

Statement of Interest

Our intent is to investigate the relationship between urban environments, their affect on groups and individuals who inhabit them, and how technology in combination with nature can alter this connection. Our goal is to introduce subtle shifts in physical environments to change social exchanges on a larger scale by placing interactive installations containing plant life into the New York City subway system.

The Clean Train Movement (started in May 1989), in conjunction with other citywide efforts, proved that small changes to physical environments can alter attitudes and social interactions on a larger scale.¹ In the mid-to-late 1980's, New York City subways were filled with garbage and graffiti, social disorder was rampant, and crime was at an all time high. The city took a radical approach and decided the best way to solve New York's problems was by focusing on a small detail of removing all graffiti from subway cars. Their hope was that by making this step, it would in turn affect community perceptions and change social interaction for the better. It worked. When citizens saw clean, well-kept trains, they began to think that the city was improving and negative social conduct would no longer be tolerated. This simple change to the physical environment of the subway began a chain of events that revitalized New York.

In our own instigation of plant life and the affect on social interaction, studies have shown that being surrounded by plant life calms people, lifts spirits and improves neighborhoods as people are more likely to be respectful (not littering, etc) of an area when natural elements are introduced.²

Projects currently being done in this area, such as installations done by Ignacio Espoz Babul, director of LatinGreen, a green wall installer in Santiago, Chile, have illustrated the significant improvements to air quality and the reduction of noise pollution that plant life provides underground transit systems.³ Patrick Blanc's *Vertical Gardens*, represents a design approach that works in harmony with contemporary architecture and makes use of plants that will thrive within the conditions they are placed.⁴ Christopher Janney's *Reach* installation on the 34th street subway line shows us the importance of providing alternative interactive environments to improve the aesthetic and ambiance of a space by offering a new experience for the patrons of the New York City subway system.⁵ The environmental research group, Enviu, provides a direction for creating self-sustaining energy systems by harnessing the energy created by human actions to balance the impact and draw everyday human activities have on local power sources.⁶

We intend to use these concepts as our premise to develop a system that would introduce natural environments into New York City's subway network and create a plant life based installation to promote a cleaner, healthier urban environment. Our hope is that through individual and group responses to our installation(s), we can improve the emotional and physical interactions of commuters, reduce environmental stresses caused by the current subway system and inspire people to understand a tangible connection between nature, urban environments and technology.

Project Proposal

1. Research and Precedence

a. Nature

Installation piece - Our project will first involve additional research into previous work done in vegetation installation work. We will also explore other examples of self-sustaining, interactive work done in urban settings.

Plant life - Research will be done to investigate various types of plant life, specifically those that will fit our intended environments (low light levels, resilient to temperature changes, allergen conflicts, etc). Our precursory research has shown that certain plants, such as succulents, may be able to handle the conditions of the NYC subway system well.

b. Technology

Vegetation support systems - We will investigate techniques in support systems for plant life in low-lit areas. Among others, some of the specific areas we will focus on will be watering (hydroponic, aeroponic & soil based) filtration and nutrients and lighting (grow lights, full spectrum) to develop a working installation.

Self powered/self sustaining- We will investigate new technologies such as self generating power systems (dynamo's, magneto's, piezo electrical fields, etc) to develop a low impact, low maintenance installation.

c. Urban Environments

Government Agencies - Identify what MTA and City Departments and Agencies we need to work with. We're aware there will be many steps required in order to carry this type of project out in the subway system. We are eager to work with the city and other agencies on this project. We understand the special requirements and needs that must be met for subway system installations and wish to maintain the safety and security of the subways for all commuters. By working closely with MTA and other agencies we will take the necessary steps to ensure that.

Practical Method

We will investigate other cities and transit systems to uncover strategies for urban planning and transit systems. Through this project we will develop an installation, documented research and an analysis that may serve as a model for other cities to follow.

2. Prototyping and Testing

We will do a series of installation prototypes to see how the plants we selected deal with the environment, test and observe people's interaction with our piece, see ways in which we can improve the design, its presentation and ability to communicate intention as well as gather information for further revisions (Fig. 1).

We plan to test our designs at several locations within the subway system in order to analysis and document difference responses from commuters based on changes to the physical environments that are site specific.

As mentioned earlier, a key element of our design will be its ability to be low maintenance & self-sustaining. Our aim is to create an installation that is not a draw on local energy resources, and instead is representative of future, eco-driven initiatives that are needed in the mass transit system of New York.

3. Final Installation

Our project will culminate with a final installation piece that puts plant life in an setting that will encourage interaction and will be sustained by this interaction. We hope the project will provide a model for future installations of its kind. Detailed written documentation will accompany the installation, along with a website, blog and several short videos documenting our process and final creation.

Budget Outline

This project will require research beyond the resources of our school, and will connect us to other designers, environmentalist and scientist whom we may consult on the project. We will be creating a number of installations for this project, of which using sustainable and recyclable materials will be predominant whenever possible. Our intention is to be eco-conscious and low impact throughout the project.

Research (books, magazines, documentation supplies) – 10%
Prototypes (materials, permits, etc) – 30%
Final Installation (materials, permits, website, etc) – 25%
Designer Fees - 30%
Miscellaneous (travel, exhibit admissions, etc) – 5%

¹ Malcolm Gladwell, *The Tipping Point*.

² Jonathan Kaplan, "Plants Make You Feel Better".

³ Saul Chernos, "Santiago, Chile installs green walls in subway stations"

⁴ Patrick Blanc, "Vertical Garden interview".

⁵ Christopher Janney, "Sculpting Sound".

⁶ "Eco-Disco Self-Sufficient Dance Floor".

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Figure 1. (three images)

Utilizing current architecture:



Close-up of installation in current architecture:



Other possible design implementation:

