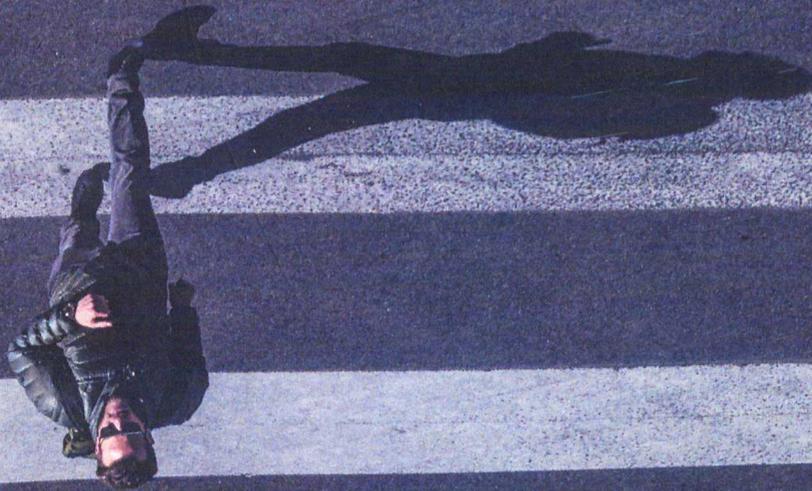


Walkability and Urban Design



What is walkability?

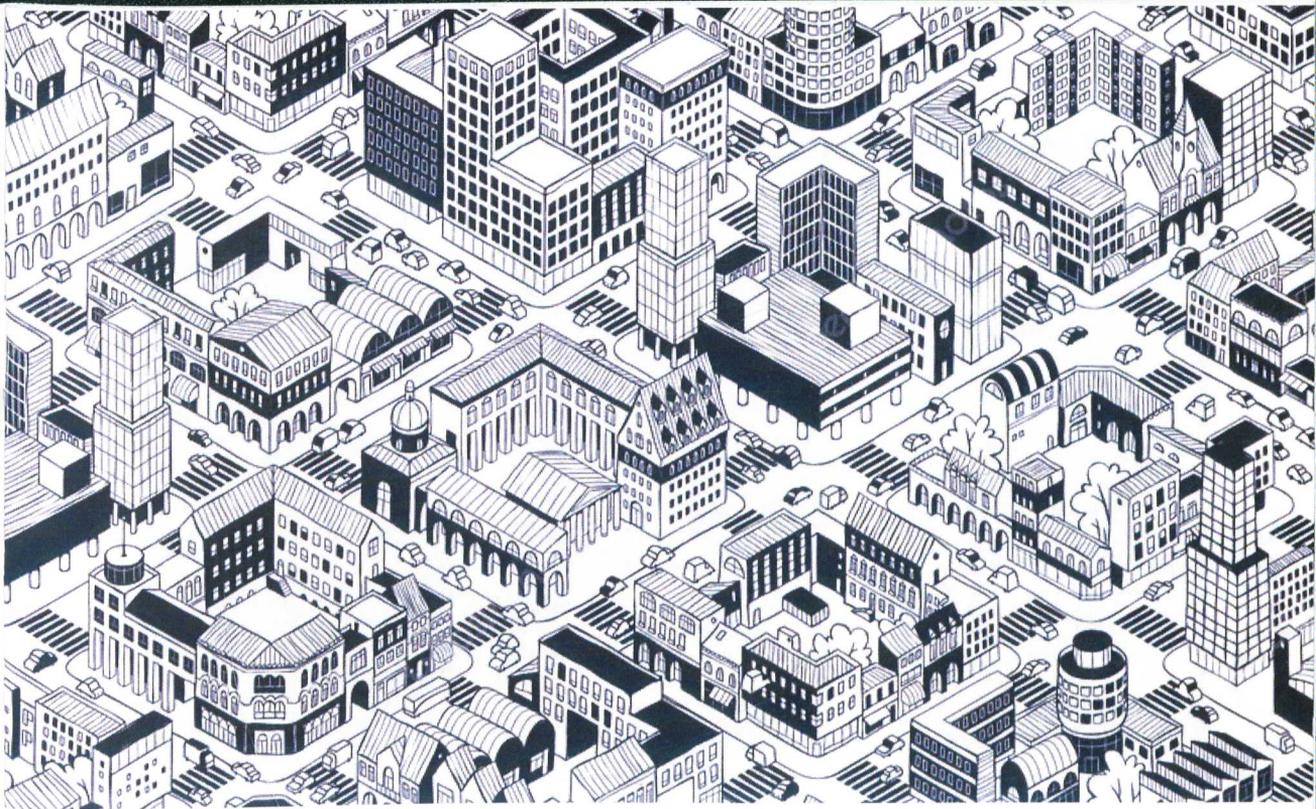
I grew up in Washington DC. Although Washington is a relatively walkable city, where I lived, walking anywhere is pretty hard. My neighborhood is tucked away in Rock Creek Park, a large forest that runs through the city. Since my house is surrounded by a natural barrier, there is nothing within walking or biking distance. It doesn't help that there are no close bus stops or public transport methods near by. The only option to leave my neighborhood is to drive.

