Public Spaces Planning Policies and the Effects on Pedestrian Mobility in a Metropolis City; the Case Study of Tehran, Iran



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Urban Change in 21th Century

21th century is a different era in history of urbanism. Based on UN data in 2014, 54 per cent of the world's population lives in urban areas, a proportion that is expected to increase to 66% by 2050.

quality of life

Public spaces quality



Public Space, Planning or Design?

Looking more to the literature demonstrates more attention to public spaces analysis and design whereas the planning policies to distribute, manage and control of public spaces through the city are more important.

Public space planning policies can connect strategic scale and design level of public spaces coherently.



CHANGING CONCEPT OF MOBILITY

Mobility can be assumed as a universal driving force that changed urban form since ancient time.

For many years mobility had a close meaning to transportation. Because of humanistic approach to cities the meaning changed and new dimensions of mobility have bean emerged



CHANGING CONCEPT OF PUBLIC SPACES

These new types like consuming spaces, lost spaces, etc.(Carmona, 2008) have created new hidden network of public spaces which criticize traditional mobility in classic public spaces like streets and squares.

Considering sensitive groups needs like women, children and older people increase complexity of mobility concept



Planning must be adapted to this shifting reality through the redefinition of new concepts and tools.

Coming back to Walkability

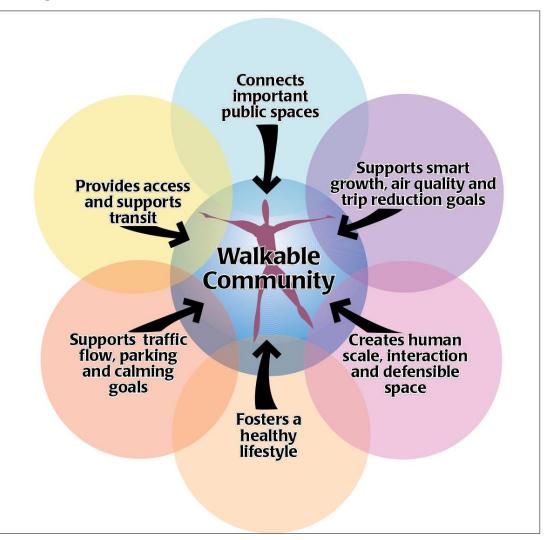
According to contemporary key concepts like urban **health and quality of life** a number of cities in developed countries have changed their public spaces planning policies through creating:

pedestrian zones health districts

and introducing new documents like

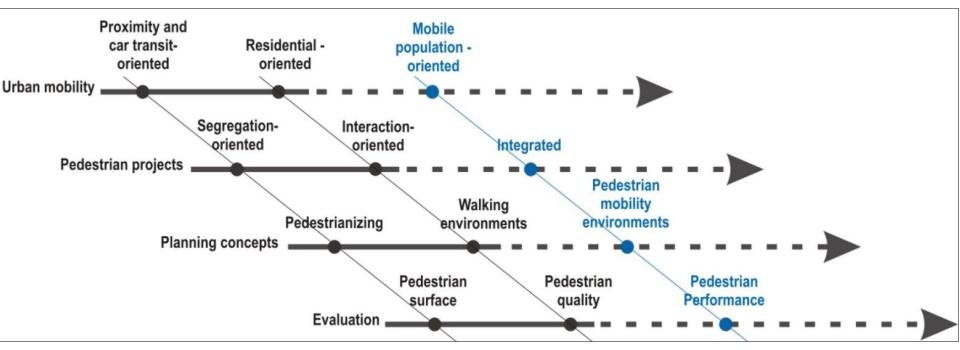
pedestrian mobility and safety guide pedestrian master plan

in which walkability is a main concept with different benefits



walkable community benefits. (City of San Diego pedestrian master plan)

Evolution and relationships between urban mobility, pedestrian projects, planning concepts and evaluation



(Soria&Talavera, 2013)

With this background, public awareness about pedestrian spaces benefits, growing researches that show effects of walking on physical and mental health, fast changing of city centres to pedestrian zones and great efforts to enhance public transport especially in European cities, it seems that:

21th century is more inspiring in mobility concept comparing to modern era.



Tehran Car factories; 50 car /h



Tehran 68 H for pedestrians



Key points for analyzing Tehran as a good case study

- academic associations have started a quasi movement to pedestrianize urban spaces.
- Tehran is a pattern city for other cities of Iran in urban developement
- The recent decade is a different era in history of Tehran with a significant growth rate of urban quality
- In this period the mayor of Tehran has been fixed, so there is a good context for analysing urban policies. The mayor of Tehran in this period, has been nominated as top 11 mayors of World in 2008

