Pedestrian Areas and Sustainable Development

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***Abstract*—**Transportation is one of the most fundamental challenges of urban development in contemporary world. On the other hand, sustainable urban development has received tremendous public attention in the last few years. This trend in addition to other factors such as energy cost, environmental concerns, traffic congestion and the feeling of lack of belonging have contributed to the development of pedestrian areas. The purpose of this paper is to study the role of walkable streets in sustainable development of cities. Accordingly, a documentary research through valid sources has been utilized to substantiate this study. The findings demonstrate that walking can lead to sustainable urban development from physical, social, environmental, cultural, economic and political aspects. Also, pedestrian areas –which are the main context of walking- act as focal points of development in cities and have a great effect on modifying and stimulating of their adjacent urban spaces.

***Keywords*—**Pedestrian area, Sustainable urban development, Walking, Woonerf

I. Introduction

WALKING is the simplest way of movement and is the only mode of transportation that is independent of any tool or device: "Pedestrian movement is the most natural, ancient and necessary form of human disposition in the environment" [1]. Pedestrian movement is among the few human activities that has kept its primary form despite the development of different kinds of technological, communications and transportation tools. In the meantime, all city-travels via any vehicle whatsoever begin with and end with walking. Meanwhile, walking is accepted as the best type of human interaction with the urban environment: "What makes pedestrians distinctive is that they are open and slow. These qualities enable walkers to truly experience and interact with their urban environment. It is walking that knits the structures, spaces and people of a city together" [2].

Prior to late 19th century, walking was considered as the dominant mode of transportation in cities. However, after the industrial revolution and the extensive emergence of the automobile, the structure of cities was confronted by major changes and vehicle movement became dominant. In the late 1960s with the negative effects of automobile-traffic appearing, first in European cities and then in the US, there was a change in the approach to the development of pedestrian-orientated urban space. Therefore at the beginning of the new millennium, the pioneer cities turned to legislate a *pedestrian master plan* leading to the creation of a full pedestrian network, which is an important indicator of urban sustainable development. This paper is an attempt to survey the importance of walking and pedestrian streets in contemporary cities. It also aims at detecting the role of pedestrian areas in urban sustainable development.

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II. Pedestrian Areas: Definitions and their History in Cities

Before the industrial revolution, walking was the main mode of transportation in cities and there were specific restrictions for vehicle traffic such as daily obstructions of taking heavy carts to the town center in ancient Rome, where the inner city arteries were both movement and social spaces. However, especially after the emergence of the automobile, urban structure changed fundamentally. Movements were separated spatially and functionally in the city. "Before that… movement was always inextricably linked with -and indeed usually generated- other activities, both adjacent and within the same external space" [3]. The first practice for separation of those walking and riding in the modern era was done by Olmsted, an American architect and urban planner, in designing Central Park in New York in 1858 where he constructed a stone bridge for pedestrians over a vehicle road [4].

In the 20th century, some initial practices began for closing city center streets to traffic. Essen in Germany was the first city which turned one street into pedestrian during the thirties. "In the forties and fifties, the idea of traffic-free town center shopping streets was conceived but it was not until the sixties that pedestrian areas came into their own" [5]. In the 1960s and 1970s many streets used for cars in European cities were converted to be used by pedestrians. In the United States, walkable streets which were named Malls developed. These streets were used for strolling and for shopping.

In the eighties, the idea of traffic calming or Woonerf was promoted instead of complete automobile elimination. In this concept, in residential areas, motorists and pedestrians share the street. In a way, it can be termed as a residential yard. In a woonerf concept street, people on bikes and on foot have access to the street, not just the sidewalk. This concept was British in origin but a Dutchman named Niek De Boer made it become a reality. "Motorists would feel as if they were driving in a garden setting, forcing drivers to consider other road users" [6]. This approach fit into a denser development context like in most European cities. For example, the concept (which is known as Home Zone in the UK) is regarded as being legal recently. "The focus is on creating a shared space

where it is possible to drive and park, but also where both children can play and adults are more free to socialize" [7].

