



Fig.11. painting of rickshaw as urban art. Source: <http://kishnakathad.blogspot.com>

Reference list

- Choudhury, I. (2009). *Proceedings of the International Conference on Nature in Eastern Art*. Translated from English by Parvin M. Tehran: Art academy of Islamic Republic of Iran, 2009.
- Edensor, T. (1998). *The Culture of the Indian Street*. In Fyfe, N. R. (Ed.), *Images of the Street – Planning, Identity and Control in Public Space*. London/New York: Routledge. (205-221).
- Ghosal, A. & Atluri, V. P. (2011). *Architectural Study of Hybrid Electric Propulsion Systems for Indian Cities*. 13th World Congress in Mechanism and Machine Science, Guanajuato, México.
- Girot, Ch. (2006). *Vision in Motion: Representing Landscape in Time, the Landscape Urbanism Reader* New York: Princeton Architectural Press. (87- 104).
- Hasan, T. & Hasan K, J. (2012). *Socio-Economic Profile of Cycle Rickshaw Pullers: A Case Study*. *European Scientific Journal*, 8 (1): 310-330.
- Itten. J. (1999). *Art of Color*. Translated from English by Abdolali S. Tehran: Yasavoli, 2003.
- Kim. Y. H. (2010). *Cities and economic systems*. Translated from English by Abolfazl M. Tehran: Center for Urban Development and Architecture research, 2010.
- Lynch, K. (1995). *Image of city*. Translated from English by Manouchehr M. Tehran: University of Tehran, 2010.
- Lynch. K. (2002). *The theory of the City form*. Translated from English by Hossein B. Tehran: University of Tehran, 2008.
- Mansouri. S. A. (2010). Identity of urban landscape: the historical study of the evolution of the urban landscape in Iran. *Manzar magazine* (9): 30-33.
- Mort, N. (2008). *Micro Trucks: Tiny Utility Vehicles from Around the World*. London: Veloce Publishing Ltd.
- Nasr. S. H. (2000). *Man and Nature: The Spiritual Crisis of Modern Humanity*. Translated from English by Abdolrahim G. Tehran: Islamic Culture Publishing Office, 2008.
- Tavallaei, N. (2007). *The coherent form of city*. Tehran: Amirkabir, 2007.
- Warren, N. (1997). *The Story of Rickshaw: A Loanword Case Study*. Fukuoka: Fukuoka International University.

hand, and the emerging phenomenon of Localization of vehicles on the other hand, leads to international impact of auto-rickshaw; nowadays the vehicle is a part of Indian urban identity around the world. The

global status of rickshaw, added “touristic” quality to its secondary features, besides, says the message that motion landscape, can integrate with whole urban cape mass, if can interact with local patterns of society.

Table 1. conformity of auto-rickshaw with the main criteria of urban Indi. Source: author.

Row	Criterion	Effective measures in accordance
1	Economy	- Low-cost manufacturing, supplying and maintaining rickshaw - The suitability of the cost to rent
2	City Structure	- Small size, trike, the triangular plan, low speed - Compatibility with the organic structure of India
3	Climate	- Semi-open structure, the cloth roof - create blind and shade, prevent greenhouse effect
4	Culture	- Conformity of half-open body with the in the current street economy - Affected by beliefs and life style of the driver on rickshaw and promotion to the landscape place - Contentment and harmony with the simple life of the people (to avoid the use of private vehicles) - familiar body color (yellow, green, black) which evokes the sacred colors

