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RESEARCH PAPER

Investigation Of Lost Character of Street Space by Differentiating it from Mere Road

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PAPER INFO	ABSTRACT
	Streets are the most important part of the urban environment. Streets, in the past, were the places of informal meetings, kids' play, social gatherings, and processions. Streets have evolved into massive engineering roads that celebrate 20th-century technological development. Considering streets as roads has ruined this very space's socio-cultural importance and real character by giving priority to cars over human beings. The objective of the research is to differentiate the rich street space from the. Through the qualitative method, this study differentiates the use and feel of streets and roads separately. Learning from old street patterns, particularly in medieval Islamic cities, reinforced the socio-cultural aspects of the street. It is concluded that all stakeholders should work together to introduce a new model for balancing people, socio-cultural character, and vehicular traffic. This may prove to be the best solution to bring back the lost character of street space.

Introduction

A street is a public thoroughfare in a built environment and one of the fundamental components of urban design (Moughtine, 2003). In an urban setting, a street is a strip of ground with buildings on one or both sides (Cambridge University Press, 2022). A town's streets are crucial because they give buildings and other built structures their shapes, much to how a dress gets its shape from a tailor's dummy (Haslam, 1972). Streets are the most significant component of the urban environment in the public realm. Every trip to work, to the store, and to eat out takes place in this area (Ewing et al., 2006). Streets connect different areas of a city by combining the public and private spheres. These links carry social interaction. Since properly planned streets provide a pleasant, secure, and healthy environment, streets play a significant part in the character and worth of society (Brown, 2000).

The street can also serve as a means of transportation and a location for people to hang out with their friends and neighbors to pass the time of day, depending on each street's layout. We all had street experiences, but the value of those experiences differs based on the street's environment and design. If a street has a lot of traffic, the experience will reinforce the idea that it is just for moving around and will be dominated by automobiles. However, it may be more sociable and, in certain situations, allow for play when there is less traffic, as many streets did in the past.

Since appropriate streets generate vibrant, secure, and healthy settings, it substantially contributes to the character and quality of the community. Its rich culture,

atmosphere, and romance have been sacrificed to improve traffic efficiency. With the quick rise in popularity of personal transportation, the walking distance restriction has been removed, albeit at the expense of lost social interactions and pedestrian democracy on the streets. As a result, streets' ability to be walked on and their sociability have diminished.

Under various social, economic, and political circumstances, streets have become enormous engineering roadways celebrating 20th-century technological advancement. There is a misconception that streets are only for travel or solely for automobiles, which is insufficient use of this space. As a result, misunderstood streets have turned into dangerous places to live. It is necessary to reframe streets as areas of safety, livability, resident terrain, communities, fun spots, and local history. Studying the causes and contributing variables that contribute to the alteration of streets and change in their character is therefore important. People tend to stay inside their homes and travel around in their motor vehicles because streets in most locations have turned into dangerous places for pedestrians due to fast traffic and are so unsociable & unwalkable (Fig 1)

Fig 1 depicts the danger of walking on the street when a car invades all the street space.
Source: (Stromberg, 2014)

The primary function of the street is to serve as a setting for unstructured interaction, including conversation, amusement, and reaction. It makes people's social desires stronger. If you can't stroll along the street, you might not be able to meet anyone, as Jacob(2003, p.6.2-1) stated.
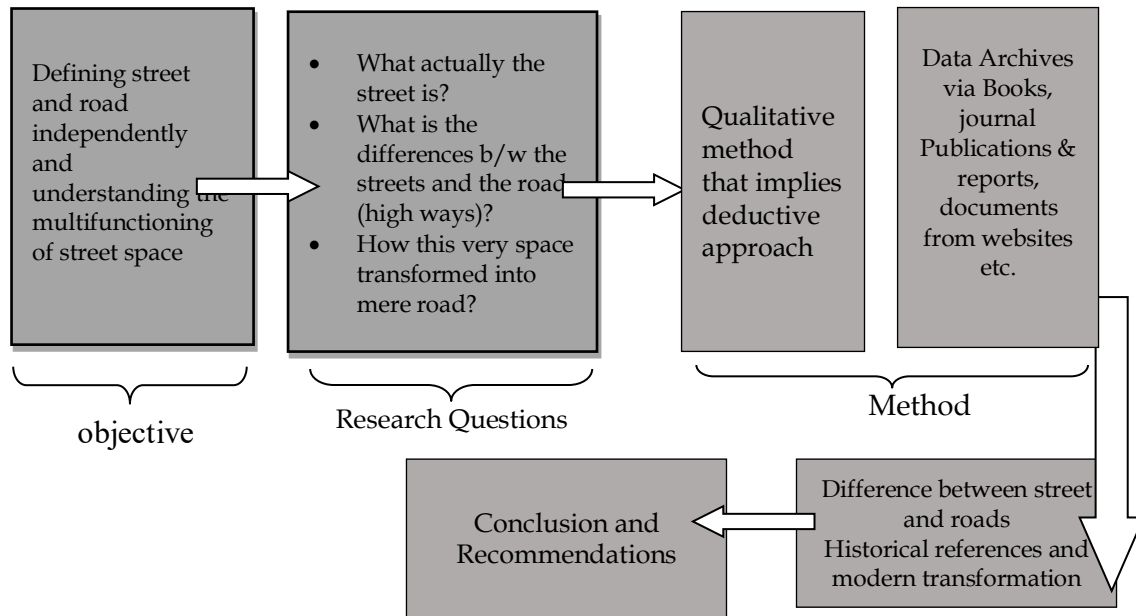
Literature Review