In 1990s, street reclaiming was introduced as a conceptual step beyond the traffic calming concept: this refers to the process of recapturing social space. This idea was focused on decreasing vehicles movement in residential areas and typically involved building speed bumps and chicanes. "The more space a city devotes to movement, the more the exchange space becomes diluted and scattered. The more diluted and scattered the exchange opportunities, the more the city begins to lose the very thing that makes a city: a concentration of exchange opportunities" [8]. Finally, from the 1990s, this has been emphasized on overall street networks for pedestrians and many cities have approved the Pedestrian Master Plan for developing pedestrian areas.

The street has always been part of the movement structure in a city. Also, as Lynch expresses, paths (streets) are the most important elements of contents of the city image: "the paths, the network of habitual or potential lines of movement through the urban complex, are the most potent means by which the whole can be ordered [9]. However, in recent trends in urban design it is considered as a link, a place and one of the most important urban public spaces. So, all the ingredients of good place making can be applied for increasing the vitality of streets. "Place making is not just design, it is a strategic approach to a collaborative system of relationships, triple top line thinking that integrates the social, environmental and the economic" [10]. It is usually referred to as the five Ps; Planet, Place, Product, Program and People all of which should be considered in the process of good place making. Allan Jacobs has identified requirements to transform streets into better public realms by studying great streets in detail. "Certain physical qualities are required for a great street. All are required, not one or two: accessibility, bringing people together, publicness, livability, safety, comfort, participation, and responsibility" [11].

In recent years, the role of streets as third places that "host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work" [12] has been increased much more than before. Also, it is emphasized on creating an attractive environment in streets for walking and cycling. UK standards recommend "Applying the five Cs; Comfortable, Connected, Conspicuous, Convivial and Convenient to all streets as standard can help to improve their performance as walking and cycling routes" [13].

Streets have multiple functions. They allow motor vehicles to access buildings, provide space for parking and loading, develop places for walking and provide a few open spaces for residents, shop owners, employees and visitors to socialize, interact and relax. "Outdoor activities in public spaces can be divided into three categories, each of which places very different demands on the physical environment: necessary activities, optional activities and social activities" [14]. As Jan Gehl argues that in higher quality public spaces (streets), a wide range of optional (social) activities such as taking a walk to get a breath of fresh air, greeting, conversations, passive contacts, etc. tend to occur.

Based on primary users, there are different typologies of streets which govern the design. One important study recommended four basic types of street: through, shared, pedestrian and busway (Table 1); "Through streets prioritize vehicles and pedestrians. Shared streets are similar to the woonerf concept where pedestrians are comfortable walking and vehicles are permitted. Pedestrian Streets would be reserved largely for non-motorized traffic" [15].

TABLE I
STREET TYPOLOGY BASED ON PRIMARY USERS [15]

Street Type	Mode				
	DART	Motor Vehicles	Vehicle Parking	Bicycles	Pedestrians
BusWay	***			*	**
Through		**	*	*	**
Shared		*	*	**	**
Pedestrian				**	***

Key: *- allowed mode ** - secondary mode *** - priority mode
Parking is dependent on width of street

The underlying concept of the shared street system is one of integration, with an emphasis on the community and the residential user. Such conditions are actually much safer for the pedestrian than in common residential street layouts [6]. In recent years, street design is emphasizing the attempt "to get streets working as part of a connected network. This is beginning to happen within neighbourhoods. The challenge now is to connect beyond the neighbourhood" [16]. Also, "Streets that connect to other streets encourage movement and activity and short linked-up streets can make places more accessible and encourage walking and cycling" [17].