My high school's neighborhood couldn't be more different. Within a few minutes walk are several restaurants, stores, bus stops, metro stations, and even the Washington DC Zoo. Clearly, I much prefer walking around my school's neighborhood.

These two locations help shape my understanding of what walkability is. To me, walkability is about how the infrastructure of a city enables the ease of walking and reduces dependency on driving. My neighborhood has no nearby pedestrian infrastructure, while my schools neighborhood is built around pedestrian transportation.



Woodley Park, DC, the neighborhood of my high school. On the right is the Metro station, on the left are an array of shops and restaurants. Source: Google Maps Street View



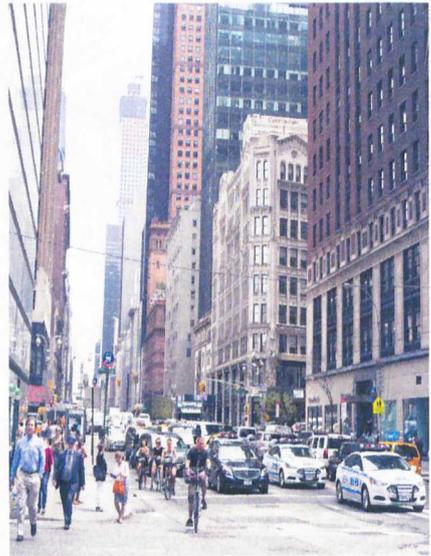
More Proper Definition

The most widely used metric of walkability is created by Walk Score. The company uses GPS data to calculate how long it takes to walk to local amenities from any given location in the US. Based off of these walk times, they calculate a WalkScore on a scale of 0 to 100 (web 4).

Another metric of walkability is created by researchers at the George Washington University. In their ranking of walkable urban areas in the US, they measure pedestrian friendliness by the quantity of office, retail, and rental spaces in a given area, the time it takes to walk to these amenities, and whether the location does or does not have predominantly auto-oriented land use (paper 1).

Most walkable cities according to Walk Score

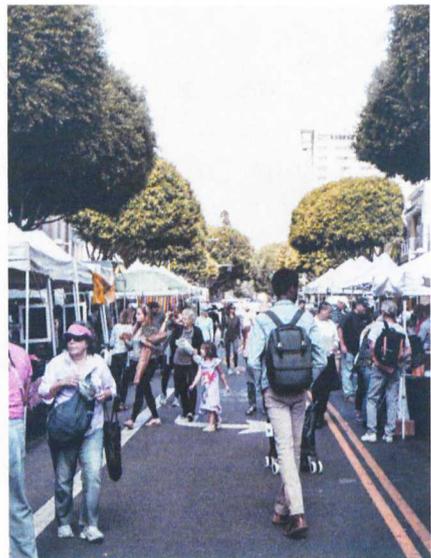
1	New York City, NY	89.2
2	San Francisco, CA	86.0
3	Boston, MA	80.9
4	Miami, FL	79.2
5	Philadelphia, PA	79.0
6	Chicago, IL	77.8
7	Washington, DC	77.3
8	Seattle, WA	73.1
9	Oakland, CA	72.0
10	Long Beach, CA	69.9