According to studies on urban design and planning (Barnett, 1982; Krier, 2003), streets play a significant role as the foundation of public open space and the fundamental framework of urban forms. The basic unit of every urban structure, a city block, is surrounded by streets. Lynch (1960, p. 96) asserts that the visual hierarchy of streets and trails serves as the framework for the representation of a city. When social, political, technological, and aesthetic factors are combined to create a city shape, each street develops its own distinctive qualities (Celik, Favro, & Inersoll, 1994).

Similarly, the following quote from Fumihiko Maki (1962) perfectly captures the value and significance of a street in a city: "A street (Linkage) works as the glue for the city. All of the city's activities are unified around this. If the connectivity is successful, humans are recognizable and intelligible. People can assemble, engage, and move around in this place with a rich history and distinct environment. Along with space connectedness, it also links individuals (Moughtine, 2003, p. 113). Streets, therefore, convey a city's history, urban form, and societies that shaped it.

Material and Methods

This research is based on probing many acclaimed perceptions and researches of numerous academicians—the investigation of the street space includes tracing its history from classical times to the present. The qualitative method is adopted to undertake the research. A great scholarship is reviewed to understand the definition of the street and its differences from the roads. This study implies a deductive approach to finding the research question since it infers the pre-established definition and theories about the street space.

Defining street and road independently and understanding the multifunctioning of street space	• What actually the street is? • What is the differences b/w the streets and the road (high ways)? • How this very space transformed into mere road?	Qualitative method that implies deductive approach	Data Archives via Books, journal Publications & reports, documents from websites etc.

objective   Research Questions   Method

Conclusion and Recommendations	←	Difference between street and roads Historical references and modern transformation

Street or Road?

These two names are frequently used interchangeably. The difference between vast baroque boulevards and small medieval streets can be attributed to the height-to-width ratio, which describes the spatial qualities of street space. Erell, et al., 2011, p. 189; Lillebye, 2001. Vertical components, such as the walls of nearby buildings, encircle a street on both sides (Erell, et al., 2011, p.19). In a developed context, it serves as a public thoroughfare. Today's main problem in street design is the urban models and theories to control traffic and technicalities. The term "road" has lessened the richness of a street's details from the past.

Apprehending the Terms; Street and Road

So far, many words have been used interchangeably, including street, way, path, highway, avenue, route, mall, boulevard, promenades, and roads. This research component discusses the key distinction between street and road rather than debating the definitions of all terms.

A road is a rough surface created for vehicles like buses, bicycles, cars, etc., to travel on (Mayor, 2009, p.1511; Merriam-Webster., 2015). Roads were once employed as contact points connecting locations where people used cars, horses, or foot transit. Or it could be a route, course, or way to travel. Along with the standard contact line of a 2-dimensional strip, movement and communication between locations are highlighted in the concept of a road.

The street, however, depicts a series of connected locations that can be used as both a pathway and a place to stay (Moughtin, 2003, p.138). According to Christian (1971), the

street symbolizes the community's personality for newcomers or visitors visiting that particular town. It's a little universe, he said (p.81). Street space is one of the two fundamental components of urban planning, according to Moughtin (2003; with a specific historical function and characteristics) (113).

The distinction between a road and a street is made clearer by definition provided by the Longman Dictionary: "A road is generally running in the country, concerning lengthy distances, i.e. among towns. A street is an internal passageway or artery of a town having the presence of people and display of link between open and built places" (Mayor, 2009; Woodward ltda, 2015).

Street: Is It a Place or Just an Engineered Road?

