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TEMPORARY USE OF POP-UP ENVIRONMENT'S POTENTIAL FOR REPURPOSING NEGLECTED
BUILDINGS AND SPACES

by

MARY HORNE

Under the Direction of Timothy Nichols

ABSTRACT

This paper puts forward a new approach to the revitalization of vacant and neglected buildings and spaces by introducing the use of temporary pop-up environments. The initial research establishes groundwork for pop-up environments and temporary use, while pointing to their potential. Records from specialists, Florian Haydn, Robert Temel, and Philipp Oswalt, exhibit various types of temporary uses and interim strategies. Strategies are displayed in their selection of sites and operation. These strategic approaches will support transitioning space and present interim projects, which have the prospect of utilizing space as a secondary means, while a more primary use of space is in development.

The case studies will demonstrate the temporary use strategies and social factors, which may establish new meaning to facilitate change. By presenting possibilities of repurposing through temporary and interim uses, there is the opportunity for renewal and averting the dependence on massive (re)development, sustaining a city's heritage.

INDEX WORDS: Pop-up environments, Temporary use, Revitalization, Neglected buildings, Repurposing, Interim uses, Alternative urban development

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BUILDINGS AND SPACES

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MARY HORNE

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Fine Arts

in the College of Arts and Sciences

Georgia State University

2014

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2014

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1 INTRODUCTION

1.1 Purpose of the Study

Many urban spaces are neglected due to deindustrialization, suburbanization, and demographic shifts, resulting in an abundance of vacant buildings and spaces spread throughout urban areas. Shifting populations, changing markets, and the apprehension of financial commitment have contributed to the neglect of these buildings, producing desolate areas within cities and devastating urban landscape. This paper proposes that the revitalization of underused, vacant, and neglected buildings and spaces can be transformed through the implementation of temporary uses, such as pop-up environments. Additionally, this paper promotes new growth of small businesses, start-ups, and local entrepreneurships by encouraging the utilization of temporary use.

This paper puts forward a new approach to the revitalization of these neglected buildings and spaces by introducing the use of temporary pop-up environments. Temporary uses could have the potential of adding activity to these sites presenting new opportunity for their use in regenerating blighted areas.

Research suggests that temporary uses have the ability to reclaim neglected buildings and spaces by assigning new use. Literature and case studies suggest that temporary use and social factors have the possibility of establishing new meaning to abandoned buildings and/or spaces and to facilitate change in the area. By presenting new narratives to these spaces with temporary use, there is a potential of reinvigorating underused, vacant, and neglected buildings and spaces.

This research effort presents solutions to avoid the demolition of urban areas to sustain the character and urban fabric of the city without the dependence on massive (re)development projects and explores alternative methods to the abundance of new development, such as temporary use to prevent the large amount of destruction of vacant historic buildings and the loss of the city's heritage. By establishing an understanding and awareness of temporary uses, temporary use types, their functions, and their strategies for utilizing and occupying space, a common vocabulary can be developed providing a foundation and scope for their prospective use.

In addition to providing suggestions for the reinvigoration of blighted urban buildings and spaces, this project suggests temporary use to encourage small business growth by promoting the development of start-ups and local entrepreneurships within these spaces. Challenges of affordable rent, uncertainty, and apprehension of long term financial commitment have discouraged many start-up businesses from opening within inner cities or central business districts where they are often priced out of the market or have been replaced by high rise condominiums, large corporate brands, and chain restaurants. Temporary pop-up environments allow start-up businesses to use a space temporarily, providing a trial period for new endeavors, with short-term leases and reduced rent. This form of regeneration by temporarily occupying neglected sites with temporary uses, encourages the development of unique business growth, increases activity, prevents vandalism, and adds vitality to the area.

Inspired by art installations and the mechanics of flexible architecture, along with my interest in urban design and the historic character of buildings, this paper explores a non-traditional approach to the design of environments allowing for expression and

experimentation of space and unique development. A non-traditional approach compared to traditional approach may be observed in one or all of the following contexts: 1) in the relationship between the property owner and the temporary user, 2) an informal or odd site or location, 3) spontaneous or atypical uses and functions, and 4) modest or unplanned designs, and 5) lacking in one or all phases of planning.

The characteristics of temporary uses, such as pop-up environments, bestow a sense of non-permanency, a non-static structural response to its constructed environment dependent on the space and situation. Often, this approach to design creates an interesting experience for the spectator, which brings about a sense of exploration and interaction within the space. If pop-up environments were used in vacant and neglected urban spaces, they could provide new narratives and inventive designs offering an original experience of the space and its surroundings assisting in the revitalization of blighted areas.

1.2 Methodology

In order to explore opportunities for the use of pop-up environments, we need to establish groundwork and determine where potential exists for their use. Due to the abundance of abandoned industrial and historic buildings and an immense amount of spaces in transition within urban areas, this paper will position the investigation in an urban context where there is a need for revitalization and regeneration. After bringing awareness to central sources of neglected buildings and areas, this paper will develop a common language and establish a typology for pop-up environments and temporary uses. By breaking-down terms and comparing functions of temporary use with those of other types of building uses, characteristics

can be determined for their use and design. After comparing environments, aspects of temporary uses will be presented from the research of several specialists on the subject of temporary use. Reports from these authorities on the subject will provide substantial records of temporary use from their research. By observing the historical use of temporary environments and the concepts for their designs, the physical design of their structure and components will be demonstrated. The evaluation of case studies on temporary use, as a potential for revitalizing spaces, is offered in accordance to the outline presented by Architect, Publicist, and Professor, Phillip Oswalt. After case studies have examined various temporary uses and strategies, literature reviews from articles and periodicals on the temporary use of pop-up environments will support the argument for revitalization.

2 REPURPOSING NEGLECTED URBAN BUILDINGS AND SPACES

2.1 Introduction Neglected Urban Areas

Often on the way to school, work, and running errands, we see the same buildings every day. When we first moved to the city in which we live, the buildings seemed new and exciting with their striking architecture, as if they were picturesque images with an interesting story to tell or experience to be had. After traveling the same path time and time again, the newness fades away and you start to notice the flaws. On certain days along your way, you notice the neglected yards and houses, the rundown shopping strips, the mundane architectural styles, the intrusion of chain restaurants, and commercial strip centers. On other days, everything appears exceptional as you envision the neglected yards and homes spruced up with paint or new flowers in the yard, the rundown strip centers appear vibrant and active with unique

restaurants, stores, and cafés, and the mundane architecture and chains stores appear to add to the assortment and mixture of what makes a city feel like a city.

Many urban spaces are abandoned and neglected due to deindustrialization, suburbanization, and demographic shifts. As a result of the abandonment, many urban spaces are vacant and deteriorating the streetscape, thereby, attracting crime and debris. Unoccupied spaces leave the buildings open to criminal behavior causing communities to be overrun with unwanted activity in the area. Vacant buildings turn into targets for trespassing, vandalism, squatters, prostitution, and drug use. The condition of the urban neighborhoods and community suffers as a consequence.

The desire for safety, attractive storefronts, convenient shops, and spacious affordable housing has led people to leave central cities to a more comfortable life in the suburbs, thus suburbanization has decreased inner city residential neighborhoods and inexpensive land has encouraged companies to relocate outside urban centers leading to further abandonment and decline of urban areas.

How can these deserted spaces be repurposed to add value and vitality to the surrounding areas while they are waiting to be permanently occupied? By introducing a new vision for these rundown buildings and spaces, a model for the urban fabric can be conceptualized. The employment of pop-up environments establishes a new energy and expression into urban areas that would otherwise be abandoned.

2.2 Urban Dilemma

Urban decay is one of the shifting factors resulting from both social and economic conditions. The evolution of cities has generated enormous change and development. Post World War II government incentives encouraged suburbanization, contributing to populations leaving the urban centers to purchase single-family homes in suburban areas.

The evolution of industrial production resulted in a decline of mills and factories contributing to the reduction of the labor force in numerous U.S. cities from the late 1950s-2000. The reduction of the labor force resulted in the closing of factories, downsizing of employment, and relocation of many manufacturing plants. However, in the 1970's, the information age or "digital age" began. The World Wide Web in 1991, and other advancements in technology and software have created new jobs, but the Great Recession starting in late 2007 has contributed to 315,000 business closures between 2007-2010, which left unemployment and abandonment of many buildings.^{1 2} As a result, large development projects were put on hold and small businesses were forced to abandon their buildings leaving vacant spaces scattered throughout many cities deteriorating the streetscape, devaluing neighborhoods and communities.

¹ "Historical Data Tabulations by Enterprise Size-2007," *Business and Industry-2007 Annual Tabulations, Statistics of U.S. Business. United States Census Bureau*, Last modified April 3, 2013, <http://www.census.gov/econ/susb/data/susb2007.html>.

² "Historical Data Tabulations by Enterprise Size-2010," *Business and Industry-2010 Annual Tabulations, Statistics of U.S. Business. United States Census Bureau*, Last modified February 3, 2014, <http://www.census.gov/econ/susb/data/susb2010.html>.

During the latest financial crisis, many people lacked the qualifications to receive finance or refinance loans.³ With so many people lacking the qualifications under the stricter lending standards, there were great challenges for affordable housing, retail space, and businesses. The most affected individuals were the low and middle income households including young families with children, young single professionals, and the elderly. In urban areas, the cost of owning and renting was too costly for these individuals.

The stricter loans standards and decreased property values due to many housing foreclosures caused many people to return to renting and to downsizing. The numbers of singles, couples without children, and empty nesters had increased and many of these individuals traded their single-family homes in suburban areas and downsized to smaller apartments and condos. Due to this demographic shift, an oversupply of new apartments and condominiums is being developed throughout many urban cities.

This massive redevelopment has caused an oversupply of new apartments and condominiums on the market. The 2008 Annual Industry Forecast stated that builders were expected to expand the existing apartment inventory with 100,000 new market-rate multi-family units.⁴ In the second quarter of 2013, The Multifamily Production Index stated that the builder and developer market-rate for rental properties had gained momentum rising six points, which is the highest rise since the second quarter of 2005, for an average of 335,000

³ Haviv, Julie. "Home Loan Demand Plunges as Interest Rates Rise," *Reuters. Thomas Reuters*, Last modified February 20, 2008, <http://www.reuters.com/article/2008/02/20/us-usa-economy-mortgages-idUSN2033753520080220>.

⁴ "2008 Annual Industry Forecast," *Buildings.com*, Last modified January 2008, <http://www.buildings.com/article-details/articleid/5579/title/2008-annual-industry-forecast.aspx>.

total multifamily units for the year.^{5 6} After the financial recession, which lasted nearly five years, there was at last, a rise in the construction industry, and the forecast for total construction by the end of 2013 was valued at \$506 billion, which was a 6% rise annually.⁷ Many of the new development plans were to increase multifamily units. It was expected that there will be a 20% increase in the development of large apartment and condominium projects. The massive condominium projects will no doubt bring growth to urban areas; however, the surplus of new mixed-use buildings with street level retail and offices and residential units above them are contributing to destruction of historic buildings and landmarks in downtown areas to make room for new construction. This magnitude of new development has diminished our inventory of once proud historic urban buildings and neighborhoods and is contributing to generic styles and a loss of the cities' heritage. Many people are concerned that the "tear down rebuild approach" is not the proper solution. Often the goals of revitalization are monopolized by a hegemonic top-down approach. Although this process has proven to be beneficial for some urban development, it can lead to interests that are limited to a select few. Hegemonic or ideological ideas by dominate real estate developers and investors lead to enormous urban construction developments of neglected spaces that only high income groups can afford.⁸ This kind of development encourages only a fraction of the population to occupy these mega mixed-

⁵ Dietz, Robert, "Multifamily Housing Growth Poised to Continue in 2013," *The Home Front, U.S. News and World Reports*, Last Modified February, 2013, <http://www.usnews.com/news/blogs/home-front/2013/02/13/multifamily-housing-growth-poised-to-continue-in-2013>.

⁶ "Apartment and Condominium Market Confidence Gains Momentum," The National Association of Home Builders, Last modified August, 29 2013, <http://eyeonhousing.wordpress.com/2013/08/29/apartment-and-condominium-market-confidence-gains-momentum/>.

⁷ "New Construction Starts to Climb 6% in 2013," *McGraw Hill Construction*, Last modified August 12, 2013, <http://www.construction.com/about-us/press/new-construction-starts-to-climb-6-percent-in-2013.asp>.

⁸ Mieszkowski, Peter, and Edwin S. Mills, "The Causes of Metropolitan Suburbanization," *Journal of Economic Perspectives* 7, no. 3 (Summer 1993): 135–147, accessed March 3, 2014, Business Source Complete, EBSCOThost.

use complexes. By the use of intervention strategies and repurposing neglected spaces, neighborhoods can reclaim the character and diversity of their community to include diversity within the area.

The goal for this paper will not be to try to solve suburbanization, urban decay, or urban planning and/or development, but to explore possibilities for restoring and reusing the existing buildings and spaces. By creating awareness of the magnitude of neglected areas and discussing the potential for their reuse, this paper will offer alternative solutions to the demolition of these old buildings and to avert the amount of massive new development within urban areas. The vision of temporary reuse by the use of temporary pop-up environments can provide a vibrant social climate and enhance the appearance of neglected buildings by sustaining occupancy and adding vitality to a site with minimal expense, potentially averting the tear down/rebuild of the area. In addition, the occupancy of the buildings adds a sense of stability to the neighborhood, increasing safety, and creating a more desirable experience for the users and community within urban areas.

2.3 A Different Approach

The temporary nature of pop-up environments can encourage unique designs and creative ideas to transform and restore these neglected streetscapes and interior environments to attract audiences. By developing new uses and introducing new narratives for the neglected spaces and areas, interest is added to the spaces, thereby, giving new meaning to a site, and adding curiosity to the onlooker and the individuals who are passing by. The new narratives and designs of the space have the potential to act as a precursor to enhancing the visual

appearance of neighboring sites, storefronts, and streetscapes increasing pedestrian foot traffic. By drawing attention to the site, new activity is added generating liveliness for other local entrepreneurs, local artists, and encouraging small businesses to develop within these spaces. It is my contention that the temporary use of pop-up environments will reinvigorate an area and spur small-scale changes to produce a positive change in the neglected areas and create long lasting structures.

This development observes a middle-ground approach to everyday urbanism, which focuses on the interrelationship of the everyday life of the city and its citizens, and also embraces the uniqueness of urban life without changing the fabric of the city.⁹ This type of urban renewal is a smaller grassroots approach to reshaping urban areas by conceptualizing everyday spaces and transforming the mundane or ordinary situations in unexpected ways. The process should seek ways to incorporate the relationship between the old and the new celebrating the diversity of the two. This is not to say that this notion of revitalization should occur haphazardly or take a laissez-faire position.¹⁰ There should be a predetermined plan of action. By the production of small-scale changes to the area, steady growth will be generated, rather than, the clean-sweep development of large areas by urban master plans. Extensive plans to increase transit networks, institute (re)development of neglected sites and buildings, introducing mixed-use facilities, and increasing green spaces and pedestrian walkability, are favorable to city dwellers and entrepreneurs. The plans should, however, blend the old

⁹ Margaret Crawford, Michael Speaks, and Rahul Mehrotra. *Everyday Urbanism, Margaret Crawford vs Michael Speaks/edited by Rahul Mehrotra*. n.p. Ann Arbor, Mich.: The University of Michigan: New York, NY: Distributed by Arts Press, c2004., 2004. 8-32, 44-72.

¹⁰ Calthorpe, Peter, Lars Lerup, and Robert Fishman. *New Urbanism, Peter Calthorpe vs. Lars Lerup/edited by Robert Fishman*.n.p. Ann Arbor, Mich.: The University of Michigan: New York, NY: Distributed by Arts Press, c2005., 2005.

structures with the new development whenever possible. If redevelopment and new construction engulfs the city, it will establish a generic homogeneous aesthetic, which is standardized for any urban city, not capturing the true character or spirit of the city. By incorporating the old bungalow neighborhoods, historic buildings, and adaptive reuse strategies, as well as new development, a more unique and desirable urban environment is created.

It is my belief that local communities would prefer to see occupied buildings and unique businesses than deserted uninhabited buildings. Pop-up environments, strategically placed in vacant and neglected spaces, promote unique business growth, increase activity, prevent vandalism, and add vitality to the area. It can also promote a resurgence of the area, enticing nearby communities to take part in the effort. The new energy in the area may additionally promote participation by attracting visitors from distant cities and counties. The Atlanta BeltLine and co-component Art on the Atlanta BeltLine projects are an example of how urban areas in Atlanta, which have suffered from urban blight, have received a new vitality by repurposing abandoned railroads, warehouses, and mills using both old and new development. (See 6.4.5 Case Study: Strategy 5, Co-Exist: Atlanta BeltLine)

3 WHAT ARE POP-UP ENVIRONMENTS?

3.1 Pop-up Defined

This investigation of pop-up begins by researching pop-up environments in general, and then focuses on the specific characteristics of temporary use that can be applied to repurposing a space short-term. The notion of pop-up may include numerous typologies and durations,

which may occur in a wide-range of spaces. By addressing an overall sense of the terms pop-up, environments, and temporary use it will help to define and provide groundwork for comprehension of its meaning for this paper. According to The American Heritage Dictionary of the English Language, pop-up is defined as follows:¹¹

Adjective

- 1.** *Emerging quickly from a recessed or concealed position when activated.*
- 2.** *Rising to form a three-dimensional structure when a page is opened.*
- 3.** *Intending to remain open for business only temporarily.*

Noun

- 1.** *A business or establishment, such as a shop or restaurant that is intended to remain open for business only temporarily.*
- 2.** *A device or illustration that pops up.*
- 3.** *Computers: A webpage or advertisement that opens automatically in a new window of a web browser.*
- 4.** *Baseball: See pop fly.*

(The American Heritage Dictionary of the English Language, Fifth Edition Houghton Mifflin Harcourt Publishing Company, 2011)

Pop-up is not entirely a new concept. Today, the term describes a temporary activity or event that appears suddenly or unexpectedly and more recently, the term refers to various events and situations, and can include a range of contexts from pop-up signs, graffiti, underground events, and exhibits to restaurants and retail concept stores.