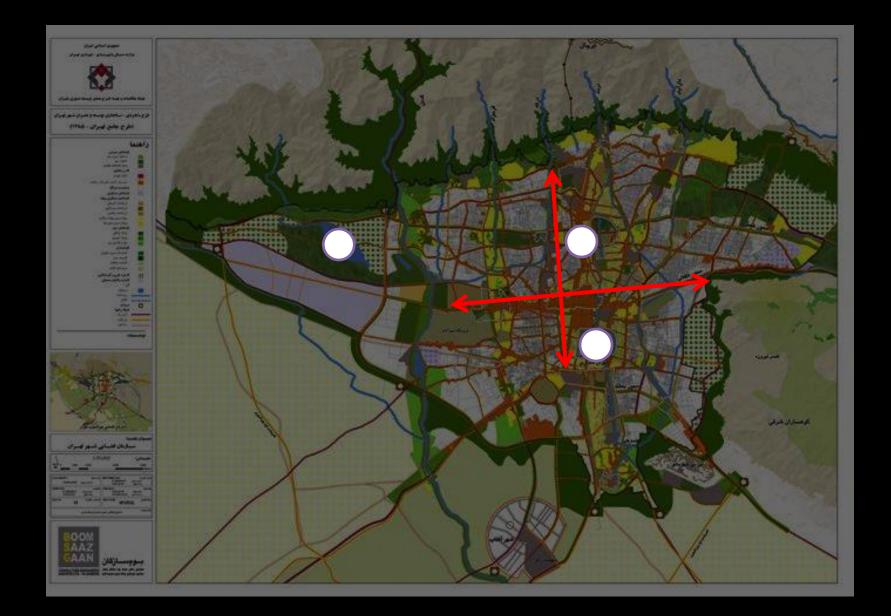
Methodology

From mobility point of view, this period is a unique period of Tehran while both pedestrian and car mobility have experienced tremendous changes.

In the first stage three largest pedestrian zones with different functions have been chosen to study

In the second stage two main streets of Tehran have been chosen to evaluate pedestrian mobility policies according to sidewalk qualities

In the third stage of the research, pedestrian spaces planning policies have been compared with highways design in a quantities approach to demonstrate how much attention has been paid to pedestrian mobility in Tehran Municipality policies in recent decade





15khordad:2010

Baab-Homayoun-sor esrafil:2012

Nasser-khosro:2014

-Nasser-khosro Pamenar:2015









Results of quesstionnair show overall satisfaction of people of changing mobility in the area. Also shopkeepers are more satisfied from economic point of view after changin streets from car dominant to pedestrian friendly situation. The main quality of the area which is more notable for people is safety especially for women (in day time not night time)



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The Effect of Physical Stimuli on Citizens' Happiness in Urban Environments: The Case of the Pedestrian Area of the Historical Part of Tehran

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Chitgar Lake waterfront; a paradise for pedestrians and cyclists in Tehran



Deep observation and questionnaires



- new change in history of 230 years old capital of Tehran
- locating close to mountain in connection to forest
- > 9 kilometre continuous pedestrian including a ring of bicycle track
- > lack of public transport
- Planning different shopping malls





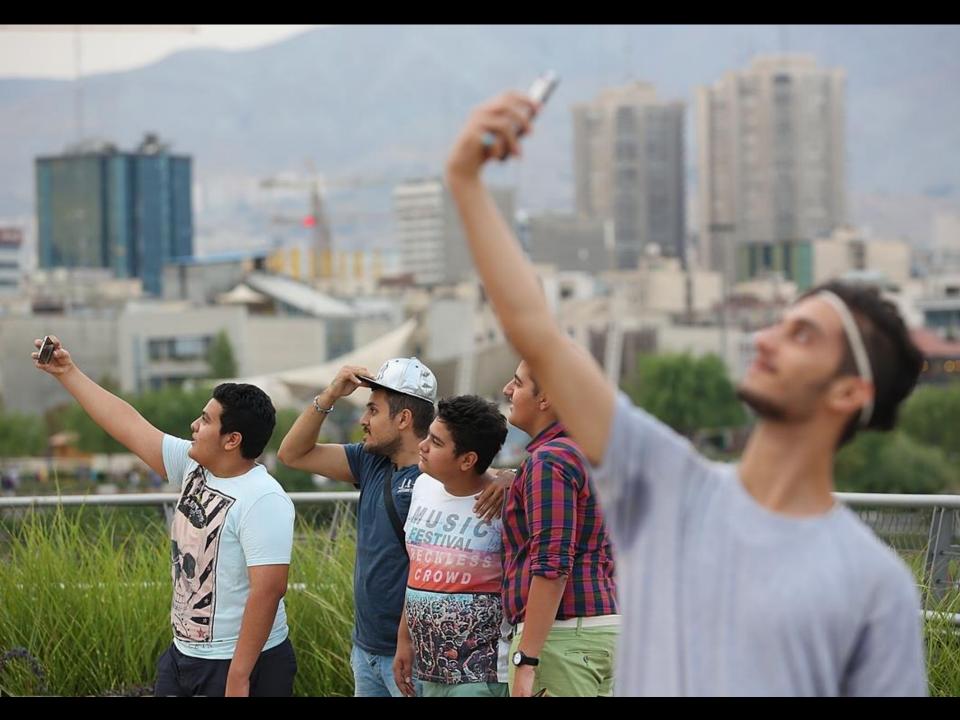
- Verity of cultural and recreational functions
- innovative design of elements,
- pedestrian bridges
- cycle tracks
- different theme parks in 68 hectare
- connection to a forest park
- vast view to the mountains of north of Tehran
- Good connection to Metro and public transport by a network of walkable spaces and sidewalks introduce an
- excellent public spaces planning policy of Tehran Municipality.
- Connectivity is a key quality in the area