Walkability is indicative of the general condition of walking in an area and is observed on different scales of site, street, neighborhood and city. "Walkability takes into account the quality of pedestrian facilities, roadway conditions, land use patterns, community support, security and comfort for walking" [18]. Today, the unified street system is a global term that encompasses the basic ideas represented by the original woonerf [19]. Pedestrian streets are urban public spaces with the highest priority for walkers. They are known by different names in diverse countries; for example car-free zones, pedestrian zones, auto-free zones, traffic-free zones, auto-restricted zones, pedestrian areas, pedestrian malls and walkable streets. Some definitions for pedestrian streets are the following:

-Pedestrian mall is a street lined with storefronts and closed off to most automobile traffic. Emergency vehicles have access at all times and delivery vehicles are restricted to either limited delivery hours or entrances on the back streets [20].

-Pedestrian mall means one or more streets or portions thereof, on which vehicular traffic is, or is to be, restricted in whole or in part and which is, or is to be, used exclusively or primarily for pedestrian travel [21].

-Pedestrian streets are paths with the highest social role which walkers dominate. These streets are a tool for public activities related to urban economic, environmental quality and social health [22].

In brief, pedestrian streets are public places with full-time or part-time restrictions on motor vehicle use and are a major priority for people on foot, riding bikes and pushing carts. While there are different goals for turning a street into a pedestrian area such as accessibility, traffic problems, fixing and strengthening some land uses, economic issues and… today, it is emphasized that the social aspects of pedestrian streets are the most important functions of these urban spaces. "Containing both social space and movement space, walkable streets connect buildings and activities across space" [23].

In fact, turning some streets into pedestrian areas has been a reaction of communities to the domination of public spaces by the automobile. This is why LeoPort, who styled himself the minister for pedestrians, always insisted on saying positively that a pedestrian street is opened to pedestrians, not closed to traffic [24]. In other words, developing pedestrianisation is a way to increasing accessibility of citizens and so it can maximize transportation system performance.

III. General Concept and Main Purposes of Sustainable Development

The record of considering to the concept of sustainability in the world in its modern meaning refers to the three decades ago and ends of 1970. "For the first time, the word of sustainability used in the *development restrictions* book in 1972. Upon report of world committee on environment and development under title of our common future in 1987, literature domain of this word was extended" [25]. Finally, in the earth summit conference of united nations organization in 1992 in Rio de Janeiro, Brazil, the topic of sustainable development was pervaded all over the world. Since that time, the importance of this subject has been increased day to day and the necessity of coordinating any development plans with it emphasized more than ever.

It has been presented different definitions for the term of sustainable development. One of the most perfect and reliable terms of which have been expressed by United Nations in 1987 is: "Development which meets the needs of present without compromising the ability of future generation to meet their own needs" [26]. In addition, other related important definitions are as follows:

- Sustainable development including concurrent pursuit of economic prosperity, environmental quality and social justice. The societies seeking sustainability require to pursuing the changes of human and social values constantly over time. Modern concepts such as responsible consumerism, environmental rights and intergenerational justice require to be pursued [27].

- Sustainable Development is positive change which does not undermine the environment or social systems on which we depend. It requires a coordinated approach to planning and policy making that involves public participation. Its success depends upon widespread understanding of the critical relationship between people and their environment and the will to make to necessary changes [28].

- The sustainability may be defined as the men responsibility for continuing a qualitative and persistent life for present and future generations. In other words, the people are living comfort in the world and in a clean and healthy and lovely environment [29].

Considering the above descriptions, it is specified that the concept of sustainable development is not one-dimensional rather comprehensive and multidimensional, and has a special attention to the social, economical and cultural contexts as well as environmental and physical aspects. Thus, perfect execution of sustainable development patterns requires essential changes in the national and international policies. Generally, sustainable development may be deemed simply a kind of development that doesn't destroy the environment and existing natural capital and doesn't decrease the quality of men life in the future. Furthermore, it seems that any efforts for defining the sustainable development shall be flexible and considers the triple cases of "the concept of relationship between society, economics and environment, justice for utilizing the resources and opportunities and living with current earth limitations" [25].

Also, agenda 21 which is considered as important evidence in sustainable development, was approved in general summit of United Nations in 1992. "Agenda 21 is an executive plan of sustainable development for 21st century and the resolution of international conference regarding environment and development in Rio de Janeiro. This statement has requested all local authorities to apply the principles of sustainable development in the policy, planning and decision making and introduce a process of providing a local agenda 21 (LA21)" [30]. Also, at this conference, several conventions such as climate change convention, biodiversity convention and the principles regarding forests were compiled. "in Agenda 21, considering this object that the integrated and comprehensive nature of earth is our house, concepts such as foresight, public participation and justice were presented. This statement contained at begins 27 principles that were increased up to 40 principles in subsequent conferences" [31].

Furthermore, although for sustainable development different purposes in compliance with different aspects may be considered but cases such as "supplying essential requirements of men, both today and in the future, upgrading the life level and its improvement for all, protection and administration of bio-systems (ecosystems) for having safer future, attention to the creatures' habitats and provision of intellectual and technological tools and facilities" [25] are mentioned as major purposes of sustainable development.

Considering the discussed subjects in this chapter in relation to the concept and objectives of sustainable development and also a view on universal increasing emphasizes concerning the necessity of centrality of this subject in all social, cultural, economical, civil, political, ecological and environmental etc. aspects, it seems that the

main content and nature of this context is not something except returning to the quality of authentic human life and natural environment that was current particularly prior to industrial revolution and domination of machines on the physical areas of cities. A topic which doesn't mean however non-utilizing the technologies and human material advancements but seeks to constitute interaction and balance between these two phenomena *life quality with an human and natural approach* and *achievements of information and communications age* in order to the next generation benefit thereof.

IV. Sustainable urban development and its different dimensions

Although the principles and objectives of sustainable development are stabilized but the methods for achieving them in various scales are different to each other. On the other hand, it is obvious that whatever the physical vastness of an area get further, the extent of its effectiveness on the human society, geographical resources and elements around which will increase equally. Therefore, design and organization of cities as the greatest and most complex human artificial phenomena towards sustainability principles have great importance and may affect other downstream levels.

Following the actions of United Nations for organizing and promoting the sustainability subject over the world, this organization has held a conference on the level of leaders in Johannesburg of South Africa, in 2002 and at the beginning of 3rd millennium, in order to the renewal of countries' political commitments for achieving the sustainable development, in addition to investigate their ten-years proceed in relation to the execution of agenda 21's contents and the methods for further executing this statement. In this relation, various reports were published regarding different topics. Some of the most important approvals and achievements of this summit in the urban areas that at least in a ten-years period and until 2012, the world countries were obliged to plan for their execution including:

"Discussing the subject of good govern and its role in the sustainable development, poverty eradication, change of consumption unsustainable patterns, using the clean energies and sustainable transportation, preventing production of waste chemical materials, reducing air pollution, protecting and managing the natural resources as the base of social and economical development particularly considering the water resources, desert eradication, mountains, tourism, biodiversity, forests and agriculture" [32].

For every various levels; city, neighborhood, and building, it has been presented strategies for achieving the sustainable development. In the meantime, executing the sustainability principles thoroughly in the cities which include substructures and very extensive physical, social, economical, cultural and political relationships is very difficult and therefore interaction and coordination of diverse factors seems to be required. However, cases such as "compressed structure, traffic decrease in the streets, reduction of using private vehicle, creating a balanced density in the suburban areas, centralization of civilization in the areas of adequate facilities, mixed land use in neighborhood scale, encouraging to building 4-storeys buildings and attractive and legible constructions" [25] are nominated as the most important considerable strategies toward sustainable design in the city scale.