It is preferable to define the term "place" before defining the street as a place. Places are the framework or setup used to create social relationships; they are created, disintegrate, and rebound over time. Some of these relations are specific to areas, while others go beyond it to other places. Therefore includes other locations (Massey, 1994, p.120). A setting with humanistic elements serves as a location with emotional significance (LinkedIn Corporation, 2011). According to Trancik (1986), a good public space takes care of the user's socio-cultural values and connectivity. It functions as a place if it serves the objective within that particular society's historical and socio-cultural context (p.98). A street is a place where one can bump into acquaintances and listen to some interesting rumours. The phrases "street" and "roads" are sometimes used interchangeably in metropolitan areas.

The street serves both a pathway and a place at the same time. In the past, the street served as a connection point and a "place" where the user could simultaneously be a part of the social and trade communities. This results from all activities being similar and occurring in the same place. As a result, the street is an amalgamation of all the characteristics of urban space and serves more purposes than just facilitating traffic. In the modern metropolis, it has become common to view a street as nothing more than a traffic route or road rather than for all of its genuine qualities and potential as a place. The street previously served as an urban neighbourhood with a public space near their private locations/homes. A similar claim is made by Moughtin (2003) that "the street serves not simply as a means of access but is fundamentally an arena for the social expression" (p.123).

A common misconception about streets is that transportation is their primary function or distinguishing feature. People are often forced to stay at home and travel by personal vehicle because today's metropolitan streets are so dangerous and unwelcoming. By arguing that "the streets nowadays are only for traveling through or for transit from one point to another," Christopher offered a solution to this issue. It must provide a place to reside in. To make it feel enclosed and like a place to dwell, he suggested: "narrowing the end of a street with the bulge in the center" (Alexander, 1977, p590-591). Such a setting is already there in medieval streets, making it a place to stay rather than just pass by. A street is an engineered road rather than a place when the mathematics required for road design are considered. For instance, while designing a road, technical factors such as the number of passenger car units per hour (PCUs) must be considered to create a roadway or other path that facilitates the efficient passage of cars rather than pedestrians.

Difference between Street and Roads

From the description above, it is clear that a road is a means of transportation rather than a place. While a street serves as more than just a route from one location to another, it also serves as a social, cultural, and historical hub for its users. Digging into historical records is important to make the discrepancy more obvious. For instance, Alberti and

Palladio distinguished between two categories of streets: those that run within and between cities. The former kind of street, which connected the towns and offered vistas of the sea, hills, and villages in addition to well-cultivated plains, was referred to as a highway by Alberti (1955). A similar idea is captured by Palladio (1965), who writes that "the roadways outside the city should be spacious and tree-lined, to protect the travellers from the intense sunlight with extra quality of recreation owing to flora on both sides of the route." For instance, the Via Portuense, which connected Rome and Ostia, was divided into two avenues, one for travelling and the other for returning, by a one-foot-high stone elevator. As a result, this serves as the model for modern motorways that pass through cities (as cited in; Moughtin, 2003, p.128)

Accommodating heavy traffic or rapid vehicle movement is probably one of the most important characteristics of the road that distinguishes it from a street. Perhaps the need for quick vehicle movement caused modernist architects to ignore the street. One of the founding members, Le Corbusier, claimed that streets were an obsolete concept. This area no longer functions. This kind of space has no place in a city; a better replacement must be found. Later, he said, "Pedestrians should not meet speeding cars" (Corbusier, 1967, pp.121-123). Without approving the first assertion, it is possible to accept the second. Because the actual purpose of the street was disrupted when rapidly moving automobiles hit it. It does not necessarily imply that vehicles are not allowed on public streets (Moughtin, 2003, p.129).; rather, a street has multiple functions to perform, including transportation and communication

Road and street may resemble one another since they both serve the same purpose, the travel, but the livability amenities and facilities that a street offers pedestrians are not available on the road. Diverse personalities, such as joggers, beggars, buskers, and many others, frequently use the streets; typically, none feel secure on the roads. Moreover, the user's level of safety and security is the most significant distinction between a street and a road. Streets have this special quality because they make people feel secure when engrossed in their surroundings, regardless of passing cars.

Furthermore, In the city's streets, where people can freely assemble, and children can mingle with their peers in the presence and surveillance of their elders, is the public realm. In such a street and connected places, one may get social opportunities. Children not only have the platform to engage with others in the public realm provided by the street area, but they may also gain a lot of knowledge from them by listening and emulating what they do (Fig 2)

Fig 2. A typical street scene in the old city of Lahore where elders are busy in gossip with each other while kids play under their surveillance, learning and emulating them unconsciously

Such social gatherings for entertainment and educational possibilities can only be provided by street space when it serves society and the socio-cultural context in which it exists. In the past, roadways served as a place for communities to celebrate rituals, celebrations, and other occasions, such as numerous religious processions. None of this is imaginable on the road, where easing the congestion is a major goal.

