

Access to greenspace is a topic that has become increasingly important in recent times. The rapid urbanization of modern societies, climate change creating unique and accelerating issues in environmental conditions, and many other issues have shifted focus towards accessibility, equity, and investment in greenspace and green infrastructure. Most people think trees are good, but the actualities of success and failures in investments show we don't really know what a green, urban future will look like.

The first article is written by Headwaters Economics, a group that says they do independent, non-partisan research, focusing on community development and land management. Their work is aimed at informing people who will be making land use and community development decisions. The article discusses the effects of access to trails and greenspaces. They list various benefits, including lowered BMI correlated to proximity to parks and increased spending related to recreation activities. They also say that disenfranchised people, or those in economically depressed areas have limited access. I thought it was interesting that there was a link to using alternatives like schoolyards and vacant lots for recreation purposes in the absence of formal parks.

The information they present is aimed at enticing business owners, governments, and others to invest in greenspace in impoverished communities. The figures cited are empirical measures of monetization of park spaces, like the Strada data collected, or specific metrics that would be valuable to public policy makers, like reductions in BMI.

I am highly supportive of this, but my concern with this article is their pitch of parks as a tool for revitalization in impoverished neighborhoods. Many revitalization efforts end up displacing the original communities they are intended to help. This article is short, digestible, and positive, and I would like more resources looking at the long term changes in a neighborhood where serious investment in green infrastructure has happened.

The next piece of media is a TEDx talk. Micheal Messner is an investor who became involved in reallocating unused real estate. He brings this approach to the developing Charleston area, which he likens to an earlier Atlanta, in reference to investment in highway systems. He says they are at a pivotal point in history, where they can increase investment in automobile infrastructure, or they can follow the lead of older cities with massive green space investment, like Boston or New York. With a tenth of the budget of a highway construction project, there could be a massive reinvention of the city with a series of parks and greenways. This points out the major gap between how people view investments in commuter culture and greenspaces. Atlanta has shown little return on vast investments in highways, a course which has encouraged urban sprawl and destruction of greenspace. This is in contrast to the many benefits of greenspace investment, which come at a fraction of the cost. This video does a good job of shaking up the discussion about greenspace investment by putting the price tag on it. Highways are incredibly costly, and they are not always to the benefit of urban areas. This talk seems aimed at the voting public, who may not know the difference in price between these options, and the opportunities for the city to gain massive amounts of greenspace instead of more highway, depending on who might be in office.

The final reference is a study done on the city of Boston. Using mapping data, population projections, and estimations on tree survival, a team evaluated different strategies for attaining greening goals in Boston. Their purpose was to evaluate methods on how to create a greener urban environment, in response to many tree planting programs. They also had a focus on creating green equity. This is the idea of bringing green infrastructure to underserved or economically depressed areas. With all of their models, one of the main hurdles was the fact that planting space was not available in cities. Even in models focused on green equity, the areas most devoid of canopy didn't have the space to increase the canopy coverage. The study concludes by saying that diversification in green investments, to rooftop gardens, rain gardens, and other options is important, with the limited space available for tree planting. Focusing on planting alone will not be able to achieve the city's canopy coverage goals. This research is aimed at groups that are attempting to influence canopy in the city. It is an exacting and complicated paper that will probably be cited in sections to support greening efforts by local governments and NGOs.

All of these references lead to a central point. Investment in greenspace has a largely positive impact on development, and the investment should be made early in planning. It is difficult to walk back grey space once it has covered cities, and there is little opportunity to reap the benefits of green infrastructure once an area is covered. Investments like central park in New York have massive impacts on the city, for recreation, stormwater, cooling, and even defining the city culturally. There is no way that anything like central park could be retrospectively shoehorned into Manhattan Island now, where real estate is unrealistically expensive. Also, even older cities with great green space initiatives, like Boston and the Emerald Necklace, are

still lacking compared to canopy goals. Most cities have a long way to go to create equitable, livable spaces in a climatically dynamic future.

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Danford, Rachel S, et al. "What Does It Take to Achieve Equitable Urban Tree Canopy Distribution? A Boston Case Study." *ULTRA-Ex*, vol. 7, no. 1, 24 Feb. 2014.