



Democratic Urban Streets Design Guideline Codifications (Based on Qualitative Democratic Urban Spaces Design Norms)

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ABSTRACT: The concepts of democracy have been around for centuries in different fields of human sciences. However, in most of these fields the idealistic and far-fetched features attributed to democracy have not been manipulated yet. It should be mentioned that there have been only a few serious attempts to find proper go-between elements, which could make such a concept as comprehensible and tangible as possible. In fact “democratic urban space” is derived from the “design for all” concept. In other words, this is the physical expression of “general democracy” which appears in urban spaces and which is definable based on specific principles. These principles (qualitative norms of democratic urban space design) are jointly based on urban design and democratic approaches, and have got a moderating role among theoretical contexts and urban physics. Based on the general aspect of mentioned concepts, there is a need for detailed attention to all urban spaces in order to find specific strategies and tools for each space, based on internal characteristics of the space and according to democratic street design norms. The present article, in line with the aforementioned purpose, aims to devise the instruments and methods, which could actualize the theoretical concepts of democracy, which are often considered at a general level in the actual life of people. In this regard, studying and investigating other democratic conceptual fields in urban street spaces (economics, culture, politics, government) alongside other forms of spatial-physical democracy in streets are surveyed in this article. Therefore, the main aim of this article is to analyse and provide design guidelines based on democracy norms in the street context. In order to achieve this goal, a wide range of theories have been reviewed and systemically classified to provide physical guidelines for democratic street design.

Keywords: democracy, democratic urban space, street, democratic street.

INTRODUCTION

From a general point of view, studies regarding “democracy” are mainly based on two utopian concepts of “absolute equality” in all conditions and “absolute decision right” in all fields. This does not mean that the concept of democracy is not actually reachable, but this utopian point of view has been moderated among all fields of human societies as the “possible maximums”. Utopian look is permanently considered as a valuable

actuator goal at the subject of democracy. On the other hand, by looking at scientific theories about urban spaces and structure, necessities, elements, criteria and the generation of suitable norms, should pay more attention to human rights and freedoms.

Regarding the theoretical background, there have been few direct literatures on the subject. Therefore gathering and classifying indirect literature to achieve a proper conclusion is one of the aims of this article. Besides, the importance of the subject directly refers to forgotten qualities in our daily urban lives, which are recoverable more or less, through various social criteria

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as democracy. In fact, we have an attempt to prove this hypothesis that, it is possible to improve streets quality through democracy and its design reflections. Therefore, discovering and classifying the democratic street design guideline is the main aim of this article.

METHODOLOGY

The research is based on a wide range of literature review in three main fields of urban design, streets design and democracy, injecting solidarity through extracting the similarities. In fact, theories related to the aforementioned

subjects have been reviewed and the results were obtained based on a systematic classification approach. The presented article is a pure theoretical analysis, which produces design guidelines. Therefore, what is called “democratic street” in this article is the collection of all dispersed attitudes by various scientists. In other words, finding guidelines to inject solidarity between human freedom elements in the frame of a “unique concept,” is one of the main purposes of this article. Based on the aforementioned concepts, the structure of this article is presented below.