A street may be temporarily blocked to traffic to secure or enable other users, such as a flea market, street fair, some procession, children playing, etc.Street offers a sense of reliance & belonging. Roads, on the contrary, offer supremacy to cars compared to public gatherings and social interactions. If there are roads where obstructing traffic won't be encouraged, all other users are of secondary importance. As a result of the car's rising dominance in metropolitan areas and people's disrespect for public spaces, social and physical deterioration have occurred (Lennard & Lennard, 1992).

Street: Meaning, History, and Discernments

Any discussion of the current urban environment should begin with a knowledge of earlier urban theories (Butina, 1987). This research section investigates historical street space in terms of spatial design and use. Considerations of street design in mediaeval Europe and the Arab world are discussed. It was when socio-cultural factors rather than technical traffic management were considered while designing streets. Travel and communication, as well as the social and psychological effects, have always been major considerations in street design. Street widths were always designed to accommodate no matter what transportation was available then. For instance, in the Islamic era, the width of a street was determined by the width and space needed by loaded camels, and even then, it was considered that a straight route was necessary to facilitate carriages. Examples of social and defensive concerns are the idea of Fina and cul-de-sac (Broadbent, 1990,p.11). Without deliberate design, many qualities were added over centuries to create the mediaeval city. Travelling the winding mediaeval streets is a perpetual sequence of curiosity and surprise. The concern for creating a street as a "place" for the public rather than just a path is seen in several historical examples.

From Spain to India and south-east Asia, *mediaeval Islamic cities* were informally planned with consideration for human senses. There were also rules governing the width of streets, with seven cubits being the minimum for streets and allowing for the parallel passage of two fully loaded camels. These streets' widths may have been altered for various reasons, including military needs, the requirement to allow diverse modes of transportation, and aesthetic considerations (Broadbent, 1990). There were considerations for (Sabat &Fina), adding not only the protection from weather but also beauty and safety from strangers. The sensation of security and vibrant social contact are enhanced by the labyrinthine planning with its small, occasionally blind alleyways that end in private courtyards and are frequently covered. Cordoba, Casablanca, and other Moroccan cities are a few examples.

Fing 3(a). In a street in old Tunis, Tunisia, the steps for the house on the right are within the fina and sabat in the form of an arch, adding the feature of severe weather protection along with connectivity among residents 3(b)A curving, twisting street in Cisternino shows a feeling of mystery and surprise. Source : (Hakim, 2008)

Most of the streets were curving, twisting, and turning into each other for security, privacy, defensive reasons, and the thrill of surprise(Fig b). Streets were rarely straight (Broadbent, 1990, p.11-15). Hassan Fathy describes the traditional Arab city and its pattern in detail. *The narrow street space functions as a courtyard to control temperature. Straight and wide surfaces would heat up more quickly. This layout generates more appeal from an aesthetic standpoint. Street alignment irregularities act as a catalyst for innovation and creativity. (Fathy, 1973)*

Transformation of Street Space

The transition from agrarian to industrial civilization brought about a radical change in consideration of street space; notably, the 20th century brought an abrupt transformation in this aspect, which is primarily responsible for the transformation of street space into engineering roads. Even though, at the turn of the 20th century, roads and tracks were distinct from streets.

Street Modifications and Industrial revolution

Unexpected city growth was a result of the industrial revolution. For instance, cities like Manchester saw population growth during the first 40 years of the nineteenth century, going from 35 000 to 353 000. (Mumford, 1946). The demand for energy, speed, power, and inventions increased production and consumption. Due to unchecked population expansion and novel inventions, new home types were developed. Near their workplace factories, the workers set up residence. The worker class's quality of social life decreased as development, consumption, and output increased (Dickens, 1859). Due to the unchecked growth of industrial activity and urban population, problems, including air and water

pollution, emerged. The rejection of curving streets was caused by the need for proper sewage and drainage. Planners were prompted to consider the street width rule because it was supported by doctors' organizations following a severe outbreak of infectious diseases caused by inadequate ventilation and sanitation.

The street space was widened as a result of all of these problems. Under the Public Health Act of 1875, Bye-Law Street, straight and Wide Street, was established in England. For industry and trade, winding, narrow streets were also inadequate for the transportation of products. Due to this need, the artificial pavement was developed for streets and highways so that the surface would not be damaged even when carrying the largest loads. Small fragments of fractured stone surrounded by mud and water were used for this. The development of multilayer road paving also involved Thomas Telford. As a result of the construction of roads, stone transportation became convenient and easy, and modern road constructions evolved from these methods.

