Thesis Project Portfolio

Streets for People

(Technical Report)

Urban Green Space and Green Gentrification: The New York City High Line

(STS Research Paper)

An Undergraduate Thesis

Presented to the Faculty of the School of Engineering and Applied Science

University of Virginia • Charlottesville, Virginia

In Fulfillment of the Requirements for the Degree

Bachelor of Science, School of Engineering

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Spring, 2022

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Sociotechnical Synthesis

"Adaptive reuse" is the repurposing of existing space for a new use. In transportation and planning, this happens frequently on many different scales – from turning a parking spot into a dining area to turning a defunct rail line into a public park. My project studies the technical and social aspects of such reuse. In a world where public space and green space are in such high demand and low supply, it is important to create it, but it is also critical to consider how this may affect surrounding communities. Without considering social and political implications of creating public green space, creating it cannot be done so equitably. An equitable design of public green space provides what the community needs and benefits all users equally, and to do so, the community must be involved in the design process.

Technical Project

As a result of the Covid-19 pandemic, there has been a rise of cities reallocating right-of-way from vehicle travel lanes and parking to create open space where residents can walk, bike, dine outdoors, and navigate their neighborhoods with sufficient social distancing. Due to the nature of the pandemic, public engagement surrounding these projects was limited and normal public processes were frequently sidelined, leading to limited data on public and agency perceptions of these repurposed streets.

The focus of this project is to better understand the recent repurposing of streets using several research questions. The design team will develop a survey/interview process to answer these questions alongside the US-based city transportation engineers and planners who oversaw the repurposing of these street spaces. The team will compile the lessons learned and the best

practices with the purpose of suggesting additions and changes to urban street design guidelines in Charlottesville.

STS Project

100 million Americans have to walk more than ten minutes to reach a park. In an effort to combat this, in the past 30 years, United States planners and developers have begun creating new parks and public space to increase access to urban green space. However, this can result in unintended consequences of gentrification, called green gentrification or eco-gentrification. This research aims to investigate the New York City High Line as a case study in the creation of urban green space and resulting gentrification in the surrounding community using the STS framework of technological politics. Creating urban green space, while potentially solving the problem of inequitable access to green space, can raise property values and price out current residents. This exacerbates an already existing power structure disadvantaging marginalized communities. To avoid creating these scenarios, developers must set forth a community-based approach to design which first asks what the community needs instead of defining what would be good for a neighborhood in which they do not live.

Reflection

Conducting these projects simultaneously allows each project to inform the other. The technical project collects information about the technical aspects of how best to design public spaces – the STS project studies how best to take into account the social and political consequences of these technical designs and implement them in equitable ways. A technical design may be perfect in every way, but if that design does not satisfy the needs of the community, it will not be a successful design.

The work done in the STS project informed some of the work done in the technical project. The capstone team included in the survey we sent to transportation engineers and planners a few questions about the social consequences of their repurposing projects such as: Which people benefitted from your design? Did anyone experience disadvantages? Including these questions in our survey allowed us to collect more information about the benefits and disbenefits of certain designs, and additionally inform our final design recommendations.

The technical project equally informs the STS project – the information we collected suggests it is very unlikely that the inequitable consequences of constructing urban green space are intentional or malicious in nature. In fact, communities vulnerable to gentrification are often those that most need more access to urban green space and creating it seems like what they need. However, my STS project shows that the designer cannot just *assume* what the community needs – it is always better to ask and involve them.