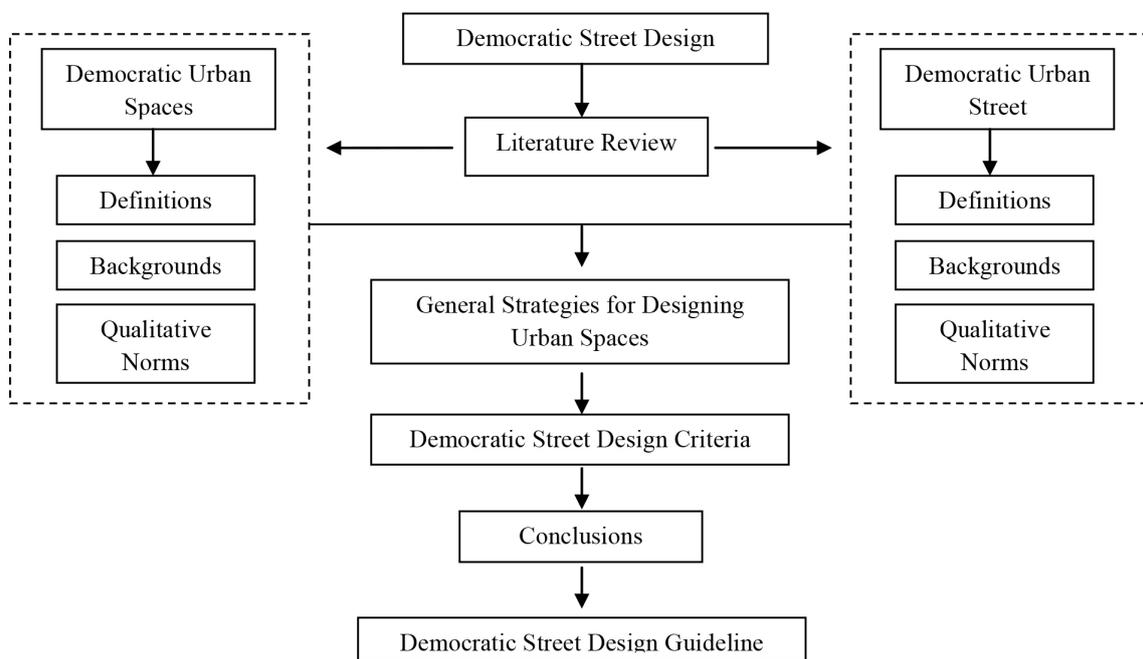


Fig. 1: The article structure

LITERATURE REVIEW

The science of urban design has risen from the point in which planning and logic oriented urbanism gave priority to improving the quality of life, living environment, and providing human freedoms. Therefore, this research is based on a human oriented science framework which pays more attention to citizen as a wise creature. The literature review framework of this research emphasises on the emergence of urban design and is considered as a strength point of this research.

By glancing at the ideas of urban designers during

decades about urban spaces and structures, necessities, elements, criteria and its suitable formation norms, in most ideas we can see that attention to human and its related freedoms is considerable in most ideas. As an example, “Haten & Hunter” in “Sustainable city” (1994) declare “democracy” as one of the urban design qualities in a sustainable city (Golkar, 2001, p.47). In addition, “Francis Tibbalds” (1992) in his book “Citizen-oriented Urbanism” considers freedom and comfort of citizens as the main components of upgrading public spaces and urban environments (Tibbalds, 2004).

In the book “Responsive Environments” written



by “Bently et al.” responsive environments are defined as “human built environments which should provide a democratic atmosphere through improving possible amenities and opportunities to citizens” (Bently, et al., 2006, p.4).

Regarding the subject of this research (democratic urban streets) the only existing literature was a masters thesis in landscape architecture, entitled “Improving the Pedestrians Experience in SOHO, NYC”. The term “Democratic Streets” was surveyed in this thesis, which ends in a case study design, based on democratic streets design principles (Zhang, 2007).

Democratic Urban Space

What is considered as democratic urban space is a space containing a complex of various environmental and citizen oriented qualities, and a space that acts as a suitable context, which provides social vitality in urban society. Basically, a democratic urban space can be defined as below:

A democratic urban space is a space which provides the possibility of utilizing free movement and access to the space for all. This space also provides environmental comfort and equal distribution of urban facilities. In addition, this space promotes citizens to participate and utilize the space and provide justice in a frame of a special order considering feedbacks (Behzadfar, Kordestani, 2009, p.40). This would essentially remove some of the authority of the designer as author, the city as owner, and the city’s spatial planner as decision maker. Such design would represent a departure from established practices (Ruskeepaa, 2011).

Design Qualitative Norms

Enriching democratic urban spaces based on the mentioned definition consists of principles which provide a theoretical framework for such spaces. These principles, as qualitative norms for designing democratic urban spaces, are categorized into 12 principles (Behzadfar, Kordestani, 2009, p.40).

Citizens Utilization

An urban space that has the ability to provide opportunity for all citizens, should enjoy certain attributes. On the one hand, this space should be able to offer a verity of activities to users, and on the other, it should be able to adapt itself to the needs of different groups. Citizens who use urban spaces are mostly from different social groups with various tastes and needs. For instance, women, the elderly, children and handicapped as sensitive groups of citizens, are in need of specific facilities in cities, which

should be provided in urban spaces to be utilized by them. This main norm can be derived in 3 sub-norms:

- “mix of uses”,
- “compatibility of uses” and
- “adaptability to user needs”.