Though the definitions above provide a better understanding and sense of the term pop-up, a definition as it relates to the creation of pop-up environments, needs to be further established. From the previous definitions, clarification of pop-up environments is needed to

¹¹ "Pop-up," *The American Heritage Dictionary of the English Language*, Last modified 2013, <http://www.ahdictionary.com/word/search.html?q=pop-up>.

develop a sound architectural description and adequate definition for research of these concepts. As stated above, pop-up environments can emerge quickly or spontaneously, but rather than being activated, pop up environments are constructed and built. Temporary pop-up environments do rise to form a three-dimensional structure or space, and they are most likely occupied by a business or establishment that uses a space temporarily. Pop-up in reference to pop-up environments may be defined as: Pop-up: A three-dimensional structure or environment that emerges quickly and is designed to use a space or building temporarily.¹²

3.2 Pop-up Environments Deliberate or Inadvertent

As defined by Merriam-Webster Dictionary, Environments #1: states that environments are the circumstances, objects, or conditions by which one is surrounded. They are conditions that surround someone or something.¹³

These conditions which surround someone or something can occur by nature, be deliberately made, and/or unintentionally occur due to other man-made developments. The word environment and concept as it relates to creating environments for the context of this paper will refer to the latter two types of conditions: 1) Environments which are deliberately designed or 2) Environments that are unintentionally and inadvertently created.

Designed environments, regardless of the designer's ability or expertise, have an objective and/or a plan of action, but inadvertently created environments are formed with little or no planning. Francis Ching and Corky Binggeli's theory offers an articulate definition for the

¹² *ibid.*, Pop-up

¹³ "Environment," *Merriam Webster Dictionary, Merriam Webster Incorporated*, Last modified 2014, <http://www.merriam-webster.com/dictionary/environment>.

term environment as it relates to designed environments. Ching and Binggeli state, “The purpose of designed spaces is for functional improvement, aesthetic enrichment, and psychological enhancement”.¹⁴ This view of designed environments supports the notion that functional requirements, aesthetics, and emotional response are required in order to produce a designed environment. As there is not an established definition for pop-up environments, a new definition for pop-up environment is presented using the previous definition of pop up from The American Heritage Dictionary, Ching and Binggeli’s theory, and the term temporary use, as defined by architects and urban theorists, Florian Haydn and Robert Temel.

Pop-up Environments: A three-dimensional structure or environment that emerges quickly, designed to use a space or building temporarily. Pop-up environments are planned from the conception to be impermanent. They are designed and constructed to adapt to the space and to fulfill the user's functional and aesthetic requirements.^{15 16 17}

3.2.1 Deliberate Environments

Environments which are deliberately designed, regardless of the length or duration of the use, should also have a plan of action and a developed program in order to achieve functional improvement, aesthetic enrichment, and psychological enhancement. In order to carry out and execute the functional requirements, the user, their intent, and the activities, which will take place within the space, need to be analyzed. Also, in order to implement an atmosphere and emotional response, the lighting, acoustics, thermal comfort, and furnishings need to be considered.

¹⁴ Ching, Francis D. K. and Corky Binggeli, *Interior Design Illustrated Second Edition*, (Hoboken, New Jersey: John Wiley and Sons. 2005), 36-45.

¹⁵ *ibid.*, p. 36.

¹⁶ Pop-up, *op. cit.*

¹⁷ Haydn, Florian and Robert Temel, *Temporary Urban Spaces: Concepts for the Use of City Spaces*. (Basel: Birkhäuser, 2006), 17.

Deliberately planned and designed environments, which are denoted by the building type and functions that take place within the building or space, for example in some educational, health care, religious, food service, and hospitality facilities. Today, many multi-use and flexible buildings/spaces are often designed due to shifting programs, tenants, and occupants. Environments in flexible buildings/spaces embody or denote the atmosphere of the functions that take place within the building at the time of use. Because of the flexibility in the design, the building or space allows for many types of functions and the ease of altering or modifying the space to fit the needs of numerous types of uses/users.

3.2.2 Inadvertent Environments

Temporary environments are to some extent deliberate, however, there is a certain unexpectedness, which may arise with their short duration and transient quality. Temporary environments have a probability of changing dependent upon the building or space the temporary use is occupying. This may contribute to an inadvertent design and the creation of an unexpected or unplanned environment.

Pop-up or temporary environments may appear in a variety of buildings or spaces, whether the space is traditionally planned for one specific use, a multi-use space or flex space, or a space where the pop-up may coexist alongside another type of use. A pop-up, therefore, must adapt to the previously constructed space or surroundings regardless of the preexisting circumstances, while fulfilling the user's functional requirements. Because pop-up environments temporarily occupy buildings or spaces, they could possibly be in a constant state of flux. Although a building or space may start out as an environment that was deliberately

designed, changing conditions may contribute to an inadvertently created new and different environment.

3.3 A Comparison of Environments (Ground-up, Flex Space, Repurposed, and Pop-up)

3.3.1 Introduction

As the name implies, adaptive reuse or repurposed buildings are older buildings adapted and reused according to the new tenant's functional requirements.¹⁸

Unlike the renovation process used in preservation and conservation where the building is maintained to the same physical conditions that it was previously, adaptive reuse or repurposing of a building makes modifications and renovations to fit the new user's activities and needs. The extent of the building renovation when using adapted reuse or repurposing is up to the new tenant. The renovation can involve any degree of transformation from a simple adaptation, façadism, or to a complete conservation. If the preservation and conservation process is the preferred method of renovating the building and space, the building will be restored to its original state. Historic buildings, which have not previously been registered as a National Historic Landmark, have the opportunity to be nominated as a Landmark. If the building is eligible, the building will be placed on the National Historic Landmark Registry. Another method of adaptive reuse or repurposing is façadism, a process of preserving the building's façade to its original state, while the remainder of the building is demolished and reconstructed. Whether the method of repurposing and renovation includes the conservation

¹⁸ Fitch, James M, *Historic Preservation: Curatorial Management of the Built World*, (Virginia: University Press of Virginia, 2001),

process or another adapted reuse process, the reuse of older buildings has the ability to offer new potential to the neglected spaces, while sustaining the building's structure and character. Given that adaptive reuse and repurposing are essentially one and the same, we will use the term repurposed for the remainder of this paper.

3.3.2 *Ground-up*

Traditional ground-up/new construction has the originally designed walls, partitions, windows, lighting, and materials that were specifically designed for that building and user/users. Since these buildings were initially constructed for their intended user's functions and services, they generally have a more conventional approach to creating spatial organization and establishing boundaries than pop-up environments do. This is not to say the plan, design, or construction process used is simplistic or ordinary in its design or intent, but in new ground-up construction the windows, walls, doors, partitions, transitions, and boundaries are often predetermined and constructed according to a programmed plan and design. Therefore, the ground-up or new construction process is typically intended to correspond to the functions of the user's activities, which are understood to take place in that building.

In ground-up new construction the spatial organization provides a spatial plan and sets boundaries for the users to perform specific functions or services. The adjacencies, circulation, and sequence of space are planned to allow for similar functions to be grouped together. Boundaries are established between functions and between public and private spaces. Primary and secondary functions can also be arranged by relationship and hierarchy. Natural daylight and views are also predetermined and planned in the original design for ground-up new

construction. Spatial organization establishes an overall configuration of the form and size for each space and function that will take place in the building.

3.3.3 Flex Space

Ground-up/new construction planned and designed to be a multi-use building and/or flex space typically has a predetermined design and plan to incorporate multiple types of users and functions. Multi-use buildings and flex spaces have the ability to accommodate a variety of uses within the space by leaving an open floor plan with limited barriers or obstacles intruding the space. Warehouses and office buildings are frequently designed using this approach. Boundaries may only be established for lavatory areas, for housing of mechanical equipment, and for stairs, elevators, and ingress and egress of the building. Occasionally, multi-use buildings and flex spaces will integrate movable walls, lighting, and separations, which can be adjusted according to occupant's functions.

3.3.4 Repurposed/Adaptive Reuse

In the reuse of new buildings or repurposing of older buildings, the new tenants must adapt their needs and functions to the existing buildings spatial organizational and layout. This creates challenges in remodeling the building depending on the building's condition and the extent of modification needed for the new intended functions. The new design will require planning around existing structural components, such as columns and load bearing walls. Demolition of interior non-load bearing walls and old cabinetry may be necessary to create larger spaces and more open floor plans. The destruction of walls for the accommodation of the new user's functions may require movement or replacement of electrical, plumbing, and mechanical systems. The building may also need updated equipment and fixtures depending on

the new user's needs and modernized building codes. Depending on the time period when the building was built and the projected repurposed building's condition, replacing the glass in the windows and replacing or repairing the flooring will probably be required. The repurposing process of older building can entail a great deal of labor and expense. This is one factor in the decision to bulldoze older buildings in favor of new ground-up construction. While this may be the case in some adaptive reuse situations, repurposed buildings are typically more sustainable and continue to carry on the city's heritage.

3.3.5 *Pop-up*

Pop-up environments use a non-traditional construction process and approach to constructing spatial organization. As previously mentioned, pop-up environments must adapt to the previously constructed space or surroundings regardless of the preexisting circumstances, while fulfilling the user's functional requirements. Because this may include occupying a space that was previously designed for another purpose or type of use, occupying a multi-use or flex space for a short duration, and/or may occupy a space by coexisting alongside another space, the spatial organization could possibly be in a constant state of flux. Similar to other types of construction methods, their spatial plans are built to the user's needs and function. Their approach, however, may be more comparable to portable, modular, and flexible environments because of their temporary or short-term use. They are also constructed in a shorter time frame than traditional construction. Parallel to portable and modular construction, pop-up environments require a method of assembly and disassembly, including the potential to be utilized at multiple locations. Since many pop-up environments are used within another building or space, they must adapt to the existing building, space, and surroundings, which add

to a certain level of flexibility in their design. By utilizing a modular and portable system, this allows for adaption to a variety of situations and alternate uses.

The design and planning of pop-up environments are typically restricted by time, so they often have a spontaneous aspect or an atypical approach to their planning and designs. Many planners may only have ten weeks or less to plan, design, and build a project. Studio East Dining designed by Carmody Groarke Architects had six weeks for the planning phase and four weeks to build and construct the temporary dining project and Hollwich Kushner Architecture had six weeks to design and build the glass cubed structures for the temporary UNIQLO store in New York, NY.^{19 20} With this short time frame there is not time for extended planning and procurement of materials. The plan, developed as far in advance as possible allowing for changing conditions, will reduce time in the end. This pre-planning of spatial organization and designed components will decrease the time of assembly and installation. Establishing a predetermined plan, which consists of several variables in the design may allow for modification to changing or unexpected situations which may occur. Although there is perhaps a deliberate plan, conceivably, the plan will fluctuate according to shifting conditions.

The extent of spatial planning and materials used may be limited by budget. This may require more innovative methods for constructing spatial organization, boundaries, and separation of public and private spaces. Using objects and flexible components that adapt or are multifunctional can provide for flexible circulation, create spatial divisions, sequence, and hierarchy within the space.

¹⁹ Hunter, Will, "Studio East Dining by Carmody Groarke, Stratford, London, UK," *Architectural Review*, September 2010,

<http://www.architectural-review.com/studio-east-dining-by-carmody-groarke-stratford-london-uk/8606006.article>

²⁰ "UNIQLO Cubes," *HWKN Projects, Hollwich Kushner Architecture DPC*, Last modified 2014,

<http://hwkn.com/UNIQLO-CUBES>.

3.4 Establishing an Atmosphere

Ching and Binggeli stated that designed environments should not only consider the functional requirements, but also encompass aesthetic enrichment and psychological enhancement of the space. An atmosphere is produced by enriching and enhancing the experience of the space through the use of materials, lighting, acoustics, thermal comfort, and furnishings. These components have the ability to enhance the “perception” of the surroundings resulting in an emotional response and overall experience by the user.

Atmospheres can evoke meaning, conjure images and memories, and give a sense of presence to the space. The perception of space has the ability to affect the mood and generate various types of responses and experiences. There are numerous ways to enhance the atmosphere through the harmonization of light, materials, and structural form, whether it is the combination of complementary materials and textures or the way the reflection of light illuminates the form of the space. Groupings of shapes, textures, and colors have the ability to produce particular effects and visual perception of the space. Visual relationships are created by the varying of sizes, proportions, volumes, and openings within the space. Glass, resin, and translucent plastics are materials that can provide a sense of transparency and openness and provide views of the exterior to connect the outside environment to the interior space. These are only a few of the possibilities that can be constructed by implementing aesthetic and atmospheric design elements into the overall design.

In new and/or existing ground-up construction originally designed and constructed for its intended purpose, the creation of atmosphere is taken into consideration in the overall

design of the building. The architects and designers have the ability to take full advantage of implementing aesthetic and atmospheric elements into the initial plan. The design of details, selection of materials, positions of windows and doors, and the craftsmanship and quality of construction, provide a particular atmosphere adding a sense of permanency to the environment.

In order to create an enriching aesthetic and experience within repurposed buildings and spaces, the buildings will not only need to adapt to the new tenants' functions, but maintain and reconstruct an atmosphere within the space. This can be achieved by recreating the original aesthetic, applying an entirely new aesthetic, or utilizing a combination of the old and new aesthetic. The new functions and placements of activities within the space are influenced by the location of the original windows, doors, fireplaces, and the amount of daylight entering the space. This placement should be of much consequence in order to achieve the desired ambience and maximize the use of the space. The visually distinctive features, details, and materials, which were previously designed for the building, can be accentuated and create focal points adding to the aesthetic and atmosphere of the space. Although many of the aesthetic features will need to be adapted according to the new user's tasks and functions, the craftsmanship and integrity of the original character of the building or space can be maintained.

A similar methodology could be applied to the aesthetic design for pop-up environments. By the utilization of existing design elements and the original building's aesthetic, the atmosphere can be enhanced. Due to the non-permanent and short-term nature of pop-up environments, the temporary users may be limited to a strict budget and/or may not wish to invest an enormous amount of money to reconstruct or renovate the space on a short-

term or temporary basis. For this reason alternate methods of creating an intriguing atmosphere could be employed and implemented. Designers and owners are challenged to accomplish interesting and inventive designs within a short time frame and stay within budget. The limited amount of time for design and construction of pop-ups contributes to the accelerated rate of ordering and receiving materials. This may affect the materials used in the design and/may overlap with the fabrication process causing the procurement and construction to occur simultaneously.

The vacant and neglected building's historic presence and the building's rough aesthetic can act as a backdrop for pop-up environments. Thus, by using the building's distressed conditions and features as assets in their design, the aesthetic appearance and atmosphere can be enhanced. Exposed bricks, pipes, and ductwork can offer an industrial aesthetic, if desired. Recycled and reclaimed materials can be used to create displays, shelving, seating, and desks. Walls and floors can be stenciled with designs, logos, graffiti, and chalk drawings as a backdrop for the building's conditions or to communicate messages and wayfinding.

Pop-up environments have the ability to create an entirely new environment within the space by using modular and portable components that change the shape or aesthetic of the space. Installing freestanding, attachable, and easily removable design components have the ability to transform the appearance of the space. Reusable materials that are simply affixed to walls and/or attach in multiple configurations create a new aesthetic. Detachable wall panels covered in fabric, metal, plastic, or removable wallpaper are a few components that are flexible for changing environments. By enhancing the space within an existing and new aesthetic, an atmosphere is created, giving a sense of presence to the space.

3.5 In Summary

In summary, pop-up environments could be defined as a three-dimensional structure or environment that emerges quickly and is designed to use a space or building temporarily.¹¹ Similar to the traditional ground-up and repurposed construction processes, pop-up environments are designed with a predetermined plan and formulated programmatically to fulfill the user's functional and aesthetic requirements. The design elements and construction methods for pop-up environments will differ from other methods of construction due to the temporality of their use. The type of design and construction methods used for pop-ups will be determined by the constraints including the type of use, duration of time, and budget for the project. Whether the pop-up structure or space is initially built for the intended user, adapted to the new user's functions, and/or used only by the user for a short-time, the utilization will alter the design approach and the mechanics.

4 TEMPORARY USE

4.1 Temporary Use Defined

What is meant by the term temporary use? What is the time duration of temporary use? And what are the distinguishing factors between temporary use and normal use? This portion of the paper will explore different characteristics of temporary use, which will provide insight into the role of pop-up environments. Temporary use is typically associated with terms, such as short-term, interim, non-permanent, transient, and brief; however, temporary use can also be

defined as, “One that serves for a limited period of time”.²¹ When designed and planned, temporary use can prompt a transformation of the site, to serve as a catalyst for change and for the development of more permanent projects.

Vienna architects and urban theorists, Florian Haydn and Robert Temel, have examined and compiled extensive research on temporary use in their book, *“Temporary Urban Spaces: Concepts for the use of City Spaces”*. The effort of these specialists to categorize and classify temporary uses has led to the definition, “Temporary uses are those that are planned from the outset to be impermanent”.²² According to this typology, the distinction between temporary use of space and normal use of space is the initial objective set, when planning the project. If the principal goal is non-permanence, the anticipated extent of time or duration of the use of space, whether it is to last one day, one week, one month, or one year, the use of space is considered temporary.²³

4.2 Temporary Use: Typology Considered

Currently, this notion of temporary use is gaining interest at local and state levels and the utilization of temporary use is being considered by many urban planners and developers as a strategic part of the urban planning process.²⁴ The type of method for implementing temporary use is predetermined and planned as part of a developmental process, and is

²¹ “Temporary,” The American Heritage Dictionary of the English Language, Last modified 2013, <http://ahdictionary.com/word/search.html?q=temporary>.

²² Haydn and Temel, op. cit., p. 17.

²³ Haydn and Temel, op. cit., p. 60.

²⁴ Lehtovuori, Panu and Sampo Ruoppila, “Temporary Uses as Means of Experimental Urban Planning,” *Estonian Academy of Arts, University of Turku, Serbian Architectural Journal*, (January 2012): 29-54, http://saj.rs/uploads/2012/SAJ2012_1_PLehtovuoriSRuoppila.pdf.

established to use a space temporarily as a secondary use of space, while the space is in a transition period to a more primary use of space. Primary use in this context means permanent use, and secondary use, i.e. temporary use, has the potential of developing into primary use. Florian Haydn and Robert Temel predicted that temporary use could form a new type of development, a category between momentary events and permanent development and/or (re)development.²⁵

In the past, temporary uses were frequently used out of necessity, so they were not always completely designed or planned; essentially causing their use to be a nomadic one, consisting of physical structures that were no more than a simple tent or hut.^{26 27} Today, many activities are associated with temporary uses that vary in degrees of necessity, scale, formality, and informality. The range of temporary use is extensive and may consist of anything from pop-up stores, stadiums, arenas, and pavilions to the basic need uses, like temporary housing, classrooms, and disaster relief. In addition, there are temporary uses of much smaller scale, such as street art, street vendors, ticket booths, food trucks, and tailgaters. Hayden and Temel attempted to delineate temporary uses as either ephemeral projects, which are short-lived projects without extension, or provisional projects that start out as short-lived, but develop into a more long-lasting or permanent project. For instance, provisional projects could be uses that are recurring monthly, annually, or biannually, and temporary uses that are facilitating change even after they end, or temporary uses that are developing into a more long-term plan or permanent uses.

²⁵ *ibid.*, p. 30.

²⁶ Jodidio, Philip, *Temporary Architecture Now!* (Italy: TASCHEN, 2011), 6-46.

²⁷ Kronenburg, Robert, *Flexible: Architecture that Responds to Change* (London, England: Laurence King Publishing Ltd., 2007), 10-11.

Whether or not the use is classified as ephemeral (only lasting a short duration) or provisional (develop into a more long-lasting or permanent project), the strategies for their use can be utilized for testing business concepts, transitioning old and new development, and for research experimenting. As Haydn and Temel's definition proposed, "Regardless of the intended duration of the use, if the initial aim is to be non-permanent, it could be thought of as a temporary environment", or in my opinion, more specifically up to the time or point that the temporary use or aim of the project develops into a more primary use.

4.3 Temporary Use: Intention, Site, and Utilization

Temporary environments can be designed to adapt to the changing conditions of the city. Because their functions are continually being modified depending on the space and conditions, their design can respond to uncertain situations. Interestingly, in such changing conditions, temporary uses are appropriating the space, claiming the space, and giving the space new meaning.

Philipp Oswalt, who is an Architect, Publicist, and Professor of Architectural Theory and Design at the University of Kassel in Germany, has completed a comprehensive research study in urban development with an emphasis on temporary use of space. Oswalt's study affirmed that there are many factors contributing to how temporary uses influence the utilization of space and the strategies that they use. Characteristics can be drawn from exploring the operations of temporary users; specifically how temporary users occupy a space, the way in which the users design the space, and the physical structure. These characteristics could provide an understanding of the ability to respond quickly to changing conditions. Oswalt

observed from his research that temporary uses have the ability to attract activity to areas and preserve, renovate, and modernize areas.²⁸ He also established that the bulk of temporary uses are informal uses of spaces, buildings, and/or areas. Oswald considers the strategies developed by everyday temporary users and the way in which they occupy space essential instruments in the process of urban development and to be used as tools to develop the spaces into more permanent uses. In his research, he identified three main types of temporary uses, into which all subtype uses are categorized: 1) shelter/refuge, 2) experimental space, and 3) springboard for one's professional career or public message.

"Urban Catalyst: The Power of Temporary Use", the significant book and case studies from his research, provided significant data for answering questions on the subject of temporary use and methods for temporary use in urban development. In the urban research project from 2001-2003 Oswald along with his team, namely, Klaus Overmeyer, Philipp Misselwitz, and twelve European partners, investigated temporary themes in the five European cities of Amsterdam, Berlin, Helsinki, Naples, and Vienna. The financial support of a grant from the European Commission Research and Innovation, contributed to the achievement of this massive undertaking, and the success of over a dozen interviews and substantial studies on the operation and utilization of temporary uses. Due to the immense findings of Oswald's investigation on temporary use, this paper will cover only a small fraction of his research.

Along with his team, Oswald analyzed temporary use with the notion that there was a distinction between informal use of space and formal use of space, and observed each of their

²⁸ Oswald, Philipp, Klaus Overmeyer, and Philipp Misselwitz, *Urban Catalyst: The Power of Temporary Use* (Berlin: DOM Publishers, 2013), 61.

patterns and characteristics of use. The premise behind his theory, that the bulk of temporary uses are informal, was exhibited in the temporary user's selection of sites and locations, the strategy to utilize the site, the operation of use, and in the physical design or structure.²⁹

Contradictory to the investors and developers who favor sites that are completely empty or sites where everything can be demolished and rebuilt, temporary users search for sites that are neglected or undervalued in the real estate market.^{30 31} Oswalt said that after city planners and the real estate markets have failed in their initial attempts to develop them, these sites become the setting for clubs and bars, start-up firms and art galleries, migrant economies and informal markets, recreational activities and nightlife.³²

4.3.1 Selection of the Site and Location

Selection of the site and location is dependent on a number of influencing factors. For start-ups and small businesses, the cost may be a key factor in determining the site and location, along with the demographics of the area or target audience they want to attract.

In contrast, established businesses and corporations may employ temporary use by selecting vacant buildings or sites within prime urban locations or densely populated areas to test the market, to sell seasonal merchandise, and to attract exclusive buyers.

Given that start-up and small businesses lack the capital to invest in expensive leases and locations, they are often priced out of the market in prime locations. The uncertainty of the

²⁹ *ibid.*, p. 1-15.

³⁰ *ibid.*, p. 81-85.

³¹ Groth, Jacqueline, and Eric Corijn, "Reclaiming Urbanity: Indeterminate Spaces, Informal Actors, and Urban Agenda Setting," *Urban Studies* 42, no. 3 (March 2005): 503-526, (accessed January 20, 2014). Business Source Complete, EBSCOhost.

³² Oswalt, *op.cit.*, 2013.

investment, demand for their product, and profit return can lead them to prefer marginal sites that are more affordable; however, this is not the only reason temporary users favor abandoned and neglected sites. These sites have a quality that responds to the temporary users' innovative concepts, their improvisation or ad hoc use of signage, objects, and functionality, which correspond to the building's rough aesthetic. Oswald said that the site must be suitable and possess a certain appeal or "spirit" for the temporary user's project.³³

The type of site or location is also chosen for its suitability to the kind of clientele or audience that the temporary users are interested in attracting. The clientele and/or audience can be an existing one or a new one. Oswald suggested the target audience is generated out of networks, groups, cultures, or subcultures.³⁴ Experimental users frequently have their own group or network, and local start-ups and small businesses are familiar with the demographics of where their customers live and shop. As articulated in the results of the reports, the uses and strategies of temporary environments are not always those that lack capital or resources for obtaining permanent use.

Temporary use is increasing in other segments of the population and at various scales. Professional organizations, established businesses, and corporations are also using temporary uses as methods of intervention, experimentation, provoking interest, and as interim uses transitioning old and new development. Each of these segments has their own methods for site selection. Professional organizations may be interested in investigative research by exploration and experimentation, while large corporations might be more concerned in testing the market for business opportunity or attracting buyers and consumers.

³³ Oswald, op.cit., p. 81.

³⁴ Oswald, op.cit., p. 73.

4.3.2 *Strategy to Utilize Sites*

Oswalt and his team observed strategies in the utilization and selection of sites that resulted in a subcategorization of the types of use. The strategies discovered from the team's study are identified as: Stand-In, Free Flow, Impulse, Consolidation, Co-Existence, Parasite, Pioneer, Subversion, and Displacement.³⁵ The following classifications of strategies are paraphrased from the literature:

Stand-In: A temporary use that fills in the gap between the previous use and the subsequent use.

Free Flow: A temporary use that persists by moving to new locations.

Impulse: A temporary use that adds activity and vitality to the site and continues to generate this same liveliness even after the temporary use ends.

Consolidation: A temporary space or area that developed into a more permanent use by the protection of public or private interests which supplies affordable space to cultural, scientific, and/or artist's temporary use.

Co-Existence: A temporary use which previously utilized a site and still operates on that same site at a small scale although a permanent use now has control over the site.

Parasite: A temporary use that operates next to another permanent use or site and exploits its use.

Pioneer: A temporary use which materializes into an event or significant incident.

Subversion: A temporary use emerges on an existing permanent site disrupting the permanent site to the point of change.

Displacement: A permanent use that is removed from its permanent site for an interim period, therefore operating for a short time as a temporarily use.

³⁵ Oswalt, op.cit., p. 35-51.

(Oswalt, Philipp, Klaus Overmeyer, and Philipp Misselwitz. "Urban Catalyst: The Power of Temporary Use". Berlin, Germany: DOM Publishers. 2013).

4.3.3 Development of Temporary Use

This categorization and recognition of types of temporary use provide insight into the prospective use of pop-up environments for revitalization of underused, vacant, and neglected spaces. By presenting alternative options to utilize buildings and space and proposing a range of strategies to repurpose spaces, suggestions using Oswald's categorization can be facilitated to assist in the deterring of demolition and to prevent tear-down rebuild of old/historic buildings. The studies reveal that the way temporary environments operate and utilize sites has possibilities for urban revitalization. Filling the gap between stand-still or old and new development, increasing activity and vitality in the area, research experimenting, coexisting of sites, and providing occupancy while temporary displaced, are a few uses that allow for a cities' constant state of change.

4.4 Formal and Informal

The most effective approach to implementing temporary use as a method of planning in the formal planning process is an ongoing debate. I will not try to advocate the most appropriate method of implementing temporary use in the formal planning process, but only present alternatives to massive (re)development and the possibilities for revitalization of abandoned buildings and spaces through temporary use.

4.4.1 *Formal*

Oswalt disclosed that the previous line between formal and informal use is now becoming blurred. Recently, public authorities, policy-makers, and developers have used the concept of temporary use as an integral part of the formal development plans. Architect Panu Lehtovuori, Professor of Urban Studies and Planning at Estonian Academy of Arts, and Dr. Sampo Ruoppila, Research Director of Urban Studies at the University of Turku have recognized four approaches that authorities have put into practice to integrate formal temporary uses.³⁶

The following approaches are summarized from their research:

1. **Consistent:** Encompass a long-term vision of regeneration with sufficient resources and plans that are closely monitored.
2. **Project Based:** Incorporate projects that are part of a long-term plan by using events to promote change.
3. **Centralized Idealistic:** Consist of prioritized regeneration projects, centralized generally to a specific area.
4. **Best Practice:** Include local projects which start out as small-scale efforts, but turn into models for larger projects and policy-making.

While this development has integrated temporary use into larger planning initiatives and official master plans, some wonder if this form of planning is still led by the mind-set of developers and commercial real-estate investors producing a top-down approach.^{37 38} The projection of promising real-estate markets and speculation of city growth has led public authorities and developers to employ temporary uses in formal plans to produce commercial

³⁶ Panu and Ruoppila, op. cit., p. 29-54.

³⁷ Panu and Ruoppila, op. cit., p. 31.

³⁸ Groth and Corijn, op. cit., p. 522.

synergies. In addition, developers have used temporary use in the current economic standstill development. Recently, municipal policy makers and developers are using agencies to conduct a curatorial-like service by coordinating the start-up businesses that are searching for short-term space within vacant buildings and spaces for lease, performing a sort of rental agency service. Jacqueline Groth and Eric Corijn argued that this often produced one-sided visions of development and at times kitsch or pseudo-authentic results.³⁹

4.4.2 Informal

Groth and Corijn's extensive research on urban development by the means of informal actors and indeterminate spaces, proposed that it is these informal uses and civil actors, "ordinary people", which are the incubators of initiating temporary activities within spaces. Conclusive studies from Oswald and Groth and Corijn's research demonstrated numerous case studies where the intervention of informal temporary use, introduced new narratives for the transformation of derelict buildings and spaces.

Panu Lehtovuori and Sampo Ruoppila described informal as taking place outside the official planning process.⁴⁰ The term informal temporary use is frequently used in milieu of non-planned space, although, according to Lehtovuori and Ruoppila's terms, informal or non-planned, have more to do with the lack of an official planning process rather than the lack of planning itself. In other words, informal temporary uses are planned by the user on their own and are separate from planning authorities, real-estate investors, and local politics. They are

³⁹ Groth and Corijn, op. cit., p. 522.

⁴⁰ Panu and Ruoppila, op. cit., p. 31-43.

often functioning without investor development and start at the micro-level. Professor Oswalt referred to the creators of informal temporary use as trendsetters, who use the surroundings to create new images for neighborhoods.⁴¹ Groth and Corijn suggested that informal uses and civil actors make-up the so-called creative market, consisting of artists, start-up businesses, and socio-cultural groups and activities.⁴² These groups are believed to have central prospects of establishing unique environments and the desire of repurposing buildings and spaces.

In addition to the implication that a large portion of informal temporary use is produced by civil actors outside of official plans developed by commercial investors and government authorities, it can be inferred that informal use may also consist of similar behavioral characteristics. Implied by the literature, case studies demonstrate the selection of sites and locations, the strategy to utilize the site, the operation of use, and their physical design or structure varies from formal use in the following traits: 1) a non-routine relationship between the property owner and the temporary user, 2) use of indeterminate sites and/or unusual site or locations, 3) spontaneous or atypical uses and functions, 4) impromptu building, and 5) lacking in one or all phases of planning.

Under this premise, the traits for informal use may vary from formal use given that they may or may not have an agreement between the tenant and property owner, and there may not be a contract at all. The arrangement between owner and occupant might include reduced rent, renting space on a weekly or monthly basis, or an arrangement for a trade of services for rent at no monetary cost. In circumstances where properties hold little or no current value, the property owner may make provisions to allow temporary use, in order to maintain the building

⁴¹ Oswalt, op. cit., p. 53.

⁴² Groth and Corijn, op. cit., p. 519.

or space. In return, temporary users might agree to sustain the cleaning, repairing, and fixing-up of the property.

Inferred by Oswald, Groth and Corijn, informal uses, which operate using indeterminate temporary spaces, regularly move to various sites so they continue with no-fixed location and exist by never claiming one single site. An example of indeterminate use may be observed in Oswald's Free Flow strategy for the utilization of sites.

The impression that informal use operates on unusual sites or selective sites that appear out of the ordinary, may conceivably be more aligned with the method of using the site rather than the site itself. The site perhaps only becomes unusual when an atypical use or users operates on the site to create an unusual or informal environment. Oswald's strategies Co-exist, Parasite, and Subversion may augment an atypical use of sites.

The act of impromptu building is generated by the user's decision to use building materials that are found or readily available at that particular time. As pointed out in the research and case studies, many of the projects utilize either found or borrowed materials. This has led to the understanding that salvaged materials from the neglected site, neighboring sites, or through networks and connections, are often implemented in the physical building of an informal temporary use. Making use of reclaimed building materials is not restricted to informal use, but the methods of salvaging the materials perhaps may differ.

Time constraints and budget can also affect the planning, design, and construction process of informal temporary uses. Logically, the amount of planning, designing, and constructing will vary project to project, dependent on the time, cost, and the extent of informality of the project. The degree of informality can influence the lack of one or all phases

of the design and planning process. Kevin Carmody, one of the architects of the temporary dining project known as “Studio East Dining” by Carmody Groarke Architects, asserted that there is no time for the procurement of materials phase in the process.⁴³

4.4.3 Blurring Formal and Informal Temporary Use

Oswalt put forward the notion that the line between formal and informal temporary use was becoming blurred. His merging of formal and informal theory may be the result of social and cultural factors. In the past, temporary use was regularly associated with poverty and nomadic or religious practices, except for in military, disaster relief, and entertainment use. Groth and Corijn suggested that informal temporary uses consisted of civil actors with marginal lifestyles and informal actors in the past, often resisting compliance to authoritarian systems.⁴⁴ Although these types of informal temporary use still exist, many informal uses today are facilitated by other agendas. Today, a new set of temporary user exists beyond the temporary uses conducted out of necessity, survival, and regulated systems. A new group of entrepreneurs has surfaced who are often operating businesses informally.⁴⁵

Activities and lifestyles have become less systematic and the socio-cultural and socio-spatial patterns are more difficult to confirm; however, changes in the workplace can be observed. The materialization of business practices, which are informal, have developed, given

⁴³ Galilee, Beatrice, “Carmody Groarke: Studio East Dining,” *Architecture-London, Domus.com*, 2010, <http://www.domusweb.it/en/architecture/2010/07/10/carmody-groarke-studio-east-dining.html>.

