Walkability

Mark Intertas (2012)

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Walkability is the measure on how conducive the environment is to pedestrians, which can either be gauged quantitatively or qualitatively. Walking is an important aspect of the urban fabric because of its ability to create a socially vibrant and active environment for all ages. This precedent research explores the concept of walkability and how it can be achieved in the creation of an age-friendly (WHO, 2007), environmentally sustainable (Gillham, 2002), and healthy[5] (Oakes, 2007) neighborhoods.

History of Walkability

The historical organization of human settlements took the form of the concentric model, which depict the hierarchical organization of different land-uses in a time when walking and horse drawn carriages were the primary modes of transportation. During this time it was essential for amenities to be in walking distance to the residents.

The form of human settlements has changed from being walkable to automobile dependent

In 1750 the impetus for change in land-use pattern changed as a result of the advent of the industrial revolution. The landscape started to change towards urbanization as a result of people's immigration towards urban centers from rural areas. This prompted population growth in the city centers as peasant farmers moved to the city to work in the factories (Norton, 2007).

As a result of the overpopulation in the cities and less than favorable living conditions brought by the lack of sewage, and pollution from factories, decentrist ideas came into fruition (Fishman, 2012) and the North American automobile dependent suburban sprawl emerged (Gillham, 2007). The urban fabric changed from a walkable to an automobile dependent state.

Today, climate change, depletion of fossil fuels (Kashef, 2011), and need for age-friendly design (WHO, 2007) caused new planning philosophies to emerge with the goal of reducing automobile dependence and increasing walking and a more active lifestyle.

Photo Credit: Intertas (2012)

The condominiums and apartments in downtown Winnipeg has helped in housing a relatively high population density, which helped make it walkable.

Achieving Walkability

Most social scientists and urban planners agree that the three general constructs of walkability are density, design and diversity. These three criteria

Figure 2: Apartment buildings in downtown Winnipeg create allow for higher population density

Figure 3: Driving is not ideal when shops are close to your house

are interconnected and affect each other accordingly to create avenues for walking and decreasing automobile dependence.

Density

High population density makes it feasible to locate amenities and services in close proximity to residences

Density refers to the number of people living in a geographic area. Greater population densities contribute to a walkable urban form by creating better accessibility of people to other people, work, leisure and services. This aspect is perhaps the most important because certain activities in an area require a specific density threshold to become viable and economically sustainable (Lozano, 1990). A higher population density creates higher demand for services and amenities in a region. The higher population density also contributes to a healthy labor pool, which allows places of work to hire local residents and operate within the region. This creates opportunities for amenities and services to be located in close proximity to people's residents allowing easy access and a greater chance for people to walk to these points of interests (Kashef, 2011). At a certain threshold, density also creates traffic congestions, which works to discourage vehicle usage and encourage walking and transit use as primary modes of transportation (Oakes et al, 2007).

Diversity

Diversity is the level of mixed-use planning that is created in the urban form. Following from the benefits spurred by population density, this construct emanates from zoning policies and its allowance or restriction in the locations of different land-uses. A diverse or mixed-use neighborhood planning would further allow services and amenities to be located in close proximity to people's residents, which could actively encourage walking and vehicle transportation unnecessary (Rodriguez et al., 2009). The activity generated in mixed-use planning also helps in encouraging more people to walk the streets and create a socially vibrant neighborhood[2] (janeswalk.net, 2012).

Street Design

Lastly, street design promoting connectivity encourages walking by creating different options in reaching points of interests. The creation of shortcuts, ample crosswalks, and accessibility options help encourage people to

Figure 4: Proper and even sidewalks with an aesthetically pleasing atmosphere can encourage people to walk

Figure 5: Uneven and cracked sidewalks are hazardous for people especially seniors

walk (janeswalk.net). Shorter blocks and grid patterns provide more options in navigating the streets to reach a destination. On the other hand, the curvilinear designs incorporating cul-de-sacs separate vehicular traffic from residential streets, which creates less connectivity for walking (Kashef, 2011). Street's connectivity is also best aided with traffic calming measures as well as clear and ample crosswalks (janeswalk.net, 2012).

"Eyes on the street" safety only works if people trust other people to do the right thing in a time of need

Other Methods of Encouraging Walkability

Other methods that rely on the aesthetics and people's perception of the built environment are also used to encourage neighborhood walkability. Among these methods is street safety[3], which benefits from the activity generated by density and diversity. A street filled with people creates "eyes on the street," which can actively deter criminal activity. However, the aspect of street safety can be tricky to accomplish as Jacobs argues because this requires a formed trust between strangers in the streets to help in a time of need. Casual public socialization helps to administer this trust by having petty conversations that promotes a sense of community even if a certain level of anonymity is maintained.

> "The absence of trust is disastrous to a city street. Its cultivation cannot be institutionalized. And above all, it implies no private commitments" (Jacobs, 1961).

Another method in creating a walkable neighborhood revolves around the notion of accessibility for all people and encompasses the conditions of the sidewalks being used. To start, sidewalks must be available to provide infrastructure for people to walk on. Broken and uneven pavements may serve as a deterrent for people especially for seniors and people with mobility issues because of the risks of tripping and falling. Sidewalks should have good drainage and walkable in all seasons. Paths with potholes, puddles of mud, pooling water, and ice create unfavorable conditions for walking[4] (janeswalk.net, 2012).

Final Thoughts

Walkability remains an important aspect of living in towns and cities because of its ability to encourage a socially vibrant and cohesive community by inviting people to venture into public spaces. We have seen the concept of walking disappear in the light of decentrist urban form and automobile dependence as well as its resurgence amidst fuel crises, climate change, and the drive towards age-friendliness. Interventions to achieve this involve recreating centralized communities that promote walkability through its density, diversity, and design.

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