Freedom of Movement

Based on Sir Colin Buchanan’s statements, the main sign of a civilized environment is the ability of the environment to provide the opportunity of complete freedom in movement and sightseeing for citizens (Tibbalds, 2004, p.75). Therefore, because of the importance of this issue and its effect in the creation of democratic urban spaces, freedom in movement is taken into account as one of the main norms of designing such spaces. This main norm consists of two sub norms “freedom and comfort of pedestrian movement” and “correct movement of vehicles in urban spaces.”

Spatial Alternatives

Delivering various alternatives means, the space has got the capability not only to propose itself via one specific use, but also to give the opportunity of choosing through reality and changes in its function. Furthermore, to choose various alternatives of a space, it is not sufficient to just represent it, but adequate visibility should be present to offer alternatives to users. Therefore two sub norms are identified as “the capability of change and flexibility” and “visibility”.

Accessibility

It can be concluded, only those spaces which are more accessible have the ability to provide opportunities for users. Therefore, the extent to which users enjoy the choice of movement from from one place to another, is a key element for assessing the efficiency of an environment (Bently and others, 2006, p.15). This element is named “easy accessibility for everyone” which is considered as the sub norm of accessibility.

Participation

Public participation in modern society and citizenship perception, both have got positive effects on people and local governments such as:

- improving citizen’s abilities,
- improving the sense of participation among people and governments,
- solving urban problems through public participation, and
- improving urban identity and sense of belonging in urban society (Nejati Hoseini, 2001, p.14).



This cooperation is considered in two levels of “creation” and “conservation.” Participation in creating urban spaces provides a more user-oriented environment and participation in conservation empowers and improves the identity and the sense of environmental conservation among citizens. Therefore spaces will be created in which people live in comfort and as a result of which these spaces will be more stable. In this relation there are two sub norms:

1. “Citizens trust to plan managers.”
2. “Presence of citizens in the planning and design processes.”

Citizens interaction

The opportunity of visiting and doing daily activities in public spaces of a city or a residential region, gives the ability of being among others to be observed, heard and experiencing people behaviours in various situations. Simple conversations, eye contacts and listening can be considered in relation to other ways of connection to complicated emotional interactions (Gel, 2008, p.9). Therefore, this norm can be subdivided into three sub norms. These sub norms are:

- “the ability to stand and contemplate”,
- “the ability of being observed and listened”,
- “the ability to speak in urban spaces”.

Environmental Characteristics

The main issue in designing democratic urban spaces is “identity”. In fact this norm covers identical topics in relation to “recognizing shape of urban spaces” and “personal and public memories”. Therefore “identity” and “memory” are considered as sub norms in this case.

Proper Human Scale

Urban environment are built for people, not vehicles, trucks or huge building and projects. Whereas this criterion is not observable in most cities, a comfortable human environment is designed for pedestrian uses, not high speed vehicles (Tebaldi, 2004, p.63). Therefore, a suitable human scale is one of the most important norms in designing democratic urban spaces, which is composed of: “spatial restrictions”, “human scale” and “special contrast” as its three main sub norms.

Public and Private Territory

All living creatures claim some territory for themselves based on their natural instinct, in order to defend themselves from others. “Heidegger” believes that the main component of a territory is its “private aspect” and “being defensible”. He believes that all

animals are surrounded by erratic blobs to provide spaces for protection against other animals.

“Edward T Hall” who was influenced by Heidegger, published “Hidden Dimensions” and he defines intimate, personal, social and public distances for humans in this book. He emphasized that senses among people in a specific time, define the way of using distances and each distance is defined as a spatial territory (Bahraini & Tajbakhsh, 1999, p.31). Defining mentioned territories is considered as a norm in designing democratic spaces, which has three sub norms. These sub norms are: “specific spaces for privacy”, “specific spatial hierarchy” and “privacy”.

Environmental Tranquillity

This norm includes all considerations regarding providing comfort for users. Therefore, the following sub norms are recognized in order to achieve this norm:

“vitality”, “environmental sustainability”, “climatic comfort”, “security” and “safety”.

Facilities Distribution

The impact of this norm in urban spaces is understandable in some specific cases. For instance, east-west or south-north streets crossing the heart of cities as urban spaces, include different facilities in different parts. Also river banks and beaches are the same. Therefore the balanced distribution of facilities and services in designing such spaces is the main focus of this norm.

Urban Management

Urban management refers to the act of organizing elements and resources to respond to the urban inhabitants’ needs properly. Based on the urban open systems, urban management not only considers the physical part of the city but it also includes urban lands and housing, social infrastructures, economical development and environmental issues (Safaei, 2004, p.319). Generally, reaching this norm needs other norms as preconditions to lead the system to an efficient urban management. Norms such as, “wide point of view”, “goals follow up”, “sense of responsibility” are some of the main sub norms to reach an efficient urban management.