⁴⁴ Groth and Corijn, op. cit., p. 503-504.

⁴⁵ Williams, Colin C. and Sara Nadin, “Evaluating the Nature of the Relationship between Informal Entrepreneurship and the Formal Economy in Rural Communities,” *International Journal of Entrepreneurship and Innovation* 12, no. 2, (2011): 95-103, accessed February 27, 2014. Business Source Complete, EBSCOhost.

that many businesses are now home-based, proprietary, or in early-stages of entrepreneurship.⁴⁶ In the literature by Williams and Nadin, the merging of formal and informal business can be observed in the operations of self-employed businesses, freelancers, and individuals performing odd-jobs. Many people are operating businesses outside or in addition to their formal jobs. Additionally, entrepreneurs in the early-stages of business ownership may not operate in a formal manner while experimenting with business ideas and getting their business launched. This transformation of informal business can correlate to informal temporary uses, given that many businesses are operating informally and are utilizing temporary use of buildings and spaces on a trial basis to test the market. These business practices have assisted in the unification of formal and informal use.

4.5 In Summary

Gained from this investigation on temporary use, we can conclude that temporary uses are not just briefly occupying space, but have possibility to serve as a catalyst for revitalization. Haydn and Temel put forward the typology that temporary uses are those that are planned from the outset to be impermanent and make apparent the distinction of ephemeral and provisional uses. Oswalt talked of patterns and characteristics of informality, which are observed in the selection of site and location, utilization of site, and physical structure. Lehtovuori and Ruoppila's ideas added supplementary support for distinguishing formal and informal use and offered details for their role in official planning. Groth and Corijn agreed that the informal use and civil actors have the ability to claim space as their own and give space a

⁴⁶ *ibid.*

new meaning. The research also suggested that advantages of temporary use are witnessed in economic and social conditions. These advantages can be used to benefit property owners and tenants to maintain their properties, sustain an economic monetary flow, offer new businesses reduced rent, offer trial periods, and provide test markets for experimentation to established organizations and companies. As Oswald stated, “Temporary uses preserve, renovate, and modernize”.⁴⁷ This vision of temporarily (re)appropriating neglected sites, increases activity and vitality, experimentation, and fills gaps between old and new development.

5 TEMPORARY USE AND PHYSICAL STRUCTURE: ASPECTS OF FLEXIBLE, MODULAR, AND PORTABLE

5.1 Introduction

Characteristics of temporary use can be seen in flexible, modular, and portable architecture. The exploration of the structural components will demonstrate construction methods and design elements, which could be used in the design for temporary environments. Temporary housing, dwellings for disaster relief, pavilions, and mobile museums are a few of the structures which are used temporarily. All of these structures are flexible and versatile and have the ability to respond to complex situations and/or change. Architect and professor, Robert Kronenburg states, “This is architecture that adapts, rather than stagnates; transforms, rather than restricts; is motive, rather than static; interacts with its users, rather than inhibits”.⁴⁸ The non-permanence of these structures and objects permits a freedom of travel allowing for a transitory use and mobility to be used at numerous sites or destinations.

⁴⁷ Oswald, op. cit., 2013.

⁴⁸ Kronenburg, Robert, op. cit., p. 10.

Transformability and mobility are both concepts that can be implemented into the design for pop-up environments to allow for various configurations and to provide opportunities for pop-ups to be used short-term in many types of spaces.

5.2 Modular and Portable in Temporary Use

Modular and portable design elements were executed in temporary environments, as early as the 1800's, in the plans and designs of world fairs and expositions, for example, in the Great Exposition of the Works of Industry of All Nations held in Hyde Park London in 1851 and in the Chicago World's Fair in 1893. The Crystal Palace, a 500 meter long palace, designed by Joseph Paxton was fabricated for the London event. The structure was a modular greenhouse design made of prefabricated wood, cast iron, and 10 in. x 49 in. glass modules.⁴⁹ After six months, Paxton's structure was disassembled from the site and reassembled at a new site located in Sydenham Hill. Because modular building methods were used in the design, the structure can be relocated or transported to various sites.

The use of modular components also provides the opportunity for many of the parts to be interchangeable. Modules can then be positioned into place or rearranged within the structural frame. The manufacturing process for modular structures permits the fabrication to be achieved in a controlled environment and constructed within a short time frame. The structures of today can take advantage of these characteristics in the designs from world fairs and expositions.

⁴⁹ Merin, Gili, "AD Classics: The Crystal Palace/ Joseph Paxton," *ArchDaily*, Last modified July 2013, <http://www.archdaily.com/397949/>.

In addition to their use in fairs and exhibitions, many designs for temporary structures are associated with the entertainment and leisure industry. For example, there are temporary structures in the designs for Olympic stadiums, sports stadiums, concert arenas, shows, and convention halls. The progressive designs and construction methods used within the entertainment industry have utilized concepts of flexible, modular, and portable building methods. This technology is not only seen in temporary mega structures like the London Olympic Stadium for the 2012 Summer Olympics designed by Rod Sheard, but also in the flexibility of small-scale assemblies like stages, pavilions, vendor carts, food trucks, and tailgating setups.

It is presumed by some people that all architecture that is portable is also modular, and that modular and portable are one and the same; however, there are many buildings which are situated on permanent sites that are not portable with modular features, and there are many portable buildings that are transported to sites, which have fixed components that cannot be altered. The term flexible architecture used by Robert Kronenburg incorporated both forms. He used the term to describe any building or structure that had the ability to respond to change.⁵⁰ Flexible architecture consists of components and mechanisms designed to slide, fold, open, and close to offer the user the flexibility for change and present them with options. Buildings and structures that are portable, prefabricated, and modular are also considered non-static, responding to the user's activities and circumstances. This notion of flexibility of architecture and objects avoids set prescribed rituals and allows for alterations in response to situations.

⁵⁰ Kronenburg, Robert, op. cit., p. 10-11.

5.3 Flexible Design

Although the term flexible design was not previously a term used to classify or describe this type of architecture until the past decade, flexible design is by no means a new concept. Flexible design could be seen in the designs implemented in permanent structures in the 1920's and in prefabricated buildings even earlier, in the 1800's, with the designs of Manning's Portable Cottage in 1837, and in William Laycock's Iron Palace in 1843. The experimentation with the use of flexible elements and features was naturally incorporated into the process of solving design problems and developing solutions to functional requirements. Gerrit Rietveld incorporated the notion of flexible design in his design for the Schröder House in 1924. Rietveld's design for the upper floor integrated a system of sliding panels to allow the space to be one large open space or as many as three separate rooms depending on the arrangement of the movable wall panels.⁵¹ With his focus on a multifunctional approach to the design, Rietveld created a space that could adapt to various situations. These flexible concepts were, and still are, of interest to architects and designers today. Designs for doors that fold, walls that slide, and windows that rotate are only a few of the infinite possibilities that can be achieved by integrating flexible design into architecture.

5.4 Temporary Structure Today

Today, urban areas and public spaces have acted as a stage for pop-up environments. Temporary retail shops have appeared in neglected buildings; temporary nightclubs have

⁵¹ "Rietveld Schröder huis (Rietveld Schröder House)," *United Nations Education, Scientific and Cultural Organization, The World Heritage Center*, accessed November 24, 2013. <http://whc.unesco.org/en/list/965>.

revitalized abandoned castles in Europe and old warehouses in the U. S.; fashion shows have performed in train stations; and art installations have been exhibited along city streets.

Temporary users have taken upon themselves to express their ideas, employing temporary practices in their use and design. Many of these temporary uses were born out of creative DIY (do-it-yourself) methods, designing of spaces through experimentation, reuse of materials, and the repurposing of vacant and neglected buildings with minimal funds or resources. The use of portable and modular elements in the design of space and objects has re-imagined the present condition of the buildings, spaces, and surroundings.

6 CASE STUDIES

6.1 Case Study Introduction

Because of the fairly recent growth and development of pop-up environments, research is in its early stages so there are only a small number of well documented case studies on the prospective of using pop-up environments to reclaim a building and/or space and their potential to add vitality to an underused, vacant and neglected building or space. In its place, the temporary use of buildings and spaces will be investigated to provide similar support for pop-up environments. The purpose of my study is to demonstrate a relationship between the temporary use strategies discovered in the research for this paper and real projects utilizing spaces temporarily, in order to identify possible strategies, which might be used for a more extensive investigation.

6.2 Selection of Case Studies

In determining temporary uses for this study, the projects were evaluated by using a specific set of criteria. Although many temporary environment projects were sources of research for this paper, the following factors contributed to the final selection of projects for the case studies. These factors are as follows:

1. **Realization of the project**- implementation of a planned, built, and completed project.
2. **Initiative of use** - scientific, educational, cultural, artistic, and/or community.
3. **Response by participants and public** - unique, meaningful, memorable, or significant.
4. **Physical Structure**- physical design, craftsmanship, and/or quality of the built form.
5. **Sufficient Data**- an adequate amount of information on the case.

6.3 Methodology of Investigating Case Studies

Type of Temporary Use: The first step of investigating the case studies was to examine the programmatic requirements for the selected project and to provide insight into the approaches for temporary use of a building and/or space. This investigation will include a study of the type of use, site location, objective, and duration of use. By following Philipp Oswald's classification of temporary uses, each case study can be categorized by the type of use and approach. The nine types of temporary use and their strategies to utilize sites, which are listed in Chapter 4, are as follows: Stand-In, Free Flow, Impulse, Consolidation, Co-Existence, Parasite, Pioneer, Subversion, and Displacement. Following this strategy as a guideline will develop a better understanding of the patterns demonstrated in their approach and parallels, which can be drawn for their use.

Structure: The next step of investigating each case study was to determine the factors that influence the design of the physical structure including the spatial organization, user's functions, and location of the structure. Analysis of the building plans and construction methods utilized in temporary environments and a review of technical and structural components can provide a better understanding of the procedures used in their mechanics. In response to the changing circumstances of temporary use and short time duration of the structures, the structural systems used are likely designed using transportable, transformable, and modular design components. Frequent patterns may be exhibited in their mobility and ease of assembly and disassembly. Concepts of sustainability are also displayed in the materials selected for the structures, and many temporary uses have employed ways to reduce material waste and to minimize environmental impact.

Response/Perception: In the last step of investigating the case studies, an account of the overall response and experience will be described. This response will reveal how they are perceived by specialists, participants, and spectators. An assessment of the responses and perceptions from reviews in newspapers and online articles, academic journals and books, and interviews can measure the potential and outlook for using temporary buildings and spaces to produce vitality for underused, vacant, and neglected spaces.

6.4 Case Studies: Temporary Use

6.4.1 *Strategy 1, Stand-In: Studio East Dining*

Studio East Dining was an ephemeral dining pavilion constructed for the London 2012 Olympic Games designed by Carmody Groarke Architecture in collaboration with restaurant owner Bistrottheque. The dining pavilion, which lasted for the duration of the games (three weeks), was built on the Westfield Stratford construction site on the roof of a thirty-five meter high parking garage in East London. The concept for the temporary restaurant was the result of an impulse to utilize the site while the development of the Westfield Stratford Mall was under construction.

Placing the pavilion at this altitude and location provided panoramic views of the Olympic stadiums and events. The radial plan and precise alignment of each of the thirteen volumetric forms allowed for each structure to be oriented in a specific direction. By leaving the ends of the structure open to the air, the guests had views which overlooked the Velodrome, Queen Elizabeth Olympic Park, Canary Wharf, Victoria Park, and the London Aquatic Centre.⁵²

Because of the short duration of the structure, the concept was to construct the building using materials from the construction site, borrowing scaffolding poles, scaffolding boards, and reclaimed timber. This method of constructing the space permitted the materials to be recycled after their use. With a limited duration of six weeks to design and four weeks to construct the pavilion, the light weight metal scaffolding allowed the structure to be easily lifted and assembled quickly by only a few crew members. The mass forms were created by using scaffolding frames made of standards and ledgers covered with sheeting of industrial

⁵² Hunter, Will, op.cit., 2010.

grade heat retractable polyethylene. By enclosing the structure with the semitransparent material, filtered light was created within the space and when seen from the exterior of the space, the light produced an illuminating glow. The walls and flooring were created by using reclaimed boards.

The Studio East Dining Pavilion acted as a stand-in use while the Westfield Stratford Mall was under construction. Because of the ephemeral nature of the dining pavilion, it temporarily appropriated the site, attracting activity and vitality during the three weeks of the Olympics. The concept to build the dining pavilion was the result of an impulsive idea to take advantage of the vacant construction site and the Olympic Games.

6.4.2 Strategy 2, Free Flow: Mobile Museen and Mobile Studio

Mobile Museen, designed by Gruber + Popp Architekten, was a mobile art museum launched in 2004 by Artist Director Susa Pop and artist Hans J. Wiegner. Pop and Wiegner founded the Public Art Lab (PAL) in 2001, which consisted of an interdisciplinary team of artists, curators, art historians, architects, scientists, and multimedia producers.⁵³ Mobile Museen was the group's first attempt at a traveling art museum, which only lasted from April to June in 2004. The Mobile Museen traveled to the cities of Berlin, Vienna, and Barcelona, and popped up in public urban spaces. In 2006, PAL reconstructed the Mobile Museen under the new name Mobile Studios, which acted as a pilot project for a mobile artist's production laboratory. Mobile Studios temporarily occupied urban spaces in Bratislava, Budapest, Belgrade, and Sofia.

⁵³ Belarmino, Vanini, "Flow of Mobile Ideas with Public Art Lab," *Belarmino & Partners*, Last modified June 2008, <http://belarminopartners.com/2008/06/24/flow-of-mobile-ideas-with-public-art-lab/>.

The portable museum consisted of three cubes made of recycled white polyvinyl chloride (PVC) sheets. Each cube structure had a puzzle piece shape which allowed for changes in their positions and proximity, creating a range of organizational layouts depending on the urban site and its surroundings. The puzzle design of the form also permitted each structure to fit securely together for the ease of moving and traveling to other sites. All three of the cube formations had an open accessible interior allowing the artists to exhibit their work within the space. The minimalistic form of the structures and white glossy surface material provided a modern visual aesthetic and a clean backdrop for the artist's artwork.

The Mobile Museen and Mobile Studio's approach to the utilization of space is an example of Oswalt's Free Flow method. This approach is achieved by occupying the site temporarily then moving to the next site. The sites selected were in dense urban spaces where the museum could attract onlookers and pedestrians passersby. PAL used the Mobile Museen and Mobile Studio as experimental temporary labs to test ideas on exhibiting art outside of a typical museum or gallery setting. In the Mobile Studio project, the artists involved the audience in the art they produced by adding activity and socially educating the public.

6.4.3 Strategy 3, Impulse: Swiss Sound Box Pavilion

The Swiss Sound Box was one of the many temporary pavilions built for the Hanover, EXPO 2000 World's Fair themed, "Humankind, Nature, and Technology". In 1990, Hanover, Germany was awarded the honor of hosting the World's Fair by the Bureau International des Exposition. The fair consisted of 190 participating countries and 800 global projects from around the world. Hanover was the first city granted permission to utilize existing buildings and

vacant surrounding sites for the fair.⁵⁴ The Swiss Sound Box pavilion was the Swiss contribution to the fair. The pavilion was designed by architect Peter Zumthor along with senior building engineer, Jürg Conzett, and a multitalented team of architects, engineers, developers, carpenters, and graphic designers. Sound Box lasted for the duration of the fair, 153 days, from June 1 to October 31, occupying a vacant site. The concept by Zumthor and his team was to offer a tranquil relaxing experience with harmonic sounds and music and the aromatic scent of Swiss wine and food. In addition to introducing a Swiss experience, sustainability was a huge part of the design, using materials that could be reused after the expo ended.

The pavilion was constructed of 144 km. of newly milled non-treated lumber with each cut to 20 x 10 cm. in length. A grid-like organizational pattern was formed by using 12 stacks of lumber arranged in vertical and horizontal directions. By alternating the direction of the lumber stacks and using 9 m. high interior walls, passageways and open-square areas were produced. Each beam was assembled without adhesive, screws, or nails and was held into position by using post-tensioning vertical and lateral forces. The planks and cross members were braced by the compression of steel tension rods, which were attached to a coil spring above and steel metal plate below. The use of tension coil springs allowed for expansion and contraction of the lumber, which was only partially shielded from the weather. The majority of the interior space was open to the air with only the bar areas and service areas enclosed and sheltered by a sheet metal roof.

The pavilion lasted only five months, but it brought vitality to the vacant site in Hanover by attracting audiences with its unique Swiss experience and architecture. The strategy to

⁵⁴ Zumthor, Peter, *Swiss Sound Box: A Handbook for the Pavilion of the Swiss Confederation at Expo2000 in Hanover* (Basel, Boston, and Berlin: Birkhauser, 2000).

utilize vacant buildings and sites during the Expo2000 World Fair brought liveliness to the buildings and area, which would otherwise be empty. The temporary pavilion was used by the Swiss to be a symbol of their identity and a representation of Swiss' traditions to the public and to promote tourism, science, and culture.⁵⁵ Although this temporary structure was constructed and assembled at a grand scale and the quantity of materials required for this project was costly, the design for Swiss Sound Box Pavilion integrated many building techniques that can be observed in the temporary use of the site and the structural system. Techniques, such as stacking the lumber in opposing directions for separating space, and creating boundaries by changing the direction of the lumber, are a few approaches to creating spatial organization.

