

PUTTING SMELL IN ITS PLACE:
THE CATEGORIZATION OF ODOR PRESERVATION PROJECTS

Justin Miles Thomas Clevenger

Submitted in partial fulfillment of the requirements for the degree
Master of Science in Historic Preservation

Graduate School of Architecture, Planning and Preservation

Columbia University
May 2018

Acknowledgement

I initially became interested with the topic of smell in preservation practices when I participated in Jorge Otero-Pailos and Andreas Keller's Experimental Preservation course in the spring 2017 semester where we began an initial study of smell, how western society utilizes, and underutilizes, the sense of smell. In the course of the semester long course we attempted to train ourselves to be able to recognize different scents and how different scents can trigger different emotions and memories. Then we were tasked with creating our own scent which revolved around a particular person, object, place, time or event at the J. P. Morgan Library. We had to thoroughly research every aspect about our chosen topics and then in order to create our olfactory recreations we had to become chemists. Through a long process of trial and error over many weeks, each participant in the course created their own customized odor. The odor was meant to both capture and convey the topic that was chosen by each student. I came into the course very skeptical about the topic, as most of my other colleagues did, but by the time the semester was completed and the projects were produced, I became truly enamored and fascinated with the concept of smells being utilized in preservation projects.

I would also like to acknowledge and thank my all of my friends at Columbia University and in D.C. as well as my family for all of their support which continues to push me onward to great achievements. I especially wish to thank my Grandpa for everything that he did for me. I modeled my strong work ethic after his and he is the reason why I am resolved to do my very best in all of my endeavors. This thesis and my time at Columbia University is dedicated to him.

Abstract

Preservationists, starting in the late twentieth century, have put the idea to practice that the smell of an object, place, event, or person can be worthy of preservation and considered culturally significant. This is a recent shift in a discipline that was previously focused on physical objects such as buildings, monuments, and art as the only entities that were considered to be worthy of preservation. Preservation theory therefore developed theories of authenticity that do not capture or are unable to judge smell. This thesis will fill an important gap in the heritage discourse by providing a critical framework for judging the level of authenticity in olfactory preservation projects. I examined key examples of scent preservation including Colonial Williamsburg (1926), the Dennis Severs House (1999), the Japanese Ministry for the Environment's 100 Most Fragrant Landscapes List (2001), and my own Morgan Library Odor Recreation (2017). I provide an analytical framework for judging the level of authenticity of smell preservation projects, consisting of eight categories including sourcing, significance, fabrication, location, intention, duration, evidence, and aesthetics. While each of the aforementioned case studies utilize odors in some manner, each of them does so very differently with a different intent. In every instance where case studies have been analyzed and historical records have been created no one has attempted to categorize them. The intent of this thesis is to arrive at such a framework through the analysis of key olfactory preservation projects by providing a framework for judgement. I hope to provide a theoretical foundation for future practices in management, design, and interpretation of odor preservation projects.

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Chapter 0 Preface

0.1. Methodology

For this thesis, I used both primary and secondary sources. These resources included scholarly journals, articles, books, as well as websites and blogs which are members of several fields of study including scientific, historical, cultural, preservation, and theoretical. I documented archival and in-situ preservation projects that concerned the preservation of odors and the author's methods and intentions paying particular attention to their claims on the authenticity of smells. Once documented, I compared and contrasted their methods to arrive at similarities and differences in the projects. Due to the topic being related to so many different fields, in order to create a thesis that can be easily understood, the literature review is a singular entity in chapter one. I did this to both convey foundational information for olfaction and to allow for the creation of a more cohesive narrative. Also interwoven throughout the thesis are several real-world precedents which pertain to many of the aforementioned fields which are meant to provide the reader a real-world frame of reference for each field. I chose primary and secondary sources as the method of conducting the thesis primarily because these sources were most plentiful and because surveys of individuals or groups would be biased since each person interprets smells differently. The sources included historical documents, eye witness accounts, scholarly articles, newspapers, magazines, blogs, and results of experiments. I have also included my own firsthand real-world accounts of visits to a number of the case studies as well as one case study, the Morgan Library Odor Recreation, which I created.

In order to narrow the number of case studies for this thesis, I established certain criteria for the selection of case studies from the onset. The criteria are as follows:

1. Scents must be historic recreations or odors that were being preserved.
2. The purpose of the recreation was/is not to solely distribute for commercial gain.
3. Each case study represents a particular methodology toward the preservation or recreation of historic odors.
4. Each project has a particular goal or narrative to convey to an audience.
 - It is not simply a perfume or cologne.
5. The projects can be located anywhere, even theoretical places.

In order to evaluate the olfactory recreation projects, I established a binary framework that evaluates each projects attempt at authenticity against their level of sensory integration. Each project is evaluated based on eight different categories, which serve to distinguish one project from another (Fig. 1). In order to devise my “Clevenger Authenticity Scale” I worked hermeneutically by analyzing one case study, creating a rudimentary scale, then analyzing another in order to refine both the categories and my own understanding of the topic. I did this no fewer than eight times and the end result was my binary scale for judging the authenticity of preservation projects.

The scale is based on a simple 0-10 scale; 0 is the lowest level of authenticity and 10 is the highest level of authenticity. It examines the what, when, where, why, and how of each project

and on a scale of 0-10 assigns a score accordingly. In the scale I have developed the “How” is represented in the “Sourcing” category. Sourcing judges the projects based on whether the odor is being recreated through chemical means or if the original source still exists and is being maintained. Maintained smell objects are the most authentic. The projects “When” is represented in the scale under the category called “Duration.” In this category the project is analyzed according to whether the time period that is being conveyed to the audience by the odor is long and vague or short yet specific. A project receives a perfect score of ten in this category if it is focused on a single brief moment in time such as a particular event or day. “Why” is represented in the category called Intention. The projects in this category receive a perfect score if the odors are intentionally being preserved, as opposed to them being accidentally or incidentally preserved. The concept of “Where” is judged in the Location category. In this category, to receive a perfect score, the project needs to be located in-situ, the original site, as opposed to ex-situ, a different location.

The concept of “What” falls under four different categories including Significance, Fabrication, Evidence, and Aesthetics. A perfect score is only achieved in the Significance category if the odor being preserved is something unfamiliar to the general public as opposed to an odor that is ubiquitous. An unfamiliar odor can refer to both common and rare odors, however the odor under scrutiny must not be well known in the current time. The Fabrication category judges odors on a scale of being either artificial or natural. In this category, if the odor is being emanated from a natural original source then it receives a perfect score. In order to receive a perfect score in the Evidence category, the odor must be either maintained or created

with a very high level of documentation. The final category in which the notion of “What” is scaled is called Aesthetics. In this category, in order to receive a perfect score of ten the odor must be able to be perceived in a unified manner, not fragmented. By unified, I mean that if a visitor comes to smell the scent, they must be able to sample all the constituent parts in one inhalation from a single source. The contrary example would be if a visitor wanted to smell the odors being preserved, they would have to go to various locations and in so doing have to assemble the genius-loci of the odor for themselves. After I judged all of the case studies according to my scale and calculating each of their scores I then ranked them from highest to lowest level of authenticity.

In addition to judging the odor preservation projects according to the Clevenger Authenticity Scale, I compared and contrasted each project on a chart which analyzes their level of sensory integration against their attempted or possible authenticity. They have been placed in one of three categories; event, place, or event/place. Event means that the project was attempting to recreate a particular incident. Place means that the project was recreating an area. Event/Place indicates that the project is recreating both a specific incident in time and where it took place. This chart is located in chapter six, *Findings from Establishing a Framework for Preservation Projects That Have Incorporated Odors*.

Clevenger Authenticity Scale		
Category	0 _____ Level of Authenticity _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) _____ 0 10	0
Significance	Familiar _____ Unfamiliar _____ 0 10	0
Fabrication	Artificial _____ Natural _____ 0 10	0
Location	Ex-Situ _____ In-Situ _____ 0 10	0
Intention	Accidental _____ Intentional _____ 0 10	0
Duration	Long (Vague) _____ Short (Specific) _____ 0 10	0
Evidence	Undocumented _____ Documented _____ 0 10	0
Aesthetics	Fragmentary Impression _____ Unified Impression _____ 0 10	0
Total		0

Figure 1 - Clevenger Authenticity Scale

0.2. Challenges & Goals

I have two main goals for this thesis. The first being to fill a gap in the field of preservation by providing a basis for judging the authenticity of smells in preservation projects by the projects own interpretation of the odors. This framework will assist future preservationists in the management, design, and comprehension of projects that incorporate odors into their exhibitions. The second goal is to prove that scent has played an important role in the practice of preservation in the latter half of the twentieth century and that it can be executed successfully in an authentic manner.

There are a number of challenges in writing this thesis. Perhaps the biggest challenge is to critique the commonly held misconception in the historic preservation field that odor preservation projects is inauthentic. In part, this thesis seeks to prove that they can be executed successfully in cultural heritage installations. Another challenge for this thesis is conveying to the reader the experience of smell. Odors are a terribly difficult sensation to convey because smell lacks a proper vocabulary of its own (See chapter one). In order to judge olfactory projects, you need to be communicate and therefore you need a common vocabulary. At present, the way in which we speak about odors is confined to the dictionaries of the other senses such as taste, sound, and sight. Many attempts have been made to create a vocabulary for smell but none have been successfully adopted by the public. Experience is ultimately the only way to judge odors, or is it? One of my case studies, NASA's space odor recreation, was

never executed, it was only ever theorized. As a foundation, I am proposing that my system can aid in placing olfactory projects into their position in the cultural heritage discourse.

Odors are best experienced firsthand, so attempting to do this