Democratic Urban Streets

Alan Jacobs in her recent book “Boulevard” states that a proper urban street should respond to many requests such as vitality, dynamicity, safety, public transportation, open spaces and delightful atmosphere, which are vital components for an urban life. Based on the previous



expressions “democratic streets” can be considered as complete and Proper Streets. Therefore, consideration of the above mentioned criteria is necessary for developing and designing democratic streets. In addition, general points regarding streets and general design guidelines will be illustrated and eventually “the concept and definition of a democratic street”, design criteria, “organizing democratic streets” and “special design strategies” will be illustrated based on the basic mentioned issues.

Street Definition

Streets as physical phenomena are the simplest components of urban elements which harmonize both surrounding buildings and society (Behzadfar & Ghorbanian, 2008, p.17). Streets are considered as one of the most important of urban spaces. From the functionalists’ point of view, a street is a connecting space which guides, divides and empowers the urban structure. Those who pay more attention to environmental perception (Lynch, 1960) consider access as the most important factor in the mental mapping of the people. Urban sociologists also consider open spaces in cities as the main vital component of urban dynamicity (Aminzadeh & Daeinejad, 2002, p.51). Therefore, the way considering street is one of the main nodes which there are many differences thought (Lang, 2007). In addition some of the main definitions of streets are:

- Streets are result of the decentralized housing settlements and are considered as a public place for citizens. Streets are a part of a network and rarely are considered as an independent space (Karier, 2004).
- Street is an urban place or space which is mostly used for access and traffic (Marshal, 2005, p.293).
- Street as a vital and dynamic space is the most important interaction space in city by means of which a city is known. Therefore, streets play more important role than only a traffic rout (Grouter, 1996).
- Street is not only a connection place among urban spaces and activities but also a symbol of all cities. Therefore, it is expected that they have different physical appearance in different cultures in different cultures. (Cowan, 2005, p.433).
- Streets are the main frame, body and structures of cities. In other words, one of the main components of urban form, is the city network structure. It is also clear that each road has got its own characteristics and priorities. Therefore, urban identity and form is firstly recognized through its main network structure. In fact, these are public urban spaces which provide proper connectivity all over districts and activities in a city like human vessels do (Bahraini, 2004, p.6).

Generally, street as the most important urban space has got a clear presence in all states. This component of a city also has got a valuable formal importance as the most sustainable part of urban morphology. In addition, regarding social issues and presence of citizens provide a considerable potential.

Street Background

By taking an overall view at the history and background of streets, an evolution in points of view is observable. In Rome and Greece, which are the first era of developing the concept of street, a rigid physical attention to streets is evident. Length, width, direction and adornments of streets are the most important considerations.

In religious Middle Ages, the concept of street is forgotten and it is only a tool of access to residential units and religious issues. In these cities, narrowness of streets limited establishing public and private gardens and in most cases the narrow alleys were covered by balconies and arcs. These balconies were part of building that had been built against regulated building codes (Geisst, 1992).

The Renaissance showed a return to Classical ideas and the importance of axes, in addition to the role of pedestrian and vehicle traffic. Moreover, the concept of street is considered as an architectural integrity. Whereas it is observable from Alberti ideas to consider streets as an integration of each building units- which are observable better from arcs-, during the renaissance era, the harmony in building facades turned in to an ordinary issue (Mouris, 2005).

The spatial order of streets began the Industrial Revolution. During this period, pedestrians’ growth and importance speeded up and the naming of streets began (Shakibamanesh & Ghorbanian, 2008). Following Modernism, based on the rigid functional and formal point of view, the role of streets turned into an ordered traffic factory. By paying precise attention to modern plans, the cities were built and organized based on the architectural projects from one side and traffic engineering and road constrictions from the other side. All these accumulated factors have caused a high dependency on vehicles and the destruction of city centre fabrics and environment (Goli, 2008, p.78).

The contemporary era is the period during which the concept of quality entered urban space design. This is the result of the residents needs to higher quality and better urban conditions. The first action projects regarding providing green spaces and facilitating city centres took place in this era. The first pedestrian axis called “Rowan” was constructed in France in 1965 parallel to the first traffic plan. This 300 metre length access faced huge



protests. But the success of this project occurred after 2 years all over France. The 70s was a fortunate decade in providing high quality urban spaces in France along traffic plans (Pier Moore & others, 1994).

Urban Streets

Among various urban accesses, designing urban streets needs the highest sensitivity, because these are spaces in which social interactions and urban dynamicity reach their qualitative and quantitative maximums. In addition, streets contains inhabitants' memories as a way of social life (Pakzad, 2005).

Urban streets are full of happenings which absorb citizen presence in different hours. Going to the main activity centres, shopping malls, watching shops and retails, walking around, observing others and being observed, make urban streets as a congested and dense space of various public and private happenings for all inhabitants. These streets play the role of an unpredictable space that provides excitement and alacrity for visitors (Pakzad, 2005).

Subjective Expectation from Urban Streets

Based on the mentioned ideas, each street is considered as the main public life root structure and it should save its vitality. Therefore, we should try permanently to provide various events in various hours. Therefore, flexibility is taken into account as the main characteristics. This space must utilize all facilities to create a memorable space for citizens, for their presence, supervision and conservation. In addition because all kinds of users (elderly, children, and disabled people, etc...) are present in this space; therefore, providing safety is one of the most important issues (Pakzad, 2005, p.139).

ANALYSIS

Based on the aforementioned literatures, the criteria, strategies and guidelines of a democratic street should be extracted. The main method of analysis for this process is based on the systematic categorization of different theories in two fields of urban street design based on democracy for which street design guidelines are concluded.

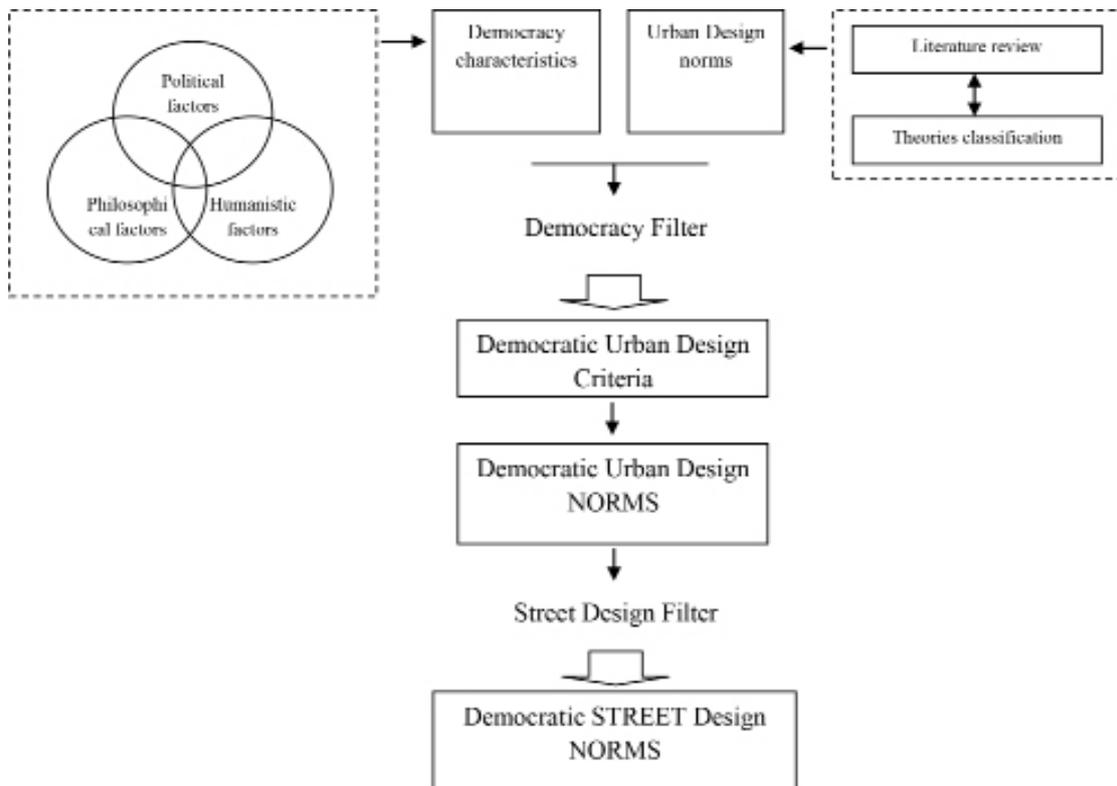


Fig. 2: Analysis Process



Democratic Streets Design Criteria

Democratic space refers to open, secure and well-developed public urban spaces for all urban residents where people should be able to mix with various groups and experience the benefits of urban environments. Again, the local authority has a major role to play in promoting and supporting the development of democratic urban spaces throughout the City (Rabie, 2010).