6.4.4 Strategy 4, Consolidation: Goat Farm in Atlanta, GA

The Goat Farm is located on a 12 acre site just outside of Midtown Atlanta in a repurposed building that was first constructed in 1889. In 2010, real estate developers, Anthony Harper and Chris Melhouse, reclaimed the abandoned building that was once an old cotton mill owned by E. Van Winkle Gin & Machine Works. Harper and Melhouse, who are business investors/musicians, developed a plan to maintain the building and site to support the arts, by securing spaces for art showings, music and dance performances, and events.⁵⁶ Their business model provides low-cost rents and temporary spaces for art studios and rehearsal spaces for performing arts use. The building is occupied by artists, designers, dancers, and

⁵⁵ Herrle, Peter and Erik Wegerhoff, *Architecture and Identity* (Berlin: Münster, USA and London: Transaction Publishers, 2008), 118.

⁵⁶ Endolyn, Osayi, "The Goat Farm: Urban Art Space," Edited by Collin Kelley, Atlanta INtown Paper, Published by Springs Publishing LLC, (May 2012).
<http://www.atlantaintownpaper.com/2012/05/the-goat-farm-urban-art-space/>.

musicians, who live on the property. The Goat Farm assists the young professionals and emerging artists, who are generally priced-out of the market and have limited available spaces in urban areas.

The previous owners of the property refused to sell to commercial developers, but after Harper and Melhouse's firm, Hallister Development, purchased the industrial building from the Haywood Family in 2008, Harper and Melhouse preserved the property by the temporary use of performing arts.⁵⁷ The Goat Farm site is comprised of a series of buildings with rustic brick walls, large arched windows, and large open spaces. The building's tall ceilings and open-floor plan allow for many types of temporary uses within the spaces. In-between the buildings, there are large open courtyards that act as spaces for temporary marketplaces, events, and performances to be held. Each building on the site was allocated for various types of uses, such as studio spaces and rehearsal spaces. The integration of these uses and the building's distressed barn-like aesthetic adds to the eccentricity of the uses and events.

Unlike other art and cultural centers that host temporary events, the Goat Farm has an unconventional atmosphere, attracting underground temporary uses and activities. Many of the events are unknown to the general public and only known to groups and networks hosting the event. Since the Goat Farm does not have a website and does not advertise, the events and performances are often unannounced or spontaneous. Notices of the activities are only found on Facebook, artists' websites, or through a personal invitation. The Goat Farm's use of space

⁵⁷ Wheatley, Thomas, "Goat Farm gets Sold: Atlanta cotton gin-turned artists' space finds new owner," *Creative Loafing Atlanta*, (April 7, 2013), <http://clatl.com/atlanta/goat-farm-gets-sold/Content?oid=1868024>.

and avant-garde collection of uses and events can be seen as a succession of happenings that enliven and add vitality to the site.

6.4.5 Strategy 5, Co-Exist: Atlanta BeltLine

An urban redevelopment planning strategy titled, the Atlanta BeltLine is an ongoing project in Atlanta, Georgia. The BeltLine was originally a city planning proposal by Ryan Austin Gravel as part of his master's thesis project in 1999. Gravel's objective was to use the abandoned railroad corridor, "the old Atlanta beltline", as another means for commuting/transit as a route connecting major areas and streets in downtown Atlanta to new and existing urban neighborhoods and businesses. The transit network will eventually surround the downtown and midtown area to connect Marta stations, parks, trails, and downtown neighborhoods.^{58 59}

Since the project started, the BeltLine has attracted numerous people to the area and has encouraged many commercial developers and small businesses to act in the repurposing of neglected buildings and sites along the BeltLine corridor, and also, it has inspired a number of existing businesses to adapt their building entrances by constructing secondary storefronts facing the corridor route.⁶⁰ The Krog Street Market, Ponce City Market, Atlanta Beltline Bicycle, and Bell Street Burritos are some examples of businesses that have repurposed their buildings in anticipation of the new BeltLine Project. Buildings which previously existed along the BeltLine

⁵⁸ Gravel, Ryan A, "Belt Line- Atlanta: Design of Infrastructure as a Reflection of Public Policy," (M.A. Thesis, The Georgia Institute of Technology, 1999).

⁵⁹ "World-Class from Concept to Completion," *Project History, Atlanta BeltLine*, Last modified 2014, <http://beltline.org/progress/progress/project-history/>.

⁶⁰ Burke, Kevin W., Senior Landscape Architect Atlanta BeltLine, Inc., phone interview by Mary E. Horne, Monday Oct, 28th 2013.

route, such as Paris on Ponce, Telephone Factory Lofts, and Block Lofts are adapting their buildings to the new route.

Not all the projects developed along the BeltLine are permanent, as many temporary uses of space are also being developed. The initial thesis proposal by Gravel did not encompass art along the new BeltLine route or the development of other temporary uses, which have transpired since its beginning. As the project has progressed, the local citizens, artists, and start-up businesses have taken action to implement other types of uses into the plan, and taken it upon themselves to appropriate buildings and spaces temporarily.

The development of art installations along the BeltLine has produced an additional project titled, "Art on the Atlanta BeltLine". The "Art on the Atlanta BeltLine" displays temporary and permanent art installations by professional and emerging artists, which attract audiences and vitality to the area. Its strategy is to co-exist with the BeltLine Project by temporarily appropriating the space with art installations. The majority of the art installations along the BeltLine trail were planned, designed, and constructed to accommodate the site and have employed the use of durable weather resistant materials, stability, and portability in their design.

Although the Atlanta BeltLine project is a permanent city planning and development project programmed to build transit networks and redevelop public spaces, many strategies for temporarily utilizing the site have co-existed. The anticipated growth of the Atlanta BeltLine Project has brought vitality to its neglected spaces and buildings. The BeltLine provides opportunities for revitalization of neglected areas by repurposing and the possibility for temporary uses to co-exist by integration and to bring steady growth together with the new

and old development. This project is a model for taking steps toward future development while sustaining the historic buildings and urban fabric of Atlanta.

6.4.6 Strategy 6, Parasite: Food Trucks

Food trucks frequently make use of vacant, neglected, and underused sites, temporarily repurposing the site. Spaces, which have been thought of as ugly or marginal, from abandoned parking lots to deteriorating strip centers, have been turned into active spaces by the utilization of food vendors.⁶¹ Due to a weak economy, aspiring restaurateurs and local start-up businesses have initiated a new DIY alternative to owning conventional restaurants by using food trucks. Food trucks provide a low start-up cost to open a restaurant and an easy way to test their products and ideas.

Food trucks are an evolution of the old trade of food vending from the traditional push cart vendors. The innovative structural and graphic designs that appear on the vendors' trucks have taken mobile food vending to a new level. By using creatively designed kitchen components, vendors can refrigerate, cook, and store their food while visually presenting the food or product in a unique and attractive arrangement. Beyond the customary food service window, many food trucks are equipped with sleek modern kitchens with entire façades that open. Food trucks, such as, Del Popolo Pizza and Guactruck have gone beyond the standard motor vehicle aesthetic. Del Popolo Pizza has installed a wood-fired brick oven and glass paneled doors that swing open, and Guactruck installed a large transparent façade for a view of

⁶¹ "Gas Stations, Food Trucks and DIY Districts (FTF II)," *Forward the Future Series, Hidden Unities, WordPress.com*, Last modified March 10, 2013. <http://hiddenunities.wordpress.com/2013/10/03/gas-stations-food-trucks-and-diy-districts-fff-ii/>.

the interior to reveal hardwood floors, stainless steel countertops, pendant lights, and vibrant artwork.

Instead of waiting for consumers to approach them as in conventional cafés and restaurants, food trucks set up shop where there is high foot traffic and passersby. With the assistance of social media, The Atlanta Food Trucks make use of websites, Twitter, and Facebook to post their locations, daily schedules, and maps to the sites. This is an approach to utilize temporary space by the means of a parasite plan and the use of a free flow method in order to attract activity.

6.4.7 Strategy 7, Pioneer: BMW Guggenheim Labs New York City, Berlin, and Mumbai

The BMW Guggenheim lab was a temporary lab that popped-up in New York City, Berlin, and Mumbai from 2011 to 2013, designed by Architects Yoshiharu Tsukamoto and Momoyo Kaijima, principals of Atelier Bow-Wow. The temporary mobile structure acted as a public conference space for brainstorming, testing urban issues, trends, and evaluating the public opinions on dwelling in urban cities. The project, announced in October, 2010, was a co-initiative by Solomon R. Guggenheim Foundation and the BMW Group and led by multidisciplinary teams of architects, urban planners, designers, artists, and scientists.

The program lasted for the duration of six weeks at each of the locations, interacting with pedestrians and city dwellers to obtain their opinion on urban design, and tested concepts of comfort in dense areas, views on proximity, privacy, mobility and transient lifestyles. The design proposal, which was to build a temporary structure in the middle of dense urban areas that would engage onlookers and people passing along the streets in hands-on projects and

outdoor public presentations and forums, allowed for a relaxed environment for dialogue and response. The decision, to execute an informal project and to use the densely populated cities of New York, Berlin, and Mumbai to host these pop-up experiments, would achieve the greatest responses from this type of study.

Architects Yoshiharu Tsukamoto and Momoyo Kaijima, who were selected for the BMW Guggenheim project for their non-iconic architecture, have concentrated in the design of urban micro public spaces which are customized to fit into their environment.⁶² This concept provides for spaces, which include a hybrid of functions, and focuses on the study of human daily behaviors that Tsukamoto describes as Behaviorology.⁶³ Architects Tsukamoto and Kaijima's design philosophy can be seen in the design of the 5,000 square foot structure designed for the BMW Guggenheim Lab in New York City and London. The structure functioned as a two story framing system with open public spaces at street level and a fly loft system above. By introducing the fly loft system into the design, it permitted overhead lights, video screens, equipment, and furniture to be suspended above the space when they are not in use. The fly system also allowed the entire assembly to break down in a controlled manner with all the components stored in the upper level for mobility and to allow it to be transported easily to other locations.

All three of the designs for the BMW mobile labs corresponded with the visual aesthetic of the site location, which represents the design objective, to fit into its surroundings. The lab

⁶² White, Mason, "Atelier Bow-Wow: Tokyo Anatomy," *Archinet Features Creative Commons License, Archinet.com*, Last modified May 22, 2007,

<http://archinect.com/features/article/56468/atelier-bow-wow-tokyo-anatomy>.

⁶³ Tsukamoto, Yoshiharu, "Yoshiharu Tsukamoto, Co-founder of Atelier Bow-Wow," *You Tube.com*, Last modified Oct 12, 2011. Lecture presentation by Walker Art Center and the School of Architecture, University of Minnesota College of Design. September 9, 2011,

http://www.youtube.com/watch?v=P_vpYUO7kLw.

constructed for Berlin and New York was made of black carbon fiber reinforced plastic (CFRP), which was selected for its light weight and strength, alleviating the heavy lifting of metal and permitting ease of assembly.⁶⁴ The upper level incorporated a semitransparent black-carbon mesh skin that acted as a screen to hide the mechanics and equipment housed within the loft. By using mesh, the screen added texture and permitted the appropriate amount of light to enter the space. On the ground level, additional control over the lighting and shade was accomplished by integrating curtains along the outer perimeter of the black carbon frame. The stripped down exposed metal system and the minimal box-like form fitted appropriately into the New York site and subsequently the Berlin site.

In New York, the pop-up structure designed by Atelier Bow-Wow and engineered by Architects of Record, Fiedler Marciano Architecture was positioned between Houston Street and East First Street on a vacant site between two apartment buildings in Manhattan's East Village. With the site no more than 100 ft. x 22 ft., the lab was nestled between the two neighboring buildings, and its industrial aesthetic adapted well to the rough concrete and brick walls painted with graffiti art of the adjacent buildings.

After the completion of the New York pop-up lab, the same structure traveled to its next destination in Germany. At the Berlin site, located at Prenzlauer Berg in the Pfefferberg complex, the pop-up lab was positioned in the mix of an up-and-coming historic district composed of galleries, restaurants, cafés, and art studios. The vacant site for the lab, a large open space paved with cobblestone, suggested a different atmosphere than the tight proximity and dense urban surroundings of the New York lab.

⁶⁴ *ibid.*

The Mumbai pop-up lab was also designed by Atelier Bow-Wow and co-engineered by a local Mumbai architecture firm, SDM Architects. The location for the mobile lab was built on the cultural site of the Dr. Bhau Daji Lad Mumbai City Museum built in 1872. The conceptual design for the structure was derived from the Indian *mandapa*, a porch-like pavilion used for celebrations, typically opened-air, square in shape, and supported by pillars.⁶⁵ Unlike the New York and Berlin lab's black-carbon fly loft system, the Mumbai lab was fabricated from local bamboo by Wonder Grass, a local fabricator in Nagpur, India. The bamboo structural frame used various diameters of bamboo for its truss system, which were joined or lashed together with rope at each of its intersections. Along the perimeter of the structure, the vertical bamboo members were supported by a concrete block base providing less site disturbance and functioned as additional seating within the lab. A sliding curtain was placed around the perimeter serving the purpose of a shading device and enclosure for viewing film presentations. The semitransparent fabric also softened the visual presence of the structural frame. All the components used in the physical structure had the ability to be assembled in a short time frame and were light in weight. The design intent for the Mumbai lab was to communicate a non-iconic, open, and unpretentious atmosphere and to welcome the public.⁶⁶

Each of the three BMW Guggenheim labs achieved remarkable support from design professionals in urban planning and architecture, as well as the general public. Encouraged by the results from the labs, the New York Guggenheim Museum hosted an exhibition titled, "*Participatory City: 100 Urban Trends*", which opened in October 2013, to present the outcome

⁶⁵ "Mandapa: Indian Temples," *The Encyclopedia Britannica Inc.*, Last modified 2013, <http://www.britannica.com/EBchecked/topic/361575/mandapa>.

⁶⁶ "BMW Guggenheim Lab, Mumbai," *Institutional Buildings, SDM Architects*, Last modified 2014, <http://www.sdmarhitects.com/bmw-guggenheim-lab-in-mumbai.html>.

and overall response of the labs participants. An analysis was made of the responses from the pedestrians and city dwellers who participated in the event and who voiced their opinions on issues of urban design, privacy, gentrification, food distribution, waste of infrastructure, non-iconic architecture, and small-scale change to transform the urban environment.⁶⁷ The pop-up lab has inspired communities to communicate their visions for their city and how a temporary pop-up structure could create a place for people to come together.

6.4.8 Strategy 8, Subversion: LimiteLimite Tower

The LimiteLimite Tower was a temporary project lasting from 1999-2004 in Schaerbeek, Brussels. The project was intended to be a temporary meeting and exhibition space for the local community and nearby students, but it developed into an unanticipated socially dynamic project. In the selection of the site location for LimiteLimite both the local actors and community were challenged and were instigators for the project's endeavor and outcome. The LimiteLimite assembly evolved into a non-profit organization, which set out to reclaim the Schaerbeek district to provide community facilities, social meeting spaces, and prevent isolation of community life that was absent in the district.

The projected site for the temporary meeting and exhibition space was situated in the middle of a depreciated neighborhood near Rue du Brabant and Gare du Nord Train Station on Rue Dupont between residential and metropolitan districts. The area at the time of the project was a mix of a low income residents and a so-called red-light district; however, the

⁶⁷ "Participatory City: 100 Urban Trends from the BMW Guggenheim Lab Opens at the Guggenheim Museum, New York, in October," *Press Release, BMW Guggenheim Lab*, June 28, 2013, <http://www.bmwguggenheimlab.org/press/press-release-archive/2013>.

neighborhood was also heavily populated with migrants, elderly, and young adults, who dwelled within close proximity of the site.⁶⁸ This wide-range of demographics within the community contributed to a great deal of diversity in the project, and this diversity resulted in many obstacles because of such an immense division between groups.

The creation of LimiteLimite and the conception of the temporary building that the group inhabited developed from the small-scale actions of its members. By connecting with both the local community and city partners, LimiteLimite was able to build the structure and appropriate the abandoned site. The sculptural structure, which was a 9 m. high building, was made of a translucent corrugated plastic sheeting exterior and it had an interior made of corrugated metal attached to a wood frame. The LimiteLimite building was designed by architect Chris Rossaert and built by the APAJ-Classe Chantier (Association Pédagogique d'Accueil aux Jeunes). The building, known as the LimiteLimite Tower, was completed in October, 1999 and was recognized in October, 2002 by Flemish Architecture Institute.

LimiteLimite's objective was to create a public space and establish a social community in this impoverished and diversely populated area. The project initially brought about collaboration, not only in the meeting space itself, but in the initiation and accomplishing of the project meeting space. The local actors of the project reclaimed the abandoned site on Rue Dupont and established a sense of community in the area of Schaerbeek.