Dust became a problem with the introduction of cars, and a solution was needed for this annoyance. Most roads and streets were constructed using tar as the primary material. The components were bound together with tar and "macadamized" stone. As the 20th century developed, new materials, such as stone, wood, and a variety of concrete types, are now utilized for automobile and pedestrian paths. The way that streets are used has evolved. The surfacing employed to keep the ground safe from the masses has changed due to this development (Woolley,2003, pp.106–107). The likelihood of chance social encounters was also decreased by altering the existing physical pattern. This model was implemented not only in England but also in colonies developed by the British.

Street Modifications during Twentieth Century

Due to Corbusier's conviction that "Our streets no longer operate," the 20th century saw a significant change in street design in terms of use and character. The street is an outdated and unnecessary concept. (1987, Corbusier) The city transformed into a collection of sizable sections, including commercial, residential, and industrial districts, with the advent of contemporary urban planning and architecture. This segregation of city activities in different sections became crucial for the street space since it caused it to become only a means of transportation rather than a hub for numerous activities. The introduction of cars into the city streets drastically transformed the situation (Fig 4).

Fig 4. A typical street scene in Modern Lahore where people are replaced with cars and liveliness with alienation

Street behaviour shifted from being alive to being part of a "system" in modern beliefs, where it is seen as a location to get from point A to point B. (Lash, 1992). The primary cause for concern is the fast speed of life rather than the interacting society that was imagined by architects when a dead space was formed instead of a lively one (Crosby, 1956, p.33). The social environment and affluent street culture have been overshadowed by concern for efficient roads. Streets have largely been replaced with "roads" in modern times.

Some modern streets are designed solely for automobile traffic, while others partially serve the integrated purpose of roadways. One of the characteristics of streets, the supremacy of pedestrian rights, has been lost. With the help of these modern movement philosophies, vehicular traffic dependence developed beyond expectations until the end of the 20th century. At the start of the 21st century, the situation worsened so much that most streets are now dominated by cars (Woolley, 2003, p.108).

Conclusion

In a city, the street serves as a physical element and a social reality. It connects the buildings on the street and the people in a city. The role of the street in fostering interpersonal interaction and communication is obvious and crucial for connecting individuals in a social structure or a local urban community.

Defining a street as a road with all the technicalities and engineering necessities makes it a conduit that facilitates the efficient movement of effluent, not a place for everyone. Roads are designed to prioritize vehicles, while street people's interaction and pedestrians are of prime importance along with the purpose of linkages. In street design, there has always been a great concern for human comfort and psychology. As it is evident in the medieval street setting particularly medieval Islamic streets. Those streets show explicit concerns for travel and transportation along with the social and psychological needs of the user. Let alone the benefit of the feeling of enclosure, narrow winding streets provide shelter from severe weather by blocking harsh sunlight in summers. The Sabat in medieval Islamic Street is an example of weather protection. An example of such streets is, Streets in the old walled city of Lahore which provide the perfect setting for residents' communication. The children play under the surveillance of elders who would be having chit-chats with other neighbors.

However, the 20th century witnessed a 180-degree change in the character and use of the street, mostly due to the widespread misconception that transportation is the street's defining feature or its primary function. Examining history reveals that one-dimensional perspectives and simplistic ideas of city planning by modern architects and town planners produced an inappropriate urban environment where streets were seen as merely a means of transportation rather than as a transitional space between the public and private realms. The link between street space and the built environment was purposefully disregarded. As a result, the space's potential as a hub for social interaction went unrealized. The resultant street space is housed by cars instead of people and generates alienation as an alternative to liveliness.

Recommendations

Based on this research, it is recommended that

- Street and roads are distinguished from each other. Streets have superlative features, therefore should be preferred over mere roads

- It is recommended that the street design should be based on the human dimension of street space with the notion of 'place'. Human experience and its feel are important. Studying historical models of Medieval Islamic streets perhaps be helpful.
- It is necessary to address the link between the street and the surrounding buildings that have been neglected since the industrial revolution. It's also important to dispel the myth that streets serve only as quick routes from point A to point B.

The introduction of a new model for balancing people, places, and traffic may be the best solution to all current street difficulties given that the car continues to be an essential component of urban transportation and is predicted to do so for countless years to come. Street designing is not a one-person show; rather, all stakeholders, including Town planning, psychology, sociology, behavioural and environmental sciences, architects, engineers, and others, should play their role in the interconnection of people and their surroundings

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