Recently, the idea of “democratic streets” which is based on many projects and research activities has risen. It is believed that a good street works democratically (Moudon, 1987). Democratic streets are kinds of streets which have specific meaning to the inhabitants, provide adequate accessibility for users, and encourage users to participate and are conserved by users (Zhang, 2007, p.9).

One of the most important aspects of democratic street is its reflexivity regarding its surrounded neighbourhood background. Also, a good democratic street reflects social

justice, economic health, vitality, pedestrian facilities and livability for inhabitants in addition to providing the spatial balance for other users such as, vehicles, pedestrians and bicycles (Zhang, 2007, p. 18).

Generally a democratic street can be defined as below:

a “democratic street” is a street which provides accessibility for both pedestrians and vehicles together; provides the possibility of 24 hour presence of users; is flexible and adaptable to conversational needs of users during different time periods; provides the sense of safety and security; respects architectural identities and patterns in new constructions; utilizes green and natural elements for spatial vibrancy and diversity in design and encourages users to participate in conservation and maintenance. Based on the mentioned urban design norms and theories regarding democracy, the main street design criteria are excluded. These norms are the basic of the forthcoming guideline.

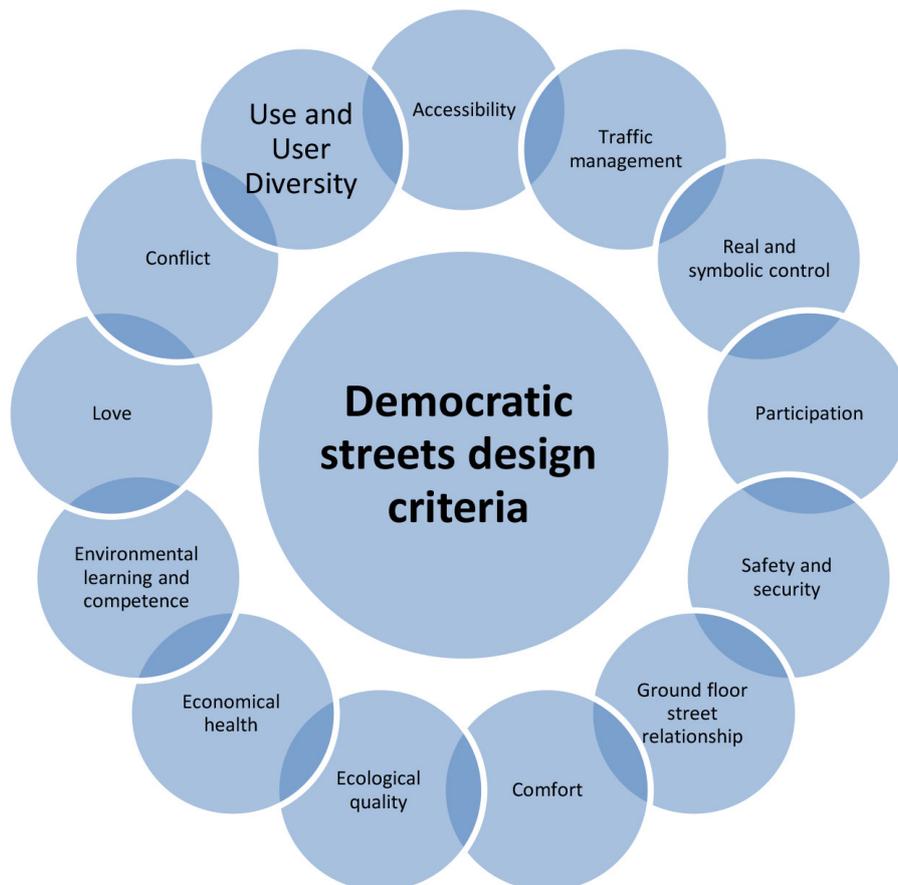


Fig. 3. Democratic Street Design Criteria



- **Use and user diversity:** a healthy street shall balance different user groups and activities.

- **Accessibility:** the space shall be “open” which means it must be publicly accessible.