⁶⁸ De Smet, Aurelie, "The Role of Temporary Use in Urban (re)development: Examples from Brussels," Edited by Benjamin Wayens, Translated by Philippe Buel, *Brussels Studies: Brussels Institute for Research and Innovation*, no.72 (November 12, 2013), <http://www.brusselsstudies.be/medias/publications/BruS72EN.pdf><http://www.brusselsstudies.be/medias/publications/BruS72EN.pdf><http://www.brusselsstudies.be/medias/publications/BruS72EN.pdf>

6.4.9 Strategy 9, Displacement: Temporary Contemporary: Museum of Contemporary Art (MOCA)

What is now the Geffen Contemporary Art Museum in Los Angeles, California was once called Temporary Contemporary: Museum of Contemporary Art (MOCA). The Temporary Contemporary Museum opened as a short-term exhibition space while MOCA Grand Avenue was under construction by architect and designer, Arata Isozaki.⁶⁹ ⁷⁰ The MOCA Temporary Contemporary was only intended to operate at that site for the duration of three years while the new MOCA was built. Architect Frank Gehry designed the space for the temporary museum in 1983. The site selected for the temporary art museum was an old abandoned warehouse, which was originally built as a hardware store and later housed police cars for the city.

Gehry used the industrial structure with exposed steel trusses and beams to create an unpretentious atmosphere. The open plan and portable features in his design contributed to a temporary and flexible environment. Moveable partition walls allowed for the space to be reconfigured in many arrangements to create different circulation patterns depending on the situation or event. Beams acted as support for the hanging screens and art installations. The old loading area of the warehouse, which previously had industrial rolling garage doors, could operate as a loading and unloading area for the artwork.

MOCA utilized the old abandoned warehouse while the new MOCA at Grand Avenue was built. In MOCA's transitional stage, a lease was signed for a three year period for the use of

⁶⁹ "MOCA at the Temporary Contemporary Opens," *History of The Museum of Contemporary Art, Museum of Contemporary Art*. Los Angeles, California, Last modified 2012, http://www.moca.org/museum/us_history.php.

⁷⁰ "MOCA Grand Avenue Opens," *History of The Museum of Contemporary Art, MOCA Museum of Contemporary Art*, Los Angeles, California, Last modified 2012, http://www.moca.org/museum/us_history.php.

the abandoned warehouse, as the Temporary Contemporary Museum. While the museum was displaced, the site acted as a secondary use of space while the primary space was developed. Due to the Temporary Contemporary's unpretentious atmosphere and informal design, it intrigued audiences, and the museum's Board requested that both the new museum and the Temporary Contemporary remain open to the public, and in 1986 the three year lease was extended to fifty years.

7 LITERATURE REVIEW: POP-UP ENVIRONMENT'S POTENTIAL

7.1 Introduction to Reviews

This review of literature proposes various possibilities for pop-up environments and provides insight and solutions for repurposing buildings and spaces. The primary objective of the reviews is to discuss ways temporary use has achieved a revitalization of vacant and neglected spaces. As mentioned in Chapter 4 on Temporary Use, there could be various reasons and methods to achieve this outcome. Research showed that property owners and developers are now aware of the possibilities for pop-up environments and are implementing their use. The reviews showed that local businesses are currently eager to test their products and that the neighboring residents are enthusiastic to assist. Additionally, architects and designers have even given their time to demonstrate how pop-ups could create interesting spaces and repurpose neglected spaces.

7.2 Pop-up as a Market Test

In a recent article, *Popping Up All Over*, posted by AIA (American Institute of Architects), Nalina Moss examined the new trend of pop-up businesses, which aimed to take advantage of vacant or neglected spaces in a sluggish economy. These urban events could be seen as a DIY (do-it-yourself) method of testing new products without the expense of long-term leases. Some businesses have used this procedure as a tool to sell exclusive products, sell seasonal merchandise, and/or establish a brand identity. Galleries, such as the Openhouse Gallery in New York City founded by Jon Daou in 2007, provided a space for implementing pop-up environments. The gallery had three properties that they lease temporarily for use as a gallery, retail space, and restaurant space. These gallery-like spaces offered new start-up companies a chance to operate a business to test their products short-term. Concepts for new businesses and products were displayed in a physical environment producing a complete dimensional experience. Greg Spielberg, the director of the gallery, described the pop-up as, "A new kind of experiential marketing that's far richer than advertising. It's three-dimensional content; it's a real experience, not a flat media".⁷¹ Although this project did not solely concern the repurposing of vacant space with the use of pop-up environments because the pop-up strategy appears to be more about testing products, marketing, and branding, the concepts used in this article put forth new ideas and possibilities for other vacant or underused spaces. The new narratives for repurposing neglected spaces also introduced innovative design opportunities for architects and designers. Moss stated, "They're challenging architects to shape spaces that

⁷¹ Moss, Nalina, "Popping up All Over," *Practicing Architecture*, AIA American Institute of Architects, n.d. (accessed November 12, 2013). <http://www.aia.org/practicing/AIAB091292?dvid=&recspec=AIAB091292>.

have a more visceral, immediate yet ephemeral impact than traditional shops”.⁷² Architects, Caleb Mulvena, principal of Mapos Architecture, and Mark Gage, principal of Gage and Clemenceau Architecture, are creatively reinventing the conditions of vacant spaces, introducing expressive designs, and revitalizing urban spaces.

7.3 Pop-up as Interim Use

In Lori Aratani’s article, *Pop-up Development May be the Bridge to Tysons Corner’s Future*, she examined the new trend of pop-ups, as a temporary means to bridge the gap between the present and future development in Fairfax, Virginia.⁷³ The pop-up stores provided occupancy at the Tysons site while the \$5.6 million Silver Rail Line Metro Station and the new Greensboro mixed-use urban development was under construction. Once completed, the developed site will accommodate offices, retail stores, restaurants, and residential units. Chairwoman of the Fairfax County Board of Supervisors, Sharon Bulova said, “Pop-ups will provide some vibrancy while we’re waiting for development in Tysons to evolve”.⁷⁴ The approach for pop-ups at this site was to provide an interim use of vacant space by using an otherwise empty site to establish vitality in the area while new construction was built. This article introduced the notion that there was a potential for pop-up environments to transition between the old and the new development. Jack Waghorn, the president of NVRetail property developer, anticipated that many of the pop-up stores would become permanent tenants once

⁷² *ibid.*

⁷³ Aratani, Lori, “Pop-up Development May be the Bridge to Tysons Corner’s Future,” *Washington Post Company*, July 29, 2013,

http://articles.washingtonpost.com/2013-07-29/local/40887380_1_strip-mall-tysons-corner-pop-up.

⁷⁴ *ibid.*

the new development was completed, bringing unique retail to Tysons Corner. If the local unique stores maintain enough business and remained after the completion of the newly constructed mixed use development, this process could provide possibilities for other start-up businesses in transitioning vacant and neglected sites.

7.4 Pop-up as Transformative

An article by Maureen McDonald titled, *Pop-up: Spruce-up*, discussed how a once neglected retail area in Detroit, Michigan was transformed by a pop-up design competition among teams of architects and business owners. The challenge was for architects and local entrepreneurs to team up to transform the desolate Eastside Retail District at Jefferson Avenue.⁷⁵ The project initiated by developer Ritchie Harrison along with the assistance of the American Institute of Architects Detroit and a grant from DTE Energy Company invited fifty architects and ten local business owners to design and showcase new pop-up stores in the district that had been abandoned for twenty years. Architects and student architects paired up with the businesses to build out their spaces, each team having a fixed \$2,000 budget. This minimal budget challenged the architects to use resourceful materials and inventive design solutions to build and equip the spaces. Church pews became bar tops, wooden pallets became chairs and benches, and bike wheels became light fixtures. The completed project attracted audiences and provided recognition to the retail district and to the pop-up businesses to prove that a once neglected site could have a new life.

⁷⁵ McDonald, Maureen, "Pop-up Spruce-up: Architects and Entrepreneurs Team Up to Show off Revamped Eastside Buildings," *Crain's Detroit Business*, *Crain Communication Inc.*, August 4, 2013, <http://www.craindetroit.com/article/20130804/NEWS/308049979/pop-up>.

7.5 Summary of Literature Reviews

The various uses of pop-up environments discussed in these articles provide insight into some of the current trends that are taking place in cities across the U.S. and Europe, as well as present possibilities for the use of pop-up environments. Tysons Corner's city planners and developers are aware of the potential for using pop-ups in vacant spaces to transition between old and new development in Fairfax, Virginia, and the Eastside Retail District in Detroit, Michigan, where they implemented pop-up stores to prompt regeneration in the area by repurposing the twenty year old neglected building. In New York, business owners are taking advantage of vacant or neglected spaces in a slow economy without the cost of new construction. Owners of the OK-LA pop-up store in Oklahoma City are testing their unique merchandise without the commitment of a long-term lease, and established companies, such as Nike, DKNY, and Hermes, are using pop-up stores to sell exclusive products to select markets.

8 Thesis Project and Gallery Exhibit

8.1 Project Introduction

The findings revealed by Hayden and Temel's theories on temporary use, the content collected from Kronenburg's vision on flexible design, and recurrent elements from the research case studies influenced the development of a unifying theme for the design project. The structure for my design project applies several principles taken from the research on temporary uses of space. The following principles will be utilized in the design: 1) A structure designed to use an underused, vacant, or neglected space temporarily to create vitality, 2) A

structure designed to adapt to surroundings and atmosphere, 3) A structure designed to employ portable, modular, and flexible design components, and 4) A structure designed with the capability of being used in various locations.

8.2 Design Problem

Art students at the Ernest G. Welch School of Art and Design currently need a retail display to sell their artwork on a periodic basis. The present method for displaying and selling artwork consisting of two folding tables in the entry of the School of Art and Design does little to represent the creativity of the artwork, effort spent producing the art, or to inspire patrons to purchase the artwork. The funds received from the “bake sales” (artwork) could provide opportunity for students to travel to national and international art conferences and shows. It is an important aspect of a Bachelor of Fine Arts and Master of Fine Arts student’s education to acquire the professional practice of traveling to observe art in offsite galleries and art exhibitions.

8.2.1 Project Goals

Many students are under tight budgets and cannot afford to attend these offsite art functions. In order to accommodate the students’ travel experience, I propose to have a pop-up art store within the Ernest G. Welch School of Art and Design Building to sell students’ artwork on an interim basis in order to fund students' travel to offsite art conferences, galleries, and art fairs. This project will accommodate BFA students’ artwork from Drawing, Painting, and

Printmaking; Photography; Sculpture; Ceramics; Textiles; Graphic Design; and Interior Design programs. The project goals are as follows:

- To sell artwork providing funding for students to attend offsite art conferences, galleries, and art fairs.
- To provide a space for students to display art work from Drawing, Painting, and Printmaking; Photography; Sculpture; Ceramics; Textiles; Graphic Design; and Interior Design.
- To give exposure to the students' work and Ernest G. Welch School of Art and Design.
- To provide opportunities to interact with other GSU students and local communities.

8.2.2 *The Design Program*

Objective: To design a transportable retail display for art students attending the Ernest G. Welch School of Art and Design to sell their artwork on a periodic basis. The displays should:

- Be able to accommodate work of a minimum of 10 art students.
- Be efficient to assemble and disassemble with two people.
- Be stable so as not to tip over due to crowds of people and heavy foot traffic.
- Be a straightforward process for putting new art on display when another is sold.
- Be simple to brand, including places for signage and logos.
- Be cost-effective in terms of building, purchasing materials, and construction.

8.2.3 *Site Selection*

The selected site for the thesis project is the Ernest G. Welch School of Art and Design located on the Georgia State University Campus at the intersection of Peachtree Center Avenue

and Gilmer Street in downtown Atlanta. The student mobile art store will offer the possibility of moving to multiple locations within the school. Primary, secondary, and potentially tertiary site locations will be selected.

The primary location for the store is inside the Art and Design School's foyer area directly inside the doors of the Peachtree Center Avenue entrance. This will be a suitable site for the GSU art students to display and sell their work, as they are already familiar with the site, and it can attract other art students to purchase work. The foyer/entrance area is positioned between a wall of elevators connecting to classrooms on the above levels, as well as two Ernest G. Welch Art Galleries. The entire foyer is approximately 823 sq. ft. Due to the heavy foot traffic and egress codes for the space, there is a requirement for sufficient circulation around the mobile art store, so as not to block the entrances to the two art galleries, entrance to elevators, or entry/exit of the building. In order to allocate floor space for these required paths of travel, the structure should sit in front of the small art gallery located on the north side of the foyer. At this location, there is 14 ft. x 11 ft. (172 sq. ft.) of unused floor space, which would not encroach on the flow of travel and allow enough space for the structure and the appropriate circulation.

The secondary site location is within the Welch School of Art and Design located in the back of the large Ernest G. Welch Art Gallery. The student prototype art store will be shown at this site for the duration of one week; therefore, the focus of the design will be to utilize the primary site in the gallery foyer. However, the secondary space should still create an intriguing atmosphere and demonstrate the functionality of the structure. In back of the large art gallery, there is 36.5 ft. from left to right and 19 ft. front to back, approximately 694 sq. ft. total, which allows for ample floor space for the prototype pop-up retail store. One challenge of this site

location is the lack of visibility from the gallery entrance due to a large partition wall that is positioned in the center of the art gallery dividing the front of the space from the back. Taking into account that the partition wall is only 13 ft., does not extend the entire length of the room, and is positioned directly in the center of the space, there is approximately 12 ft. on either side of the partition allowing for visibility of the structure. It is possible to design the prototype pop-up retail store so that it can be viewed when entering the space, if it is positioned to either the left or right side of the partition wall.

The tertiary site locations may encompass a number of spaces on the Georgia State University campus or off-campus. This is an undetermined site, but the design for the student art store will take into consideration the possibility of use at GSU events.

The primary and tertiary sites consist of heavy traffic areas and include a more confined circulation; the structure will need to be more compact or compressed at these sites. However, the secondary site is a large open space and the structure has the potential to expand and spread out within the space. This could present the option of a three-dimensional structure where people can walk around or through the various components. By the arrangement of objects or displays, the mobile store can be in close proximity at the primary site and spread out at the secondary site, creating a different image or experience at the various locations.

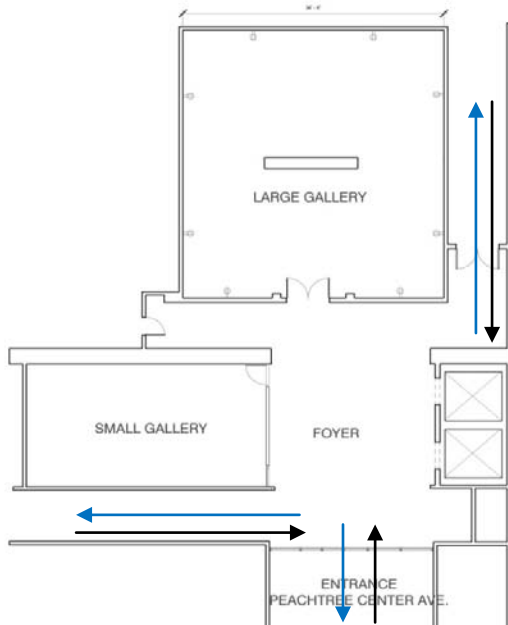


Figure 1: Floor Plan: Ernest G. Welch School of Art and Design, Study of Circulation.

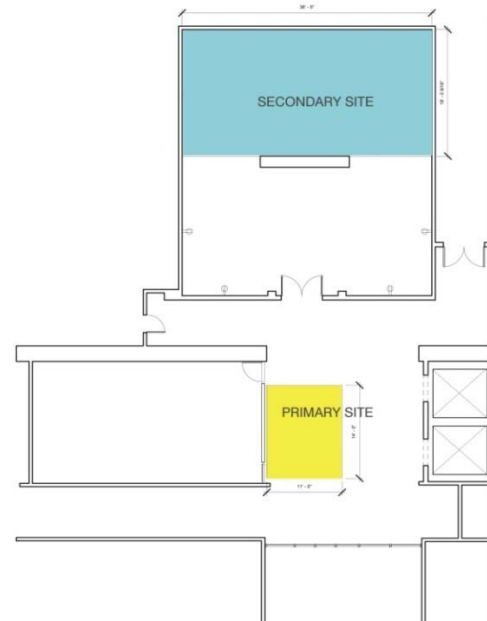


Figure 2: Floor Plan: Ernest G. Welch School of Art and Design, Study of Primary and Secondary Use.

In addition to adhering to the project program and project goals, the space should be interactive and collaborative with a sociable atmosphere, providing a communal space for the students to observe and engage with the artwork and other students. This concept of social engagement at the primary site is greater, than in the secondary location, apart from the night of the gallery reception. At the primary site, the artwork will be utilized more in the viewing and purchasing of artwork. To achieve this concept, the design should consider the placement of the displays and artwork to incorporate a tactile experience.

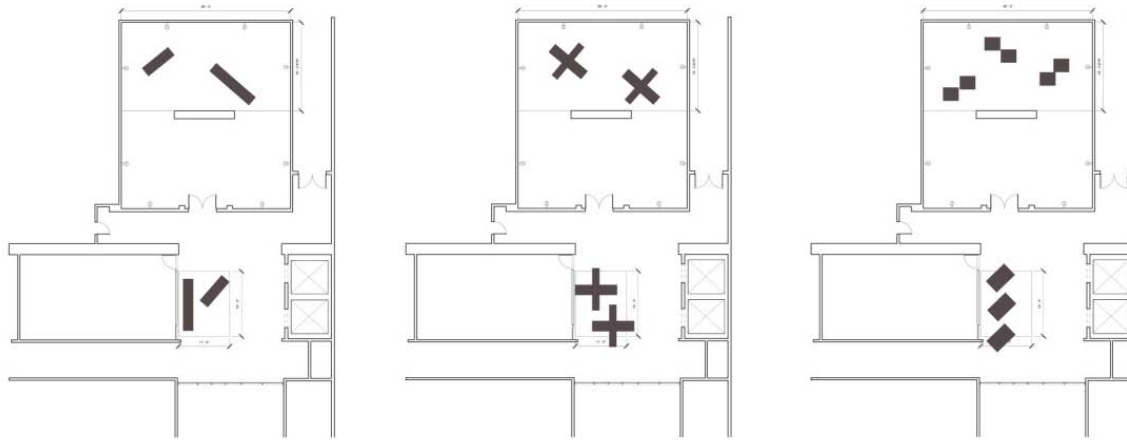


Figure 3: Placement Study

8.3 Design Concept

The design of the structure is a prototype for a pop-up retail store, which will initially be used as a mobile art store for students' artwork at GSU. The design must accommodate a variety of sizes and thicknesses of artwork and prints, bearing in mind that the artwork may be a design printed on paper, textile, photograph, or a painting on canvas.