Endnote

1. The major negative consequences of vehicles are air pollution, the dangers of high-speed, interference with pedestrian movement, noise, etc.
2. There are three main samples of motor vehicle in Indian urban fabric:
A. Imported cars, which consists mainly of luxury products of international leading companies sporadically used as personal vehicles.
B. Standard vehicles, produced by domestic companies such as the Tata and Eicher include a wide range of vehicles, from heavy vehicles to nano car (the most energy-efficient car of world produced by Tata).
C. Trike light vehicles, such equipment are important part of motorized transportation industry both in number and in terms of effectiveness. Using small proportions and style engine are their main features which make it easy to navigate and is cost savings.
3. In Japanese, Jin=human, Ricky=force, sha=vehicle. And the combination means vehicle work with human force.
4. Low maintenance costs with small and flexible form, are main factors in acceptance of the otto-rickshaw in South and East Asian countries such as China, India, Indonesia, etc.
5. Motor Trike idea belongs to Corradino D’Ascanio, the inventor of the motor Vespa. The first Vespa tricycle motor was originally a Vespa tricycle with flat cabin and no wall on back. Gradually driver chamber was added to increase driver safety and rear cabin structure was completed physical.
6. In order to transport construction materials needed to rebuild destruction, especially in the old city, small vehicle needed to be able to move and stop easily.

7. Due to the use of lightweight engine, maximum speed of otto-rickshaw is 50 kilometers per hour , while average speed is 35 kilometers per hour.
8. Otto-rickshaw roof is made of a waterproof fabric.
9. The quest for nature-oriented life in the city is possible until urbanization does not conflict with economic needs and requirements. In cities like Mumbai affected by colonialism, city is built based on modern economic structure and nativist and religion have pale role in shaping society. In these cities using auto-rickshaw is so much lower than other major cities. These elements often replaced by English style taxis. This can be compared with the low number of temples in the city.
11. For example, black color of auto-rickshaw represents using Petrol and green color is a sign of using natural gas. Non-metallic colors are not used due to its high cost and is intended to reduce the finished cost of rickshaw.
12. In Hindi culture and religion, especially Hinduism, Color has a very high cultural and religious value that its importance has been beyond the means of decoration. Black, yellow, green and blue colors are widely used in the body of the auto-rickshaw, each culture has a special meaning is Hindi culture. Yellow symbolizes wisdom and is color of Indian god Vishnu’s Dress, while is near to the saffron color (holiest Hindi color, symbol of love and the colors of the Indian flag). Green symbolizes life and joy and one of the colors of the national flag. Blue represents generosity, courage and determination of Rama and Krishna deities. Black is also symbol of Shiva (another Hindu god).



Fig. 9. Vehicle is not for prides in India.
Source: www.Flickr.com



Fig. 10. Spiritual function of rickshaw.
Photo: Zahra Askarzadeh, , archive of NAZAR research center, 2012.

Conclusion

Urban Landscape subordinates the set of elements associated with the city in the context of a civil society. Increasing the number of elements, in harmony with the living standards of the community, effects on urban readability. In traditional consolidated Indian society, elements which not fight with rural life and is flexible to religious life, can reach to mental acceptance and physical continuity. Accordingly, the physical and cultural aspects of modernity such as motorized vehicles, as phenomena threatening traditional structure, hardly possible to find acceptance. But study on the place of Auto-rickshaw in urban India, shows its success in qualifying for the collective memory of the city's population (Fig.11). This place is because of its potential adaption to local conditions (Table 1). Compliance of physical structure of rickshaw with the criteria of economic weakness and organic network of roads, effects on its "usefulness" as "tool". However, adaption the structure of vehicle to local patterns of employment, plays a major role in its "utility" as "urban workspace" has is. The importance of personal space in India, leads to the influence of culture of drivers on rickshaw, adding

the signs of Hindi life to it. This familiar signs makes rickshaw become "significance", promoting from space to "place" was. Mutual influence of rickshaw and Hindi society creates native-religious character of this emerging place, rickshaw with its "new" feature, become able to link to religion-based identity of community; And stay beside other elements of the urban landscape. Thus, auto-rickshaw has become able to respond to three main requirements of Landscape, changed from tool to place .Qualitative status of rickshaw as part of landscape mass is a result of Indian "business culture". In this culture, benefit and life are inseparable, and work space is the same with living space. Besides, Indian business culture, as a part of naturalistic pattern of social life in India, encourages expose business, and extrovert bodies such as rickshaws, have the ability to adapt to this cultural property. Auto-rickshaw therefore is a part of "business landscape", in addition to the element of "motion landscape" as well .This double-meaning function increases the affection of rickshaw on readability of Hindi city. Penetration of Indian cultural signs in hologram of rickshaw On the one



Fig. 7. a view of minimal Indian life in auto-rickshaw, Udeipur. Photo: Samaneh Rahmdel, archive of NAZAR research center, 2012.