New York City, NY

Most walkable cities according to GWU study

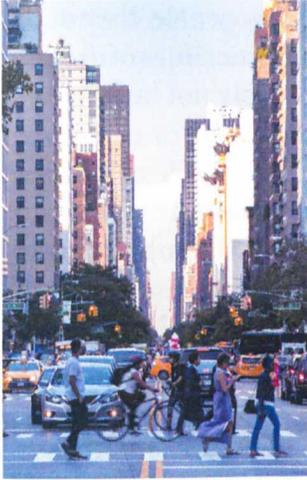
1	New York City, NY
2	Denver, CO
3	Boston, MA
4	Washington, DC
5	San Francisco, CA
6	Chicago, IL
7	Pittsburgh, PA
8	Seattle, WA
9	Atlanta, GA
10	Charlotte, NC



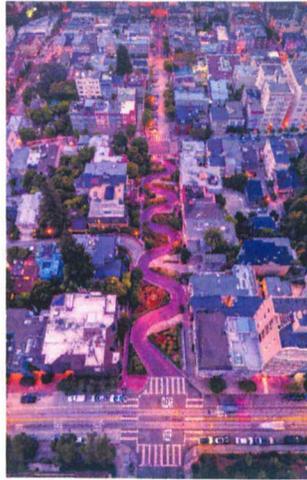
Denver, CO

Most walkable cities street view (Walk Score and GWU)

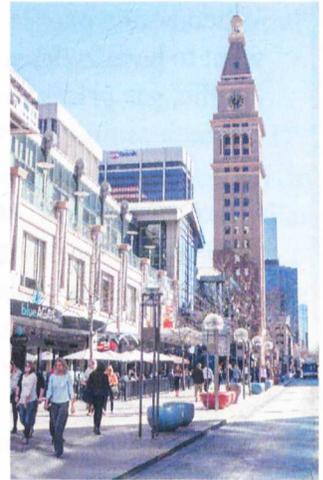
New York



San Francisco



Denver



Least walkable cities street view (GWU)

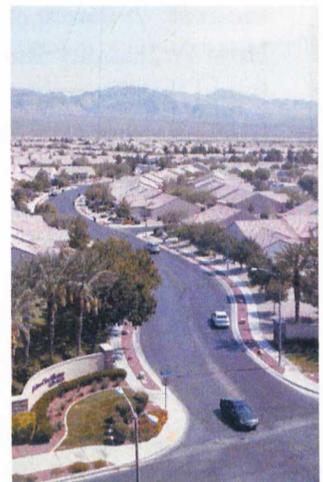
San Antonio



Phoenix



Las Vegas



Note: the Sun Belt in the US is known for poor walkability. Often, these cities have lots of urban sprawl and are predominantly built around automotive transportation.

A new generation of walkers

Millenials, when looking for places to live, now favor places with vibrant street life and pedestrian culture. The only way cities can achieve this is via walkability. When young people look for places to explore and meet new people, they don't want to have to drive there. Along with the increasing impracticalities of driving (traffic, gas prices, enviornmental costs), millennials are simply not buying cars as much as they used too (pg 17, 20).

Older generation are also moving into more urban areas. According to Christopher Leinberger, a Brookings Institution economist, "Suburban houses can be socially isolating." , "freedom for many [boomers] means living in walkable, accessible communities with convenient transit linkages." As a result, those around the age of 65 are increasingly moving to walkable cities (pg 21).

According to the Washington Post, in Washington D.C., in the past decade, the number of residents between 20 and 24 grew by 23%. Meanwhile, the number of residents in their fifties and sixties also increased drastically (web 2).

How walkability affects the housing market

There is a clear trend between walkability and housing price. The more walkable the area, the more expensive the housing. In a study titled "Walking the Walk: How Walkability Raises Home Values in U.S. Cities," researcher Joe Cortright found that for an increase in Walk Score from 54 to 71, housing prices increased from an average of \$280,000 to \$314,000. This is an average of \$2,000 for every increase in Walk Score (pg 27).



Walkability and Social Equity

Nearly all cities in the U.S. are facing a affordable housing crisis. Cities such as San Francisco have seen rent price increase from \$1,695 in 2011 to \$2,926 2018. Unsurprisingly, many wonder about the equity of walkable neighborhoods. After all, walkable neighborhoods are much more expensive in terms of housing.

According to the GWU study that analyzed the most walkable cities in the US, walkability doesn't necessarily mean inequality. The study measured equity by analyzing the average costs of housing for someone making less than the median wage, the cost of transportation for the same group, and the supply of different housing options. They found that the following cities were the most socially equitable.

City	Social Equity Index:	WalkScore
1) New York City, NY	86.3	89
2) Washington, DC	83.4	77
3) Baltimore, MD	77.7	69
4) Minneapolis-St. Paul, MN	73.4	69
5) Boston, MA	71.0	81

The reason that walkable cities aren't inherently socially inequitable is that often the lower cost of transportation is enough to offset the increase in housing price. Furthermore, those with lower incomes tend to use public transport more often, and walkable cities tend to have better and cheaper mass transit systems.

The GWU study summarizes this result stating that "Economic prosperity and social equity are not mutually exclusive goals." (paper 1)

However, that is not to say city planners should not pay attention to equity when designing walkable neighborhoods. Urban planner Jeff Speck, a big proponent of walkability, still maintains that "every city should have an inclusionary-zoning ordinance in place." (pg 109).

Why cities want walkability

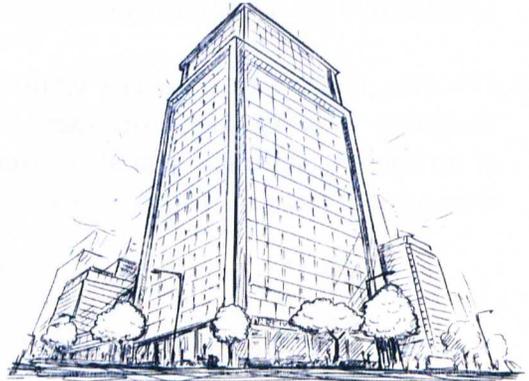
Economically, there are many reasons why a city might want to be more walkable.

1) Walkable cities attract people. As more people move into an area, the housing prices increase. An increase in real estate value is great economically for a neighborhood.

2) Companies want to be where talent wants to be. Increasingly, companies are moving to walkable locations to attract young entrepreneurial talent. According to the CEO of Wolverine World Wide, who just relocated a branch to Grand Rapids MI, the company needed “an urban hub that attracts and retains the millennial creative class. You need a vibrant city heartbeat for these people.” (pg 17).

3) Local businesses make more money. Almost all the money spent on automotive transportation leaves the local economy, off to enormous gas companies or automotive manufacturers. When people walk places, studies find that they are more likely to spend the money that they save from not driving on local businesses (pg 29, paper 2).

Walkable cities are more environmentally friendly. While carbon emissions from cities far exceed emissions from rural and suburban regions, on a per capita basis, cities produce less carbon emissions. This makes sense because in cities there is less driving, there are fewer excessively large homes, and people generally live a more environmentally conscious lifestyle (pg 52).





Why residents want walkability

The most basic reason why residents want to live in walkable areas is because they don't need to drive.

1) There is great value in not needing to have to drive everywhere. It is much easier to walk to the grocery store than it is to plan a whole driving excursion to store that is much farther away.

2) Driving is bad for your health. Aside from automotive accidents, driving is also bad for your emotional and physical health. A Miami study found that university students who drive across the city for 45 minutes or more have higher blood pressure, heart rates, and lower frustration tolerances. One study found that "a 23-minute commute had the same effect on happiness as a 19 percent reduction in income" (pg 48).