- **Participation (modification):** the street shall be designed and managed with direct participation of users the street users. Streets shall also be able to be modified by their users to fit the changing activities and needs of the community.

- **Real and symbolic control:** a democratically successful street shall let people feel a sense of control over the street itself. Streets work democratically when residents have the feeling that they are the hosts of the street in a neighbourhood.

- **Traffic management:** a democratic street shall provide the function of traffic management. Also, ongoing traffic management is required in order to bring other democratic elements into the street such as use, access and participation and make those elements to be effective.

- **Safety and security:** the street shall give the users a feeling of safety. Peoples’ concern about traffic is only part of their need to be safe on a street. A poorly understood dimension of city life is the effect of crime on street. For example, one of the major barriers to street use, especially for women, is the fear of being assaulted or robbed. Another example is that drug sales commonly take place on streets and create a sense of insecurity for pedestrians. Often there is a gap between real and perceived crime that restricts a person’s use of the public environment.

- **Ground floor street relationship:** a democratic street shall have a social connection that links ground floor building uses to the adjacent street space. A healthy relationship between private or semi-public life inside the building and the public world outside is crucial to a public street.

- **Comfort:** the street shall be comfortable. A few examples given by Moudon include adequate shading from hot summer sun and extreme temperatures, solar access during cold days, adequate and comfortable seating space. Besides, the design of a comfortable democratic street, one should consider the following aspects: visual quality, physical comfort, and lighting and information board for street life.

- **Ecological quality:** a democratic street shall be environmentally healthy. Air and noise quality affect one’s attachment to a street and should be carefully monitored and controlled through traffic management. Different patterns, colours, and textures will give pedestrians different experiences while they are walking down streets. If necessary, trees, plants and wildlife

should be reintroduced to the street environment to help create greater user comfort and satisfaction.

- **Environmental learning and competence:** A democratic street shall be a place where we learn to deal more competently with our everyday environment.

- **Love:** a democratic street, most importantly, shall be loved. It is hard to measure how the street is loved although meaning and memory as indicators are signs that could be relied on. As mirrors of the history of a place, a democratic street provides a connection between people and previous street use and reveals the large social and political world in which the street exists.

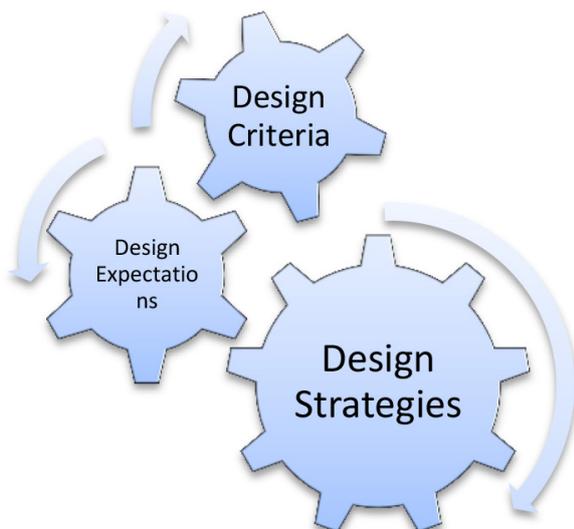
- **Conflict:** By the definition of a democratic street, it requires greater user participation and negotiation which leads to conflicts. Designers can play a significant role in translating the everyday experience and values of people into concrete plans. As a result of this process, streets will become stages for more diverse urban life and activity.



Extracting Strategies

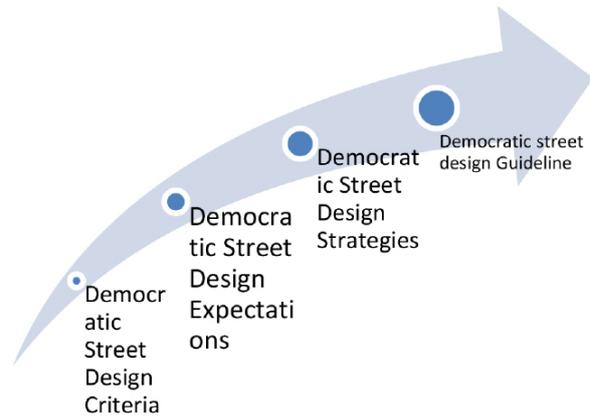
The next step in this procedure is to extract strategies based on the mentioned criteria and subjective expectations of democratic streets. Therefore, the main design strategies are explained below:

- proposing proper location of building in street sides;
- providing diversity in form of street elements;
- providing diverse land uses and activities;
- providing proper physical harmony (the height of buildings to streets width ration);
- providing balanced distinction of pedestrian and vehicles;
- providing adequate pedestrian way width;
- providing openings and places for sitting;
- easing bicycle movement;
- using green elements such as trees, shrubs & ...;
- providing transparent facades (in ground floor);
- defining the beginning and end of streets;
- providing diversity and complicity in building façade material;
- providing contiguous facades;
- organizing urban billboards as attractive visual elements;
- providing proper pavements for pedestrian and vehicle;
- providing suitable accesses;
- providing suitable spaces for car parking;
- suitable preparation for conservation and repairing of existing elements.



CONCLUSION AND DESIGN GUIDELINES

Based on the presented definitions of urban street and democratic urban street, design guidelines and strategies, democratic urban street criteria and special strategies for designing a democratic street are concluded below:



As a conclusion, the author's review of the article draws the conclusion that design itself should be an open and flexible process. When spatial planning aims to create active and engageable urban spaces, what is placed in site must be, instead of a finished scheme, an invitation to residents for design continuation. Implementation should be viewed as a first step rather than the last. In reflection of this, design's qualities must be open and fluctuating, with enough vagueness in spatial definition, regulation and program to leave freedom for the imagination, presence and authorship of the user. This would indeed challenge current structures in the design and planning professions, and would thus warrant more in-depth investigation than what is provided for in this study. The author's revalidation of the article leaves direction and spirit for further exploration and development of alternative features in the design of urban public space; for the promise of the terrain vague is worth pursuit.



Table1. Democratic street design strategies based on democratic urban spaces design norms and sub norms

Democratic Urban Spaces Norms	Sub-norms	Democratic Street Design Strategies
Possibility of using spaces for all	Mixed using	- Providing diversity and distinction of uses and activities
	Compatibility of uses	- Proper compilation of uses and connected urban spaces - Providing distinct vehicle and pedestrian spaces
Special freedom in movement	Adaptation with the user	- Repairing, substituting and renewing of street elements during the time
	Free movement of pedestrian and bicycle	- Easing bicycle movement - Eliminating barricades in pedestrian path
Delivering various spatial alternatives to users	Proper movement of vehicles in urban spaces	- Physical management of vehicles traffic
	The capability of change and flexibility	- Designing multi purposes spaces and places with land use flexibility
Accessibility for all	Visibility	- Defining the beginning and end of street - Locating marker points elements through more visibility of path
	Penetrance	- Providing adequate accesses - Providing emergency accesses to special places
Public participation in creating and utilizing places	Residents trust in design responsibilities	- Informing residents regarding previous and present designs - Providing mechanism for a face to face interactions among people and design responsibilities
	Presence of residents in design process	- Participation of residents in design, repairing and conserving of street elements
Capability of the users interaction in space	Walkability	- Dedication of adequate pedestrian path width - Proper pavements in pedestrian ways
	Hesitation ability	- Providing open spaces for seats - Proper urban facilities/ furniture design
	Observing	- Providing transparent facades (specially in ground floor) - Controlling noise pollution
	Chatting	- Proper urban facilities/ furniture design
Environment meaning	Identity	- Preserving special and memorial places - Providing necessary facilities for national and religious ceremonies
	Memory	- Proper streets naming
Proper human scale	Spatial enclosure	- Providing proper physical harmony (ratio of building height to street width)
	Human scale	
Defined public and private territories	Spatial contrast	- Providing diversity in form of street elements
	Defined spaces regarding privacy	- Connectivity in facades and refusing vacant spaces - Preserving entrance sanctum of local accesses and buildings
	Privacy	
Environmental tranquillity and comfort	Vitality	- Providing diversity and complicacy in building facades - Organizing billboards as attractive visual elements - Proper utilization of green spaces and water
	Environmental sustainability	- Controlling air pollution - Utilizing new technologies in new energy sources
	Climatic comfort	- Providing shadow in pedestrian ways - Using water in street space
	Safety	- Proper lighting (pedestrian and vehicle way) - Providing public supervision on street space
Proper spatial distribution of urban facilities	Security	- Protecting pedestrians against accidents with vehicles
	Adequate supplying of green spaces and services per capita	- Proper location of essential services along the street
Efficient urban management	Participation in urban management	- Utilizing residents participation in street management - Defining street future vision and helping residents and users



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