



JOURNAL BRIEF: Vacancy and Mobility Implications of Informal Footpaths in Shrinking Cities

Sustainable Healthy Cities Journal Brief - 2019, No. 16 - Informal Footpaths in Shrinking Cities

This brief is adapted from the following peer-reviewed journal article: Foster, A. & J. P. Newell. (2019). Detroit's lines of desire: Footpaths and vacant land in the Motor City. *Landscape and Urban Planning*, 189(2019), 260-273.

Study Intent and Research Question

This study documents and considers the implications of informal footpaths, also known as desire lines, in the Lower Eastside area of Detroit. Using mixed methods—including remote sensing (using Google Earth), physical audits, network and spatial analysis, and qualitative interviews—the study physically maps informal footpaths, documents their change over time between 2010 and 2016, quantifies their impact in increasing accessibility and mobility, and considers how they are perceived by residents.

Key Background Information

From a peak of nearly 2 million residents in 1950, Detroit is now home to just over 670,000 residents.

Vacancy and abandonment are a major concern for the city and are especially pronounced in heavily African-American neighborhoods and poor neighborhoods.

Some residents want to embrace a vision of a less dense city with more open and green space, while others want neighborhoods with conventional levels of housing density and infrastructure services.

The city faces mobility and accessibility challenges. Detroit residents have to travel farther to access employment opportunities and shop for food and other necessities (Detroit Food Policy Council, 2012); ~25 percent of the city's households do not have access to a vehicle; the public transportation system is underdeveloped.

Detroit is characteristic of legacy and shrinking cities globally, many of which are grappling with similar vacancy and mobility challenges along with constrained finances (Schilling & Logan, 2008; Haase, Haase, & Rink, 2014).

Informal footpaths exist in cities worldwide, but they are especially prevalent in urban areas with high amounts of vacant and abandoned land.

Informal footpaths have been characterized as increasing pedestrian efficiency in response to poor urban planning, as well as a strategy for contesting heavily regulated and controlled urban space.

Key Findings

There is an extensive network of informal footpaths in Detroit, totaling more than 150 miles.

Detroit's landscape is highly dynamic. Footpaths were rapidly lost between 2010 and 2016 in the city's Lower Eastside, decreasing by some 70%. While 758 were lost between 2010 and 2016, 99 new footpaths emerged over that same time. Almost half of the lost footpaths were on publicly owned land.

Footpaths were lost due to an increase in management (i.e. when a parcel is fenced or otherwise used for a purpose not conducive to a footpath), or due to increased abandonment and overgrowth of a parcel.

Footpaths serve as shortcuts that reduce the distance necessary to travel between point A and point B. Footpaths also increase mobility and access by increasing the number of available destinations within a certain distance.

For Detroit's Lower Eastside, network analysis showed that adding informal footpaths to the transportation network (along with roads and alleys) saved an average of 21 feet per route. For the longest routes, the use of footpaths could save more than half a mile in travel distance.

Adding footpaths to the transportation network increased the total number of accessible businesses and bus stops within a quarter mile (400 m) of ten origins from 141 to 158.

Interviews showed that residents largely use informal footpaths for convenience and as an antidote to poor transportation options. Some reported using them out of curiosity.

For residents that did not use footpaths, safety and visibility concerns were often cited. Others felt the footpaths signified neighborhood disrespect and decline.

Citywide, census block groups with higher proportions of vacant land and minority residents were more likely to have higher densities of informal footpaths, while block groups with higher levels of median household income were more likely to have lower densities.

Policy and Practice Implications

The loss of informal footpaths has a clear negative impact on residents' mobility and accessibility.

There is an opportunity for planning and design processes to take into account considerations of 'people as infrastructure' (Simone, 2004), paying attention to everyday and informal neighborhood uses that allow residents to make their way through the city. Informal uses and infrastructures

can be actively supported rather than abandoned by connecting them to larger processes and power relationships.

Cities can use strategies like regular maintenance, mowing, landscaping, and even paving to make some footpaths permanent while addressing residents' concerns about overgrown vacant lots being unappealing and unsafe.

Formalizing footpaths alongside the installation of neighborhood amenities can lead to concerns of eco-gentrification. Involving neighborhood grassroots groups in the thoughtful co-design and inclusive planning of these spaces can help mitigate such concerns.

Remote sensing using Google Earth makes this study's methodology for assessing urban environments and land use practices more accessible to community groups and local NGOs in a wide range of other cities and contexts.



Green Infrastructure



Spatial Reconfiguration

Further Reading and References

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About the Sustainable Healthy Cities Network

The Sustainable Healthy Cities Network is a U.S. National Science Foundation supported sustainability research network focused on the scientific advancement of integrated urban infrastructure solutions for environmentally sustainable, healthy, and livable cities. We are a network of scientists, industry leaders, and policy partners, committed to building better cities through innovations in infrastructure design, technology and policy. Our network connects across nine research universities, major metropolitan cities in the U.S. and India, as well as infrastructure firms and policy groups to bridge research and education with concrete action in cities.