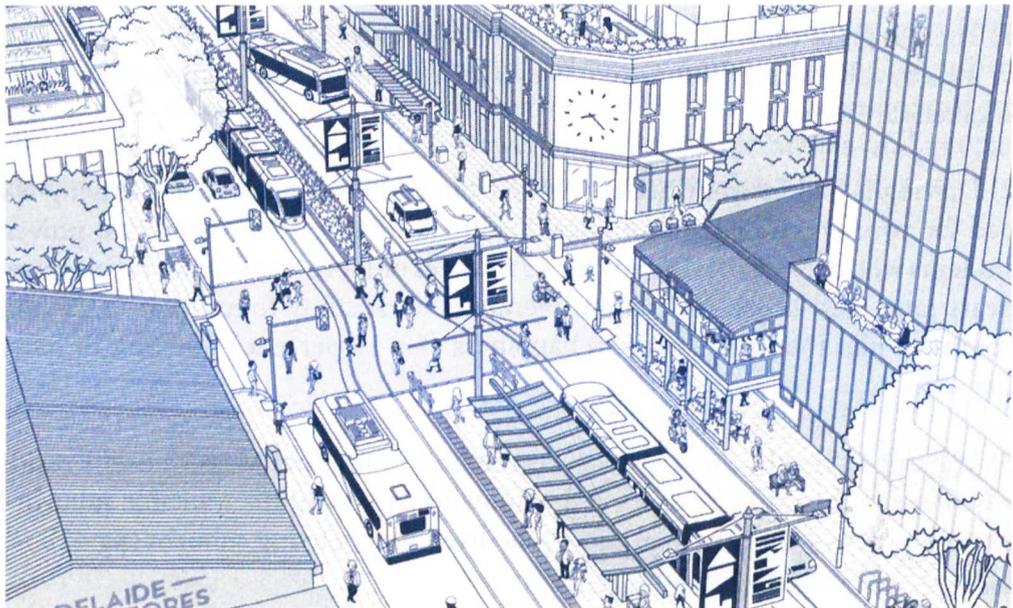
3) Walking is healthy. In one study, researchers found that Massachusetts residents who lived in the walkable areas of downtown Boston and the walkable suburbs had lower body mass indexes than those who lived in outer ring suburbs (pg 42).

Creating walkability on a grand scale

One of the ways cities are creating walkability is by changing city wide infrastructure systems such as public transportation

One of the most efficient ways of promoting walkability is through improved public transportation. After all, if you can walk to public transport, and that can get you anywhere, why drive? Unsurprisingly, some of the cities that are investing the most into public transportation are also the most walkable ones. Denver, with their Eagle P3 project, is poised to spend \$2.1 billion on new two new commuter rail lines (web 2).

Meanwhile, Portland, for the past few decades, has been a champion of bike infrastructure. 15 years ago, only 1 percent of Portlanders biked to work. Today, 8 percent do. (The national average is far less than 1%). To achieve this, Portland have been steadily investing in bike infrastructure. According to Mia Birk, Portland's former bike coordinator, for the cost of building a single mile of highway, Portland was able to build 275 miles of bikeways. Today, perhaps following in the footsteps of Portland, cities such as Boulder, Minneapolis, Seattle, and Chicago are all investing more in bike infrastructure (pg 194-195,



Creating walkability on a small scale

There are many ways a single block or neighborhood can become more walkable. Here are a few options.

1) Reduce lane width. Many cities have increased the width of lanes with the presumption that if cars have more space, there will be a reduction in crashes. However, with wider lanes, cars now travel at a faster speed, which has in turn resulted in more crashes, the exact thing they designed to prevent. Streets with smaller lanes are therefore safer and more traveled by pedestrians (169).

2) Increase on street parking. The greatest indicator as to whether a sidewalk feels safe is whether there is a row of parked cars protecting pedestrians from traffic flow. Adding street parking back onto streets where they have been removed increases pedestrian traffic on the adjacent sidewalks (pg 182).

3) Change parking pricing. Although everyone likes cheap or free parking, it doesn't make sense economically or in terms of walkability. Given the current price of parking, it is near impossible for a parking spot to recoup the costs of construction. Furthermore, by increasing the price of parking, more people will find alternative means of transportation. UCLA professor Donald Shoup suggests that the price should be adjusted so that at any given time, 85% of all spots are filled (pg 117, 128).

5) Create inviting street facades. A common feature between some of the most successful shopping districts is that they all have interesting and inviting facades. Stores with large awnings, benches outside, or interesting displays make for a more interesting and eventful walk (pg 241).



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- note: This is the primary source for this zine. All citations labeled (pg #) reference this book.

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