This is the main factor of Tabiat Bridge success as a new type of public spaces in Tehran which also has captured virtual spaces because of selfie photos on the bridge by young groups



Tabiaat Bridge, Tehran







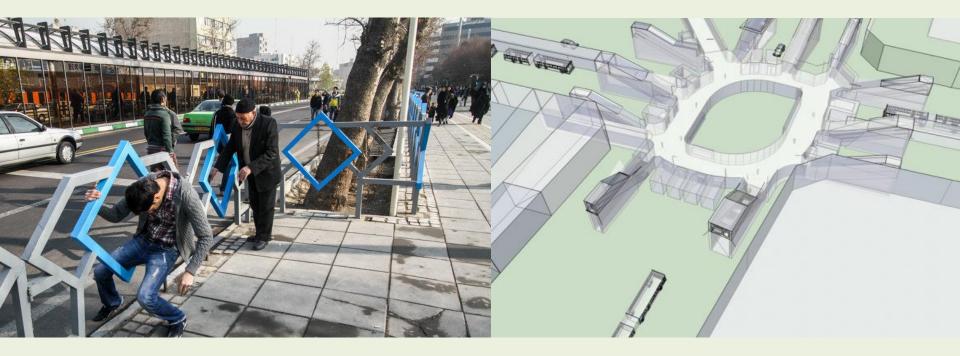




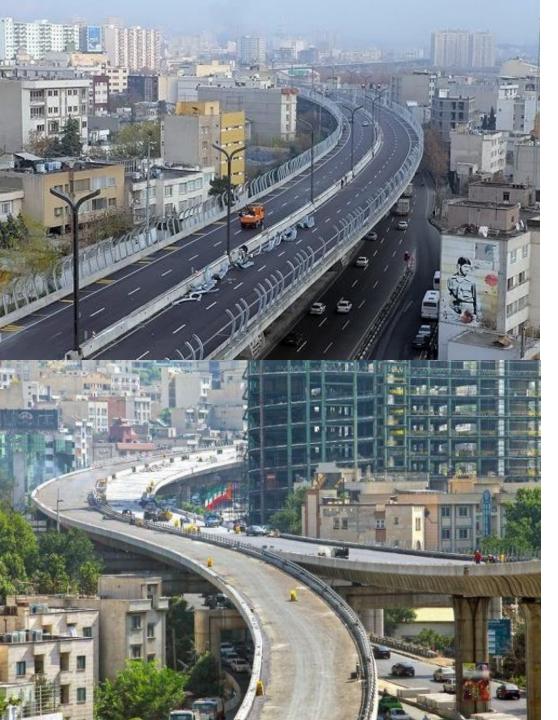
- improving overall quality of walking
- details of paving
- the interaction of paving to old trees
- Lack facilities for disabled people at intersections
- less attention to protection and irrigation of trees



Vliasr Intersection Project



At the intersection of these two streets has been a critical project in Tehran in which the pedestrian mobility has transferred underground. The dominancy has been gained by cars. In spite of developing sidewalks in these two streets, the intersection project is a sign to show urban manager main thoughts



Highways Encourage in Tehran

- Highways construction from 304 Km to 548 Km in 12 year
- a parallel planning policy that is not consistent to pedestrian mobility
- Critics on Sadr's Elevated highway325 million Euro

Ranjbar & Mashhadi Moghadam (2017) research "Upgrading urban highways: issues and negative impacts based on a case study of Sadr's Elevated highway" results showe the highway has significant negative impacts in ecological dimension, including air and noise pollution and energy-consuming parameters

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CONCLUSION

- > overall satisfaction of citizens in new pedestrian zones when we analyse these spaces from public spaces quality point of view.
- When we analyse them as spots in the city challenges are raising up. In this way the connection of pedestrian zones to other mobility patterns like public transport has a key role.
- Those pedestrian zones which have a better connection to public transport have been more successful.
- As a critical view pedestrian mobility planning policies of Tehran have concentrated in segregated zones which needs to plan an integrated urban spaces network.
- > Also other mobility patterns like public transport should be planned to connect them together.
- > The analysis of sidewalks reveals the emergence need for modification of intersections design, paving quality and connectivity based on sensitive groups needs.

CONCLUSION

- In comparison to highway development policies, Tehran Municipality planning policies in recent decades are paradoxical. This can be related to lack of integrated mobility plan which cover pedestrian spaces network, cycle network, public transport network and car dominant spaces together.
- Without this plan Tehran has a long way to overcome the challenges of the city.
- ➤ Looking to Chigar Lake area where a new highway designed at the south part of waterfront and continuing under the forest park (with destroying some part of forest park because of intersections and U-turns) announce us the uncertainty in planning policies of mobility in Tehran