Fig. 8. ritual figures in working spaces. Photo: Samaneh Rahmdel, archive of NAZAR research center, 2012.





Fig. 6. street business in jaipur.
Photo: Hoda Kameli, archive of NAZAR research center, 2012.

• First Community: Auto-rickshaw drivers

Acceptance of rickshaw as a query provides it to influence on the society. Indians pay too much regards to their business environment, knowing it as the main place of everyday life which represents their main characteristics. For this reason, they change work space to suit their personal interests and beliefs. This kind of attitude to the job consists of rickshaw drivers as well.

Dependence to street life makes rickshaw drivers spend a lot of time in their vehicle, the vehicle for these people, as part of rickshaw audience, is not only a means to earn money, but a “place” for life. (Fig.7).

Driver religious beliefs as a person trained in the ritual-religious, plays an important role in personalization process of rickshaw. Thus, decorative equipment added to the interior and exterior body of rickshaw, represent its owner’s characteristics and beliefs, creating different character for each rickshaw (Fig.8).

• Second community: citizens

Compatibility of auto-rickshaw with the culture of Hindi society is the secret of its acceptance. Using Personal vehicle, has become a tool for pride in most urban communities, while Indian contentment prevents the use of vehicle to show off Fig.9. This results in favor of public transportation, especially rickshaw, the cheap and practical one. Personalizing rickshaw, especially by using religious elements, makes it pleasant to traditional Indian society, leads to recognizing rickshaw as a “Hindi” place and influenced by the belief of the people, because space in India is dependent on elements which reflect religious beliefs of residents¹⁰.

Secondary function of some potential characters of rickshaw will increase its value in the minds of audiences; this is because of mental familiarity of audiences with these features.

Too much familiarity creates a sense of place. When the shape and familiarity combined, there will be a very strong influence (Lynch, 2008: 169-168).

One of the most important of these characteristics, is the color of rickshaw, using pure, non-metallic colors in the body of rickshaw, however for economic or legal considerations¹¹, finds a ritual function, because of the association of national and religious symbolic colors. Art and color, has always been a means to express symbolically sacred concepts in India, because religious man search for meaning in the universe through the symbols (Nasr, 2008: 178). Between three aspects of color, symbolic, emotional and intuitive (Itten, 1982: 15) symbolic aspect has the greatest impact on Indian audience. Using sacred colors, leads to signify rickshaw, linking it to religion¹². (Fig.10).



Fig. 4. rickshaw running between crowd, Ejmir.

Photo: Ehsan Dizani, archive of NAZAR research center, 2012.



Fig. 5. rickshaw in traditional fabric of Ahmadabad.

Photo : Zohreh Shirazi, archive of NAZAR researchcenter, 2012.

Achieving meaningfulness by engagement with the community

Place is a physical-spiritual phenomenon that forms by the appearance of an event (the historical experience of man) in somewhere (physical interpretation of space). Spiritual and physical characters are the two inseparable traits of place (Mansouri, 2010: 31). Space will change to the place when space finds cultural content when finds cultural content (Tavallaei, 2007: 136). Converting space into place depends on the flexibility to interact with the audience society and acceptance of its cultural-spiritual demands. The audience society of rickshaw divides into two groups: rickshaw drivers and citizens. Interactions of these two groups with rickshaw change the location of vehicle to a landscape place in Indian cities.

of the society on the one hand, and could easily move inside war-damaged fabric.

Similarities between Italy and India in the weak economy and the organic structure of the city, led to the reception of Ape in India. Rickshaw answers urban functional requirements in three cases:

1. Responding to economical needs: the most important reason to justify physical structure motorcycle is the economic weakness of source country, which is considered as one of main characteristics of the Indian urban population. Small, light engine and relatively low fuel consumption, reduced manufacturing costs, maintenance and operation of the motorcycle have been considered in the design.
2. Responding to the applied needs of urban structure: the tissue destruction left in urban traditional fabric after war, revealed the need for small and flexible vehicle for moving means, to the war-torn Italy⁶. The traditional structure and undeveloped Italian road system had a significant similarity to Indian road structure, looking at narrow, organic and non-linear roads in Indian cities, proves the necessity of using vehicle having auto-rickshaw characteristics. triangular plan and slim body are two main causes of acceptance of rickshaw in Indian urbanism, the factors that make auto-rickshaw an effective vehicle for transporting through the compact and slim Indian roads and urban fabrics (Atluri & Ghosal, 2011: 2) low speed of rickshaw⁷ leads to easily checking and reducing the risk of interfering with the movement of people, especially in the residential fabric (Fig.4&5).
3. Responding to climatic needs: semi-opened structure and non-metallic ceiling of auto-rickshaw⁸ avoid interior space from too much heating, by the possibility of natural ventilation, which point opposite to the pack and greenhouse type structure of standard vehicles.

Rickshaw, from device to place

Auto-rickshaw compliance with the functional needs of the urban population of India, alone, cannot guarantee the continuation of this element in this society. A society depended on the values of the indigenous social structure that is hardly able to catch up with modern trends. What leads

to rickshaw survive in this context, is its inclusion into the collective memory of the people and the integration with the perception of people from city mass, this process should result in compliance of rickshaw with the demands of the cultural context. How to achieve this position by rickshaw lies in its interact relationship with the substrate and the influence of these two from each other.

Structural desirability, underlying to acceptance as space

Basically, Rickshaw has a minimum structure. A large opening without any doors, created semi-open structure for rickshaw, that creates a direct relationship with the surrounding environment, means the urban fabric. Semi-open body of rickshaw, although rooted in economic considerations, has found secondary functional roll, admitting it as applicable space to street life in extroverted Indian cities. Street in India is a part of a complex spatial organization that provides social activities arena, a variety of treatment areas. Multi-functional street structure provides a combination of overlapping spaces that combine the fields of activity (Edensor, 2006: 201-202). Informal economy (Kim, 1389: 209), including mobile and temporary business services, the main activity in Indian fabric, including streets. This non-enclosed living space, appear to be justified in extroverted social life of Hindi citizens. Such an attitude to the city, has been rooted in Hindu naturalism, spirit of Hindu world view, has a sacred view to the relationship between man and nature (Chadhury, 2009: 109). In this view, relying on the nature is necessary to actualize the intellectual capacity (Nasr, 2008: 118). Street life is a reaction to inevitable urbanism, somehow attempt to opposite western development model based on the Separation of natural and artificial environment⁹. In this thought, spaces that are linked directly to the environment, find the chance to compatibility with the aesthetic patterns.

The half-open body of auto-rickshaw make it a popular business space to substantial part of the population, in addition to other street economic activities. (Fig.6).



Fig. 2. auto-rickshaws in traffic.

Photo: Samaneh Rahmdel, archive of NAZAR research center, 2012.

