and action, on road divider to act as a visual marker in the urban mobility network.

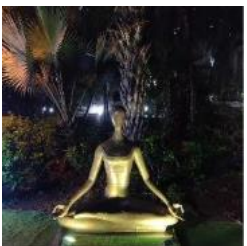
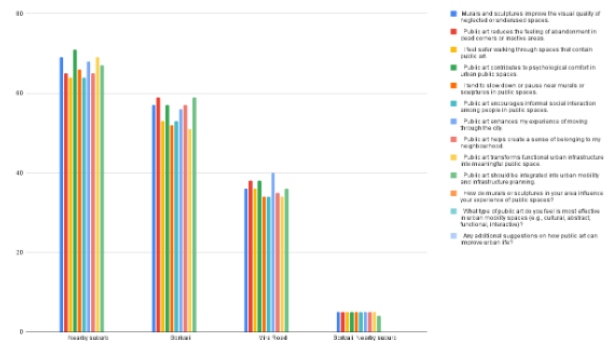


Figure 6: Sculpture meditative garden that is incorporated into a landscaped open area, which promotes stillness and reflection, and provides extended engagement with users.

**STATISTICAL ANALYSIS AND INTERPRETATION:**

Results of the analysis of the Google Form responses show that there was a great positive attitude towards the public art in the urban mobility spaces. The responses to the statements about the improvement of the visual quality, the experience of a pedestrian, and the emotional comfort of common spaces in Murals and sculptures are mainly rated between 4 and 5 showing a high level of agreement. In all sites (Mira Road, Borivali and the surrounding areas), respondents said that the presence of art in public places stimulated them to take their time, observe and have informal social interaction with others, as well as a sense of belonging and a sense of community identity. The cumulative scores in suburban and Borivali areas are marginally higher, and this indicates that there is more perceptual effect in previously underused or otherwise inactive spaces. The qualitative responses support these trends by emphasizing the theme of the better perception of the safety, decreased neglect, the cultural awareness, and psychological well-being. In general, the results effectively statistics reveal the hypothesis that the public art changes functional urban infrastructure into socially active and significant public space within urban movement networks.



**CONCLUSION:**

The research proves that site-specific sculptures and murals play an important role in improving urban mobility spaces by making them not only functional infrastructures but also socially interactive and culturally meaningful social space. Case studies, visual analysis, and survey responses have shown that public art enhance spatial perception, promote pedestrian activity, promote informal social interaction and enhance a sense of belonging to a community. The results confirm the supposition that a culturally contextualized public art serves as a stimulus of social connectivity and place making in the urban mobility networks. Public art should thus be incorporated in urban planning to ensure the development of inclusive, safe and human cities.

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