Applied urban designs so far have resulted frequently in linear changes and unsustainable developments. Therefore, theorists believe that the only actual way for designing the cities with the sustainability goal, is putting the city micro and macro areas in practice concurrently. Key dimensions of sustainable development in the cities have been classified in five general contexts including: "energy, movement, ecology, spatial form, design and development" [33] that have been displayed in Fig. 1. Meanwhile in a greater classification, three key elements may be effective in this context: "every city which be designed specifically for sustainability of artificial and biological area, shall apply three factors of society, resources and skill concurrently as the basis for its strategy" [25].

Although considering to the mentioned subjects is very effective in sustainable urban design, observing these points and notations will not constitute a sustainable city solely and without a holistic planning: "only a comprehensive composition of the policies including financial and legalistic restrictions to the sedan vehicles and regional firmer planning will constitute sustainable cities" [34]. Also, one of the most important elements and units constituter of the city structure is neighborhood, that particularly today it is emphasized to constitute sustainable neighborhood as the most applicable scale which may resulted in the sustainability of the cities. A sustainable neighborhood includes characteristics and elements that should have meanwhile continuous and close communications with each other. These four characteristics are as follows [35]:

- An hierarchy of open space: neighbourhood central square, pocket park with play, the local square, toddlers' greens, canal corridor
- A vibrant mix of uses: mixed working areas, higher density housing and some working, predominantly residential areas
- Integrated transport systems: tram/light rail or main bus route, local bus route, neighbourhood street, local distributor, access road
- Provide good local facilities: shops, primary school, places of worship, community facilities such as pub, creche etc.

Furthermore, different theorists have declared various ideas in relation to the principles of sustainable urban development. According to the reviewing these ideas and despite some differences, common factors such as supervision, resources efficiency, diversity and selection, human requirements, changeability, pollution decrease, centralization, distinction, biological support and self-sufficiency could be nominated as the key indicators in this relation. Consequently, in short

words; every factor which is coordinated with nature and human essence and causes the increase of humans life quality in the cities without reduction of the operation efficiency from available resources by the next generations will be towards urban sustainability.

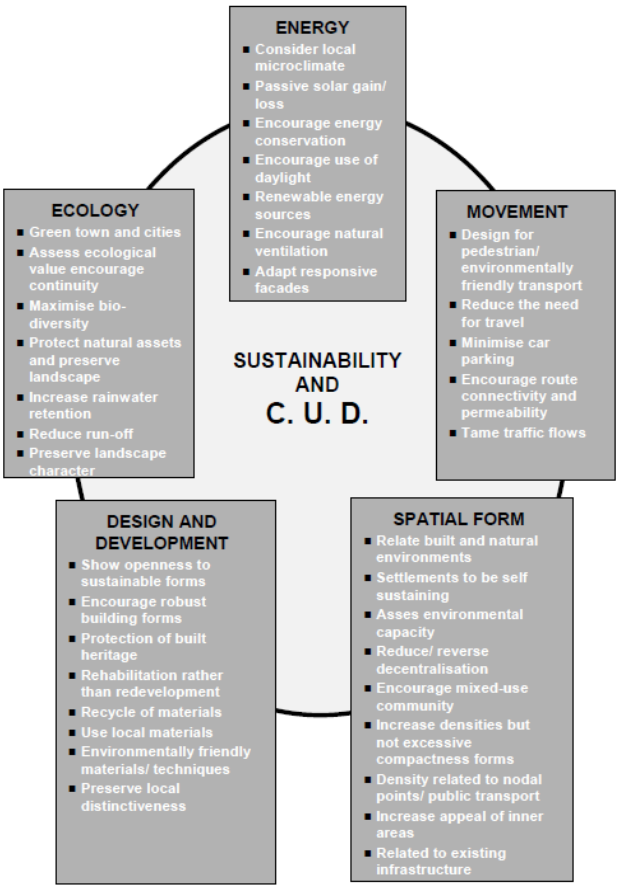

Fig. 1 Sustainability and climatic urban design [33]