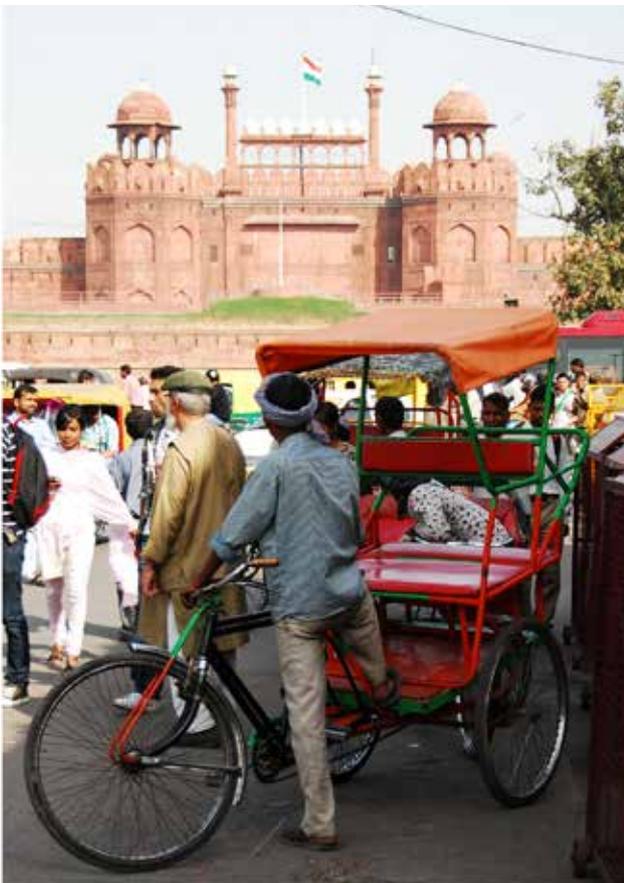


Fig. 3. cycle-rickshaw in Delhi.

Photo : Ayda Alehashemi, archive of NAZAR research center, 2012.

phenomena, factors such as economics, urban and climate are among the most prominent measures that need to be considered in designing vehicles.

The widespread use of auto-motorcycle in Indian cities proves the success of the vehicle in urban transportation. The reason lies in factors that have led to the formation of the physical structure of rickshaw. Despite rickshaw is an element come from a country having different culture from India, but reflection on the origins and motivations of the time and place of which this phenomenon comes from, suggests similarities between origin and destination countries. Model of three-wheeled vehicle was the product of special circumstances in post-war Italy (Mort, 2008: 61); a model that is able to sync with the fragile economy

Trike models was produced following the pattern of auto-rickshaw, continuing until today (Fig. 1).

Interaction with the community, durability secret of auto-rickshaw in India

Today, numerous domestic and foreign manufacturers produce vehicles in India using trike style. Rickshaws supply the transportation needs of urban India, considered the most repeated elements in urban landscap (Fig. 2). In addition to auto-rickshaw, cycle-rickshaw is used as main transportation element in some Indian cities such as Calcutta and Delhi (Fig. 3). However, the use of these two types of motorcycle manufacturer has been outdated in the world for many years, replaced with modern ones. The question will be how the phenomenon of imported auto-rickshaw is able to stay in a foreign land, while

the original is obsolete? Especially that any change effects in degradation or durability of city (Giroto, 2006: 91). The answer must be found in in capability of rickshaw responding to the needs of indigenous urban India In continue, the process of indigenization of rickshaw is studied, changing from absolutely functional element to one symbol of the city.

Auto-rickshaw and answering functional requirements

The first step in adoption of an emerging phenomenon with society is that the phenomenon becomes able to meet the expected performance of the new platform. This occurs if an element in itself is compatible with a variety of factors which are the main component of community infrastructure. In the urban context and in conjunction with mechanized transport



Fig.1. Van-rickshaw in udaipur, based on pattern of auto-rickshaw.
Photo: Samaneh Rahmdel, archive of NAZAR research center, 2012.

Introduction

Movement corridors and transport equipment, calling motion Landscape or transportation landscape, are considered the main components of the contemporary urbanscape. These components can be the only means of functional elements or affecting the readability of city. The importance of motion landscape in recognition of city is understood when not call movement corridors “empty” spaces and give them an independent quality from the city walls over there. To achieve this quality, it is essential that the constituent elements of landscape have features beyond usefulness, to upgrade from quantitative to qualitative elements. It is possible for a Phenomenon change from a physical element to landscape element, only if it can be able to answer the three landscape goals: Including usefulness, desirability and signifying. Motorized vehicles are generally more or less the same equipment that have an international aspect and cannot be seen as a symbol of a particular territory. In addition, the impact of mechanized vehicles cities¹ leads to the lack

of their role in the creation of anthropocentricities. In urban conflicts between humans and cars, the proposed solution is generally decree banishing vehicles from the human environment, and transfer them to the underground lines and the like that (Waldheim, 2000) Removing machines from the historical fabrics reveals their undesirable symptoms . This is in addition to large scales of machines. In the meantime, what ignored is the potential of municipal vehicle to become a symbol of city to help its readability. Especially should learn two traits: They are reproducible in time and space, as well as the similarity of these elements together. Because the “repeation” of elements from the perspective of the city, next to their “similarity” help to understand the physical manifestations of a residential complex (Lynch, 2010: 193-194). Localization of vehicles is inevitable to become a sign of urbanscape. It is needed that the elements somehow interact with geographic, cultural, economic, etc. conditions of the land so that could access to the common memories of citizens

Hypothesis: It seems that vehicle model “auto-rickshaw” has become able to promote its basic role of transportation to landscape element, integrating modern transportation with the native Indian features. Moreover, it could be argued that the vehicle has changed from tool to the place, by influences of urban India as the audience of urbanscape.

From Jinrickshaw to Auto-rickshaw

Three-Wheeler stoochers have major roll in Indian urban transportation². First Three-Wheeler Stoochers in India was the four-passenger type, named auto-rickshaw. However a variety of models with various functions using the Trike model was Produced over time, but the overall pattern of these vehicles is still regarded as auto-rickshaw.

Japan is known as the origin of rickshaw. First type of rickshaw, named Jinrikisha³, was invited

in 1869 in Japan, under the impact of Victorian phaetons. Traditional rickshaw was cabinet bicycle pulling by human force. Therefore is called pulled-rickshaw (Warren, 1997: 4). Gradually Cycle-Rickshaw replaced pulled-rickshaw, replacing human force by mechanical force.⁴

first years after the end of World War II, The idea of a cabinet motor tricycle designed for handling burden welcomed by Italian company “Piaggio”, due to the lack of vehicles and economically weak society⁵. And in 1948, the first such device named “Ape” entered the market (Mort, 2008: 61). In 1956 one of the new models of Ape which was dedicated to passenger transport, was noted by the Hindi company “Bajaj” actually due to similarities with traditional motorcycle, called “auto-rickshaw”. Piaggio started producing in India under license of Piaggio. Until the 1970s, the only conventional rickshaw model was the four-passenger motorcycle; from this time varying

Landscape of Motion

Localization Process of Mechanized Vehicles in Indian Cities

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Abstract

General view of vehicles as important elements in the perspective of contemporary city, Suggests that these elements are more or less similar facilities in all cities, paying only for their functional role: urban transportation. In most urban communities vehicles are merely objective, without any signs affecting the legibility of the city. Since urban life in India is mixed with primitive native life, localizing any phenomenon by people, the question is whether the native Indian mechanized transportation as one element in urban structure and yet something imported? And if the answer is positive, by which model have reached this important? Reflections on the movement in the Indian cities hypothesize that the pattern vehicle as “auto-rickshaw” could go beyond the framework of functional vehicles; become a landscape place, using its physical characteristics and its interaction with the community.

In this paper, by selecting “auto-rickshaw” as a case study, an attempt is made to prove the hypothesis. Research methodology is based on the recitation and interpretation of the urbanscape in today India. Although consistent of auto-rickshaw with the functional requirements of community affected in its adoption by people, its place as landscape element is obtained by compliance with culture of the Hindi business and becoming a work-life place. Entering familiar signs changes the character of rickshaw from an importing vehicle to a place effected by significant signs of Hindi culture, influencing the readability of urbanscape.

Keywords

Auto-rickshaw, Landscape in motion, Indian urban society, Localization, Indian business culture.