The design should allow for a tactile experience allowing the observer or passerby to observe the artwork up close, and should not be contained within a display or behind a sheet of glass or plastic. By attaching a ledge, clips, or magnets to the structural component, it would allow for a variety of artwork sizes and thicknesses. However, designing a structure with a ledge seems uninspiring and uninteresting. Clips may leave indentations on the prints or photos, and may not hold thicker canvases.



Figure 4: Design Option # 1

The use of magnets appears to be the most versatile and effective option to hold the art work. In Design Option #1 each of the three structural pairs (total of six structural forms) was designed to contain four strips of metal inset into the face of the structure to which the magnets can be attached, thereby, holding the artwork in place. The structures in pairs of two, the one on the left at 2.5 ft. in width and the one on the right at 1.5 ft. in width can be arranged side by side, separated, or turned horizontally to form a stacking formation. The positioning of the two structures next to each other could allow for more configurations of larger artwork and for larger art pieces. Although the structural forms work well for a prototype pop-up retail store and attaching artwork, the size and weight of the structure is too heavy for mobility.

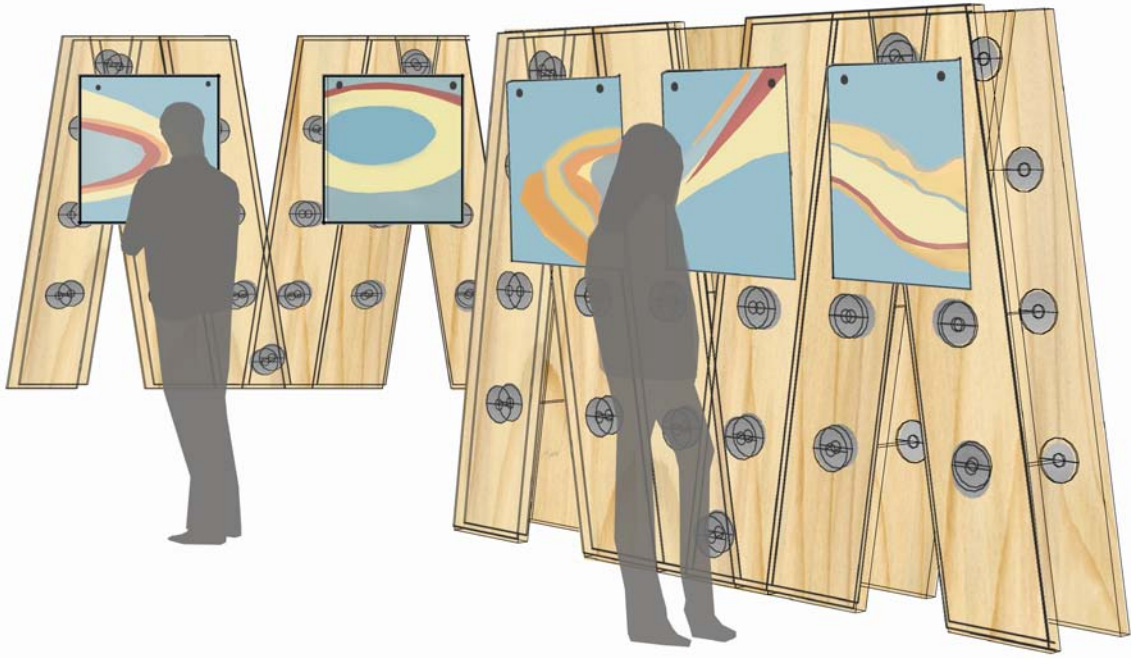


Figure 5: Design Option # 2

In Design Option #2 magnets are also used for versatility of holding the artwork. The structure, a ladder-like form, is designed with circular metal discs to which the magnets can adhere. Each of the structures can be flipped 180 degrees and aligned in an alternating pattern. They can be arranged side by side or apart. Similar to Design Option #1, by positioning two or more of the structures next to each other, it will allow for larger artwork. The design for Option #2 has the potential of creating many interesting arrangements as a pop-up retail store by placing the structures in a variety of groupings. The structure is light in weight for flexibility and ease of mobility; however, the stability of the structure is problematic in high traffic areas. Due to the height and the narrow width of the structure, it is not solid or stable enough to act as an individual freestanding unit.



Figure 6: Design Option # 3, Section Pods

After taking into account the mobility and stability of the structure, along with input from my thesis committee, the new pod shape was produced. The design for Option #3 is a design concept that was developed from a detail sketch, using standoff pegs that extend out from the back surface to hang canvas artwork. The original vision was to construct a designed pattern using hundreds of holes in the back surface with the projection of metal sign standoffs. If the pegs stand out from the surface approximately 1 1/2" from the back surface, this will allow for canvases to rest on the pegs. The nickel plated sign standoffs would protrude from the surface generating a prominent punch out effect of the cylindrical metal hardware. Using nickel or iron would allow for magnetization and the attachment of printed artwork.

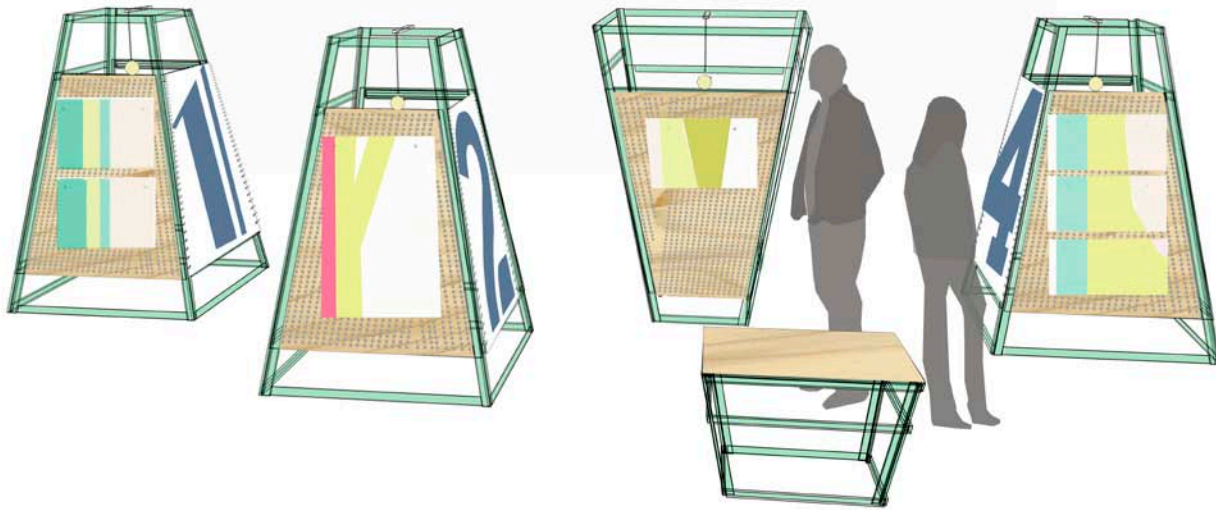


Figure 7: Design Option # 3, 3-D Perspective Pods

The spacing of each of the pegs would need to be at least one inch or more apart from one another to permit the canvases to sit properly in-between each peg; however, if the canvases are different thicknesses, the pegs could cause problems with the canvases sitting flat against the back surface. After taking into consideration how the canvases would sit on the pegs, it appears as though the pod shape form in Design Option #3 would not allow the canvases to sit flat against the back surface due to the slant of the structure.

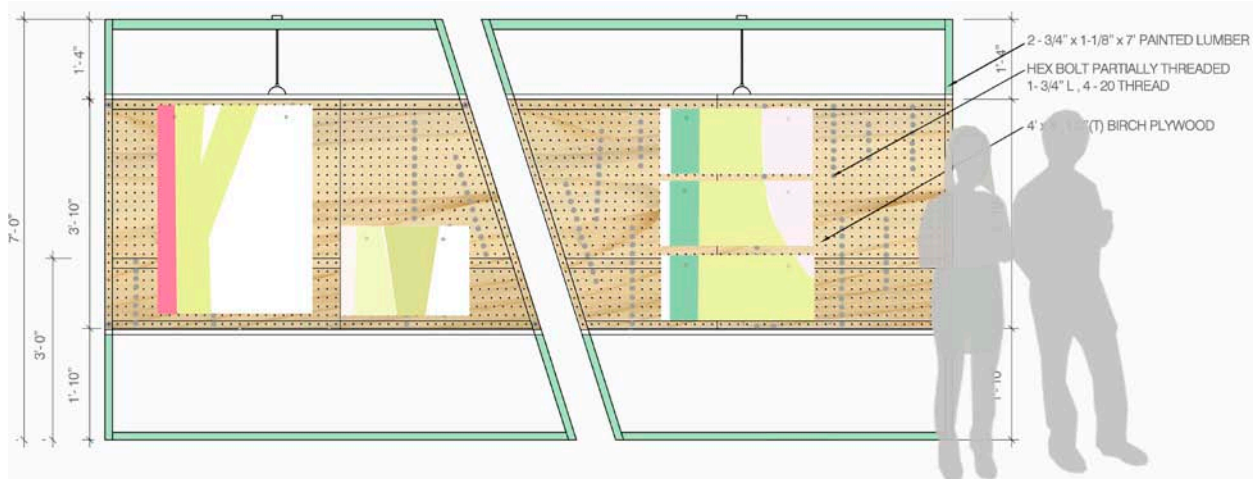


Figure 8: Design Option # 4, Section Final Design

Design Option #4 uses the same concepts for the standoff pegs, but the surface will be a flat plane allowing the canvases to sit even against the surface. The design of the angle form in option #4 is an important element that I thought added to the design of the pop-up retail store. The structures can be pushed together to produce a lengthy space for showing art or they can be used apart to produce various effects. The frame is made of 2"x 4"x 8' lumber milled down to 1 1/8" x 2 3/4" to create the visualization of thin lines, but strong enough to maintain stability. Attached to the front and back of the lumber frames are birch plywood panels, each side 3'10" in height and approximately 6' 3" in width. Each of the plywood panels has 400 holes punched out with the CNC Router in a designed pattern. The quantity of holes allows for the standoff pegs to be moved around for different arrangements of the artwork. The pegs can also be taken out when they are not in use.

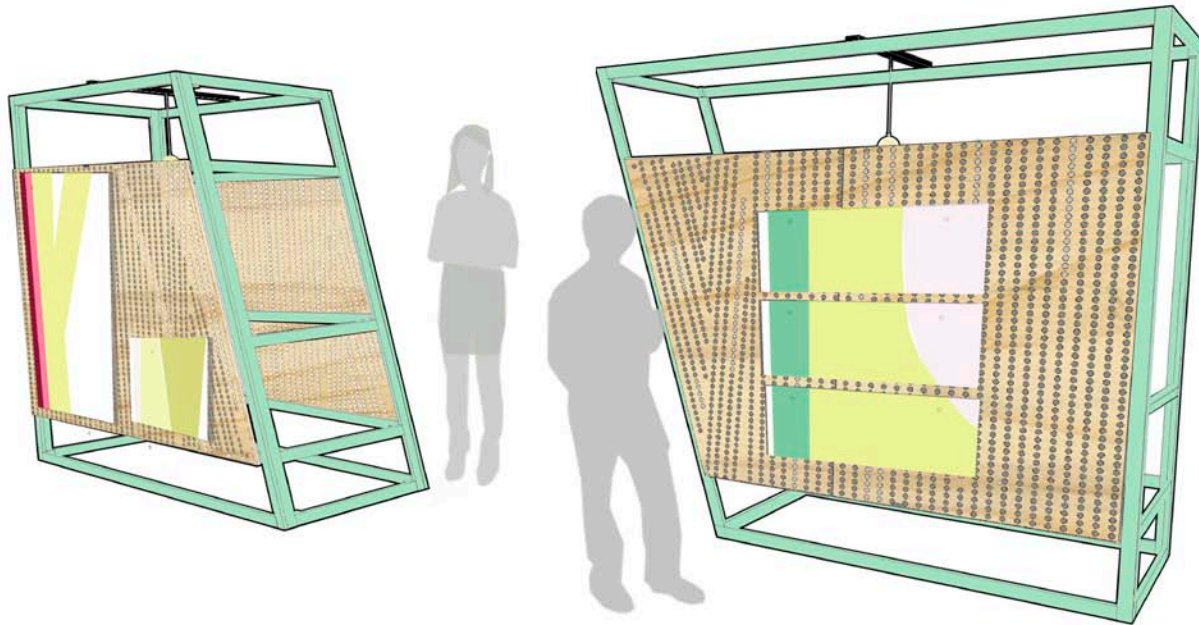


Figure 9: Design Option # 4, 3-D Perspective Final Design

In order to sustain the idea of mobility, the frame is assembled using square socket head or Allen wrench screws. This will permit the structure to be assembled and disassembled within the space. The frame is structurally secure, particularly with the extra crossbar at 3 ft. above the ground. Incorporating the crossbar at this height around the perimeter presents the option of shelving to store items, display merchandise, and/or to be used as a merchandise checkout area.

8.3.1 Anticipated Design Challenges

One of the main challenges of this design project was maintaining the quality of the design and craftsmanship with the defined parameters, such as budget and short-time restrictions.

Another anticipated challenge was ordering and receiving parts under a strict time line.

8.3.2 *The Making of the Structure*

The prototype pop-up retail structure took approximately six weeks to completely fabricate. As I expected, researching the most cost effective materials and receiving quotes for materials took a considerable amount of time, and the purchasing of material was still taking place simultaneously with the building process. However, if I had not taken the time to research the most efficient prices of materials, I would have spent considerably more and gone way over budget. Although there were many challenges in the building of the structure, the knowledge that I learned from using the machinery, constructing the structural components, and the process were worth it. One tip that I can share is to order more materials than what you think you might need.

8.4 Gallery and Reflection

The Thesis Galley exhibit lasted for one week, from April 7- 11, 2014 and the construction of the pop-up store was behind schedule. Delays in fabrication, ordering materials, and my inexperience in woodworking and building the structure, pushed the installation about a week behind the schedule that I had anticipated. The pop-up structure completed and installed by Monday the 7th and positioned within the space on its own, the standoff peg bolts in place, but without the artwork. Only on opening night Thursday, April 10th did the prototype pop-up retail structure become active with the artwork. This essentially made the exhibit feel more like a real pop-up store.

After viewing the show, my professors offered a couple of ideas, which could have also been interesting to the exhibit. One idea was to arrange the structure in a different position each day of the gallery show. The other idea was to have the prototype pop-up store display merchandise in various ways throughout the week to show its versatility. By using either of these approaches, the design of the structure and the various possibilities of displaying retail products could have been demonstrated.

Another suggestion I realized and heard from other critiques was to include information describing the project and goals. Due to me not always being in the space to describe the strategies of temporary use and pop-up environments, this would have been informative. All in all, there was a great turn-out at the gallery opening, and I learned so much from the experience.

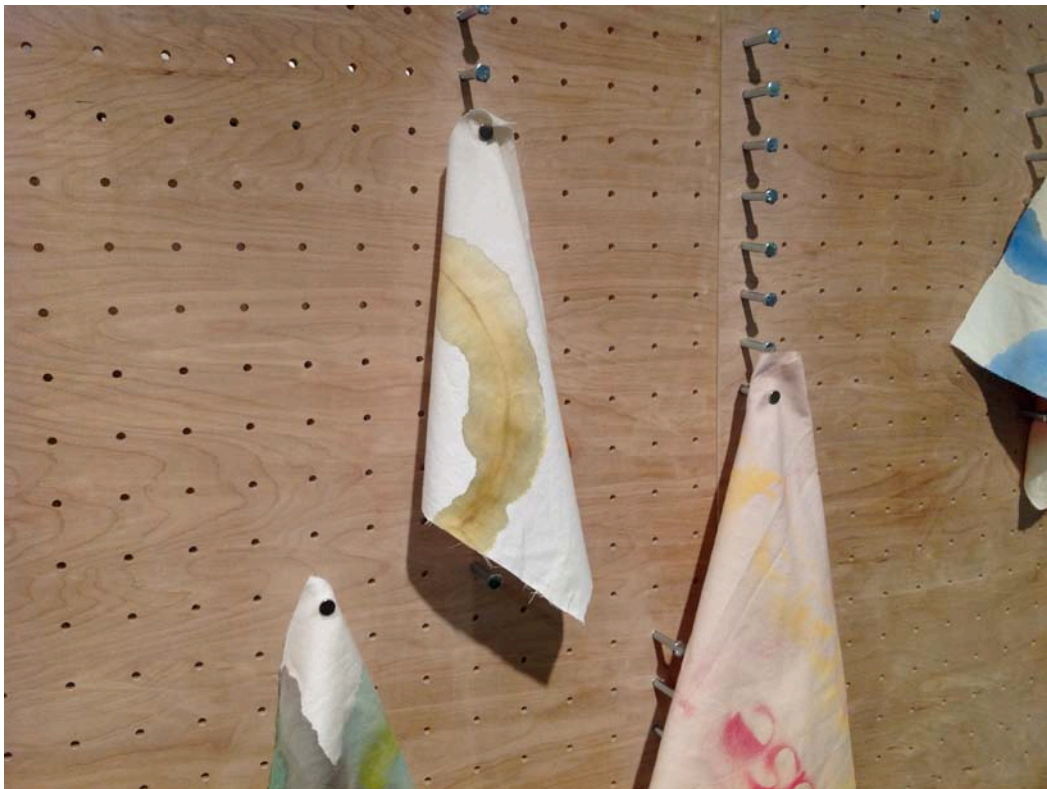


Figure 10: Gallery Installation, Photo by Melissa Paige Taylor, April 10, 2014



Figure 11: Gallery Installation, Photo by Melissa Paige Taylor, April 10, 2014

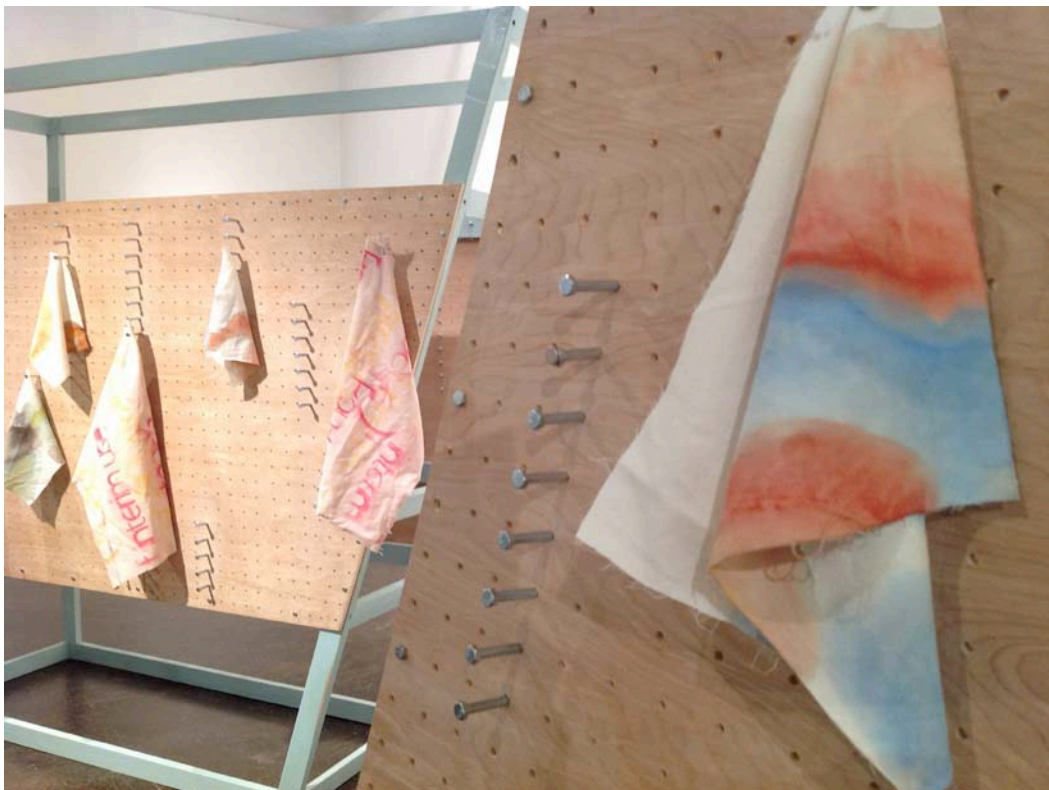


Figure 12: Gallery Installation, Photo by Melissa Paige Taylor, April 10, 2014

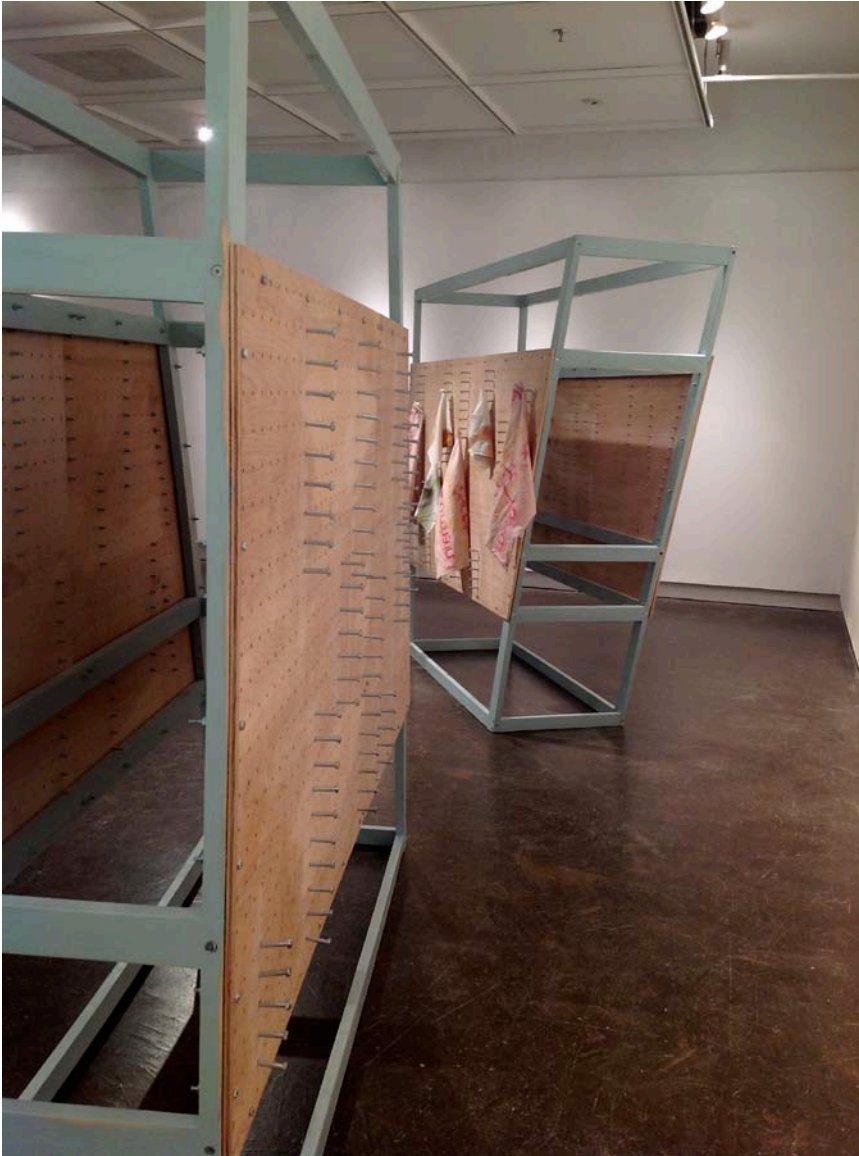


Figure 13: Gallery Installation, Photo by Melissa Paige Taylor, April 10, 2014



Figure 14: Gallery Installation, Photo by Melissa Paige Taylor, April 10, 2014

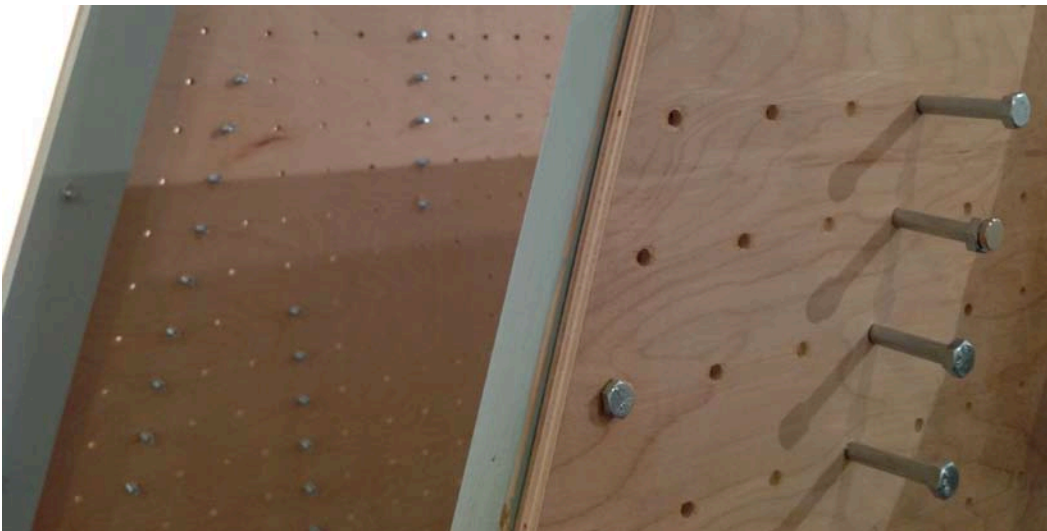


Figure 15: Gallery Installation, Photo by Melissa Paige Taylor, April 10, 2014

9 CONCLUSION

This paper puts forward a new approach to the revitalization of underused, vacant, and neglected buildings and spaces by introducing the use of temporary pop-up environments. By presenting possibilities of renewal and avoiding the dependence on massive (re)development, temporary use can assist in repurposing older buildings and sustaining the city's heritage. Temporary use has the potential of adding activity and new meaning to these sites, regenerating the blighted areas. Additionally, temporary use has the prospect to encourage new growth of small businesses, start-ups, and local entrepreneurship.

As there was not an established definition of the term, "pop-up environments", a new definition for pop-up environment was offered using the definition of pop-up from The American Heritage Dictionary, augmented by Ching and Binggeli's philosophy of designed environments, and the term, "temporary use", defined by architects and urban theorists Florian Haydn and Robert Temel. The blending of phrases demonstrates a more articulate and architectural depiction for pop-up environments, which may be defined as a three-dimensional structure or environment that emerges quickly, and is designed to use a space or building temporarily. Pop-up environments are planned from their conception to be impermanent, and they are designed and constructed to adapt to the space to fulfill the user's functional and aesthetic requirements.

Case studies presented examples of how temporary use and social factors have the possibility of reclaiming neglected buildings and spaces, in order to establish a new meaning and assign new use, whether ephemeral use or provisional use. By observing how temporary users utilize the site and occupy a space, the operations of their use, and the way in which the

users design the physical space and/or structure, certain behavioral traits and strategies could be seen. Architect and Professor, Philipp Oswalt, categorized and documented these strategies from his research as: Stand-In, Free Flow, Impulse, Consolidation, Co-Existence, Parasite, Pioneer, Subversion, and Displacement. The case studies presented in Chapter Six provide relevant examples of the use of each of these nine strategies that confirm Oswalt's theory.

Table 9-1 Strategies of Temporary Use and Physical Space

Temporary Project	Strategy	Utilization of Site	Physical Space and/or Structure
Studio East Dining Pavilion	Stand-in	A temporary use of a stand-still construction site. Used to take advantage of the vacant site utilizing the site during the London Olympic Games.	The use of stand-still construction site. The design of 13 volumetric forms made use of borrowed scaffolding poles covered in a sheeting of industrial grade heat retractable polyethylene. Scaffolding boards and reclaimed timber were used for walls and flooring.
Mobile Museen and Mobile Studio	Free Flow	A temporary use achieved by occupying a site temporarily before moving to the next site. The user uses the space as an experimental use to test concepts of mobile art studios and exhibiting art outside the traditional museum.	The use of open public space. The design of three cube structures with a puzzle piece shapes allowing the cubes to interconnect. Surface material made of hi-gloss recycled white polyvinyl chloride (PVC) sheets.
Swiss Sound Box Pavilion	Impulse	A temporary use which brought vitality to the vacant site in Hanover by attracting audiences with its unique architecture and experience. The Architect and the Swiss used the site to enhance the Swiss culture and identity.	The use of vacant site. The design uses stacks of lumber arranged in vertical and horizontal directions to create walls and boundaries. The lumber stacks are compressed using post-tensioning vertical and lateral force using steel tension rods attached to a coil spring above and steel metal plate below.
Goat Farm	Consolidation	A temporary use acting as a cultural center, which hosts temporary events, art exhibitions, and performance art. While providing temporary events, the Goat Farm provides short term studio spaces and rehearsal spaces for short-term leases.	The use of an abandoned mill. The building design is utilized for its tall ceilings and open-floor plan, which allows for many types of temporary events.
Art on the Atlanta BeltLine	Co-Exist	A temporary use achieved by utilizing the present construction of trails, paths, parks, and transit network which will eventually surround downtown and midtown Atlanta, with the installation of art to activate the area.	The use of unoccupied paths, trails, and parks with art installations, which are constructed to accommodate the space and employ the use of durable weather resistant materials, stability, and portability in their design.
Atlanta Food Trucks	Parasite	A temporary use which makes use of vacant, underused, and neglected sites by temporarily attracting activity with unique food, vehicles, and graphic art. The interest contributes to high foot traffic and passersby.	The use of vacant and underused parking lots. Food trucks, innovatively structurally altered trucks and applied modern graphics. Many trucks are equipped with sleek modern kitchens with entire façades that open.
BMW Guggenheim Labs	Pioneer	A temporary use achieved by experimental use to educate, promote awareness, and to test concepts. The temporary use made use of sites to hold public forums and conference spaces for brainstorming, testing urban issues, trends, and evaluating the public opinions.	The use of vacant lots and streets. Two story frame work made of black carbon fiber reinforced plastic (CFRP). The upper level incorporated a semitransparent black-carbon mesh skin that acted as a screen to hide the mechanics and equipment housed within the fly loft.
LimiteLimite Tower	Subversion	A temporary use by a small non-profit organization assembled as a gathering and meeting space for students and local community. The desolate area and vacant site achieved a revitalization of the site and sense of community.	The use of an abandoned site. The structure, a nine meter high building, made of a translucent corrugated plastic sheeting exterior and interior walls made of corrugated metal attached to a wood frame.
Temporary Contemporary, (MOCA)	Displacement	A temporary use, which acted as a secondary use of space while the primary space was under construction and development.	The use of an abandoned warehouse. Open plan and moveable partition walls allowed for the space to be reconfigured in many arrangements to create different circulation patterns depending on the situation or event.

The findings from the case studies revealed that everyday temporary users operated on underused, vacant, and neglected sites utilizing the following methods: to be an interim use, to fill the gap between stand-still or old and new development, to act as a experimental space, to test concepts, ideas, and products, to promote art, architecture, and identity, to endorse a social and/or political message, to provide a gathering, meeting space, and event space, and to act as transitional space while in-between their primary occupancies. The examination of case studies led to results supporting Oswald's testimonial of case studies from his research, which states that the primary motivations for temporary uses are 1) shelter/refuge, 2) experimental space, and 3) springboard for one's professional career or public message.⁷⁶

As a result of shifting factors from both social and economic conditions, demographic shifts, suburbanization, and deindustrialization, the abandonment of buildings and spaces have dispersed pockets within areas, which have left neglected spaces deteriorating the streetscape and neighborhoods. The vacant and unoccupied spaces leave the buildings open to criminal behavior in the area. Many of the abandoned buildings can develop into spaces for trespassing, vandalism, squatters, prostitution, and drug use. The condition of the neighborhoods and community suffers as a consequence of these circumstances. Repurposing the buildings and spaces with temporary/interim uses, such as pop-up environments, can assist in renewal of the buildings and spaces to postpone massive (re)development. The abundance of new extensive development plans for these neglected sites diminish our inventory of once proud historic buildings and neighborhoods. The surplus of this new construction is often a hegemonic or ideological approach by dominate real estate developers and investors, which leads to

⁷⁶ Oswald, op. cit., p.60

enormous development projects that only high income groups can afford and often end up unfilled. This teardown/rebuild approach frequently generates gentrification of the local community and loss of the city's heritage.

Pop-up environments provide a middle-ground approach to revitalization using small-scale changes to reshape urban areas by conceptualizing everyday spaces and transforming the mundane or ordinary situations in unexpected ways. Temporary users have taken upon themselves to express their ideas, employing temporary practices in their use and design. Many of these temporary uses were born out of creative DIY (do-it-yourself) methods, the designing of spaces through experimentation use and testing concepts. Often temporary uses start at the micro-level and are frequently associated with informal users. Understanding how these everyday temporary users utilize buildings and space is pertinent to the progress of employing temporary use for revitalization. It is my contention that the temporary use of pop-up environments will reinvigorate an area and spur small-scale development to produce a positive change in neglected areas and create long lasting structures.

In addition, temporary use has the potential to encourage new growth of small businesses, start-ups, and local entrepreneurship. Start-ups and small businesses test their concepts and products, while establishing a trademark or identity, and well-established businesses can sell exclusive products, sell seasonal merchandise, and experiment with new roll-out concepts. This form of regeneration, by temporarily occupying neglected sites with temporary uses, encourages the development of unique business growth, increases activity, prevents vandalism, and adds vitality to the area.

This paper proposed various possibilities for the use of temporary pop-up environments and provides insight and solutions for repurposing and revitalization of buildings and spaces. Temporary pop-up environments can encourage unique designs and creative ideas to transform and restore these neglected buildings and spaces. By developing new uses and introducing new narratives for the neglected spaces, interest is added to a building and space, thereby, giving the site new meaning.

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