V. The Effects of Pedestrian Areas on the Different Dimensions of Sustainable Urban Development

After verification of principles and objectives of sustainable urban development, in this chapter, the role of pedestrian movement as the cleanest and most natural transport mode, as well pedestrian areas which are the most suitable bed for walking in the cities have been verified from different dimensions effective directly and indirectly such as physical and mental health, transportation, environment, social, economical, cultural and political issues for constituting the sustainable urban development, as follows:

A. The Role of Walking in Physical and Mental Health

Walking brought forward many interests towards human physical health due to movement and sport and enjoying the better weather quality. Also, walking provides less stress and anxiety in proportion to the driving for the people. Moreover, an area surrounded with trees or car parking areas increase the safety of pedestrians. In this context, Walk21 conference demonstrated that: “People who live in walkable neighbourhoods walk one hour per week more than those who live in less walkable neighbourhoods. By doing so they meet forty percent of their physical activity target and halve their risk of being overweight. Inactivity is the biggest killer in western societies. Everyone who promotes walking is thus a health professional with a vital message” [36].

As well, walking may apply a great effect for making human calm and psychic health because provides the opportunity of discovering new areas and motivation of sense of curiosity for people. Meanwhile, it is emphasized that the other transportation modes even cycling although leads the men towards special destinations but it is only walking that settles a close and alive relationship with the public areas and through constituting sense of place causes to real recognizing the urban places.

B. Pedestrian Movement as the Factor of Sustainable Transportation

Displacement in the cities is not solely a purpose. The people move for accessing the other people or things. But in the car-oriented cities, the activities incline to the promotion. This force the people to more and more trips for the same level of previous access. The healthiest and most sustainable modes of transport are walking: “The healthiest and most sustainable modes of transport are walking and cycling. Even car drivers become pedestrians to complete a trip, and effective public transport depends on people being able to walk comfortably to stations and stops.” [37]

One of the essential points in sustainable transport is focusing on the access instead of movement. In other words, whatever the possibility of arriving the destination with less trips and less movements are provided, the transport mode will be more sustainable. In the pedestrian-oriented cities against the car-oriented cities that the purpose of them is facilitating the vehicle movement even for further movements, arriving the people to the destination is the main emphasis and consequently the activities instead of promotion incline to the compression.

One of the greatest mistakes of urban directors particularly in the developing countries is the assumption that through widening the streets and allocating them to the roadways, traffic problem will be resolved. Whereas carried out activities specifically in the developed countries indicates this fact that upon increase of pedestrian paths, not only the quality of urban life and satisfaction of the citizens will be increased but also traffic problem will be averted: "if we design the city for vehicles and their traffic, we will confronted the increase of vehicles number and traffic. The first step for designing the streets is dealing with this subject that the vehicles should not be dominant in the streets" [4]. Furthermore, according to the applied studies in Germany and other countries and against the widespread image, constituting pedestrian areas will not only increase the density of vehicles in the adjoining streets but will result in reducing traffic, such as following cases:

“Interestingly enough, evidence from numerous street closures shows that 100% of the traffic does not go to the

adjoining streets. In Copenhagen only 72% of vehicles formerly on Stroget, now a pedestrian mall, reappeared on parallel streets. During peak hours the percentage of cars displaced to parallel streets dropped to 38 %. Another example can be found in Norwich, where only 40% of the traffic from London Street was found in surrounding areas after its closure" [38].

In 1997, Canadian government presented a report to the United Nations commission in which has propounded nine principles as "sustainable transportation principles" including: "right to access, intra- and intergenerational equity, individual and community responsibility, protection of health and safety, education and public participation, integrated planning, conservation of land and other resources, prevention of pollution, economic well-being" [39].

Verifying these principles indicate that walking is interfered in achieving all of them directly or indirectly: pedestrian movement provides direct access to the destination, is the best mode of displacing as regard to causing equality and social justice between all the persons in the society, causes to the health and is the safest and cleanest transportation mode, through simulating the curiosity and involving all visual senses causes the public participation and education and through integrated planning and complete linking the urban pedestrian networks may take actions for rehabilitating some land uses and preventing destruction of natural resources.

Today and specially at the beginning of third millennium, disappointment of people from machine-oriented life and the consequences thereof in the world has distinguished the requirement to the pedestrian transportation and car-free zones. For instance, in Barcelona of Spain, wide streets have been constructed with the priority of pedestrians in proportion to the cars. In Paris, for zones which have been located on the cars traffic road and have been exhausted, improvement plan for these areas has been executed. Thus, "it is forecasted that until the end of 21st century, upon limiting the energy sources, the plan of constructing car-free cities will be transformed to a worldwide subject and leads the cities towards constructing pedestrian neighborhoods" [4].

C. Walking Conserver of Environment

If the most people in the city prefer the walking to the driving, the consumption of fossil fuels will be decreased and versus air quality will be increased and even it is probable that this affair prevents the widening and extending the roads and current riding paths: "Worldwide, motorized transportation is responsible for up to 20 percent of the emissions from human activity that are resulting in climate change" [39].

Moreover, pedestrian streets and malls are causes for making nature beauty, transforming the CO2 to the oxygen and constituting habitat for birds and other animals (one of the main objectives of sustainable development).

D. Pedestrian Movement Causing the Sustainable Social Development

As vulgar expression of the society, walking causes more unofficial repeated meetings between citizens. Pedestrian routes interested by the pedestrians gives further movement to those group of citizens who don't drive or don't have car, and provides more participation and social communications as well more spread as more equality and social justice.

Also, a pedestrian passenger comparing to an automobile, in addition to occupying twenty times less space is able to communicate and interact with the others concurrent to movement. Therefore, outstanding theorist, Jane Jacobs acknowledges every effort towards development of pedestrian spaces in the cities as a factor for making social liveability therein: "Lowly, unpurposeful and random as they may appear, sidewalk contracts are the small change from which a city's wealth of public life may grow" [40].

Fred Kent, director of New York urban planning in the environmental context deems the responsibility of urban planners and designers significant and believes that through policy towards facilitating pedestrian movement, we will see the moreover presence of citizens in the streets and accordingly the prosperity of public areas and increase of social interactions: "if they allocate the most city space to the public areas and presence of the citizens, these areas will get more active" [4].

Furthermore, more social communications resulted arising from constructing pedestrian areas, leaded in decrease of social crimes and abnormalities and moreover increases the social union and joining against society's external intimidator factors. As regards, today, walking has been accepted as an amusement anymore, but as a social activity and human right: "People who use the city are almost invisible in the planning process. We need to acknowledge walking as a human right, as an activity which has dignity and respect" [36].

E. Walking Cause of Sustainable Economical Development

Due to expansion and prosperity of urban pedestrian areas and networks, the holders of service rendering stores and shopping centers undertook automatically and eagerly all or part of physical and environmental quality promotion costs of these public spaces of city. Even sometimes compete with each other in this context. This subject decreases the spending public and governmental expenses for constructing infrastructures and facilities in these areas.

The verifications have demonstrated that even in the rainy days, the sidewalks were full of persons that came to these areas for amusing walking and in other words, the main cause for not entertaining a street by the people is not closing it against the cars or unfavorable climate but is the riding traffic. Also, various experiences indicate that the places which were transformed to the pedestrian areas, at first were encountered the hard resistance of shopkeepers and landowners of that zone, but immediately after executing the project, land price and lease rate were increased intensively and was multiplied even: "Many cities, including Bonn, Cologne, Hamburg, and Munich have all reported a visitor increase of 50% following the creation of pedestrian areas. An interesting phenomenon was thus observed: people in cars do not window shop, people

on foot do. It should be noted that shops specializing in furniture or large appliances either were not found along these streets or had decreased sales while other shops prospered" [38].

On the other hand, pedestrian areas not only encourage the self-employing and microeconomic development but act completely in the line and direction of information economy of third millennium:"It is important to avoid a false confrontation between the environment and the economy: the new information economy depends on density, agglomeration and face to face meeting" [41].

F. Pedestrian Movement Constituter of Sustainable Cultural Development

In sustainbale cultural development and particularly in the new millenium, it is emphasized that every person is a media and increase of communications and distriction of information among the persons of a society is considered as an important development factor. Whereas walking increases the random conjunctions and as a result causes further social interactions between the people, causes the creation of individual beliefs, ceremonies and increase of traditions and cultural interchanges as well.

Furthrmore, pedestrian areas are suitable places for performing street theatre, music and artistic exhibitions. Therfore have essential role for encouraging and introducing the unknown artists and revival of traditional arts (such as passion play and religious ceremonies) and promotion of the information. Pedestrian areas as regards have changed to an educational media of an extensive spectral cover of society people that will be effective for upbringing the future generation and transferring the ecological and oral culture and increasing the face to face communications.

G. Walking Cause of Sustainable Political Development

Today, calm and peaceful but effective and continuous presence of people in the scene of determining their destination and decisions making of country is considered as the main cause and indicator of sustainable political development. At the present age and taking advice from past experiences, it is demonstrated that harshable, radical and revolutional actions will not result in democracy only but is consideted as opposed to the sustainbale political development principles. According to this definition, at the beginning of third millenium, walking is known as the most suitable civilizing or sustainable political form of confirmation or projection all over the world. In this context, it could be mentioned to the various marchs in the days resulted in the 1979 revolution in Iran that made mutations through people's calm walking and hiking with minimum harshness of the government.

VI. CONCLUSION

Sustainable development which means supplying the current human needs considering the requirements of future races and contains multidimension concepts including social, economical and physical aspects has changed today into dominant discourse in all activities and scientific levels. Meanwhile, sustainable development in the cities is raised in different levels; city, district, neighborhood and building. Also, energy, movement, ecology, spatial form, design and development are considered as the five key dimensions, and concepts such as stewardship, resources efficiency, diversity and choice, human needs, resilience, pollution reduction, centralization, distinctiveness, biotic support and self-sufficiency are nominated as the principal indicators of sustainable urban development.

Other verifications indicate that pedestrian movement as a kind of human-oriented ativity that has reserved its initial form so far, is completely consistent and coordinated with the purposes of sustainable urban development from different dimensions including physical and mental health, transport, environmental, economical, cultural, social and even political issues, and developing the walkstreets which are the main pedestrian-oriented urban spaces may be considered as one of the least costly and meantime most efficient strategies for constituting urban sustainability.

Constituting and expanding the pedestrian areas in different urban, district, neighborhood and single-building scales provide the improvement of environmental quality in a short time.

Pedestrian areas in the cities act as focal points and can annoy the areas and spaces around themselves and cause to improve and amendment of which. In other words, the effectivity domain of a pedestrian zone not limited only to the its physical realm and includes a range of urban areas and activities.

For organizaing the pedestrian areas in cities, more than anything, providing public awareness over the society and state officials and urban managers is necessary, and in later stages, codifying a compiled program for promoting the walking and pedestrain areas, electing an integrated authority and management for executive actions, creating complete pedestrian networks in the cities and limiting (and not widening) riding routes concurrent to the development of public transportation are considerable.

Finally, although constituting pedestrian areas is considered authomatically as an agent for sustainable urban development but upon observing some topics such as lay outing these areas in the adjacent potential residential zones, creating mixed uses, providing equippments and facilities such as infrastructures and public transportation, utilizing ecological materials in the peripheral buildings and street furniture, human scale and vistas, participating the residents and users in the design process, execution and maintenance etc., the gravity of theses urban spaces and their role in the sustainability of their immediate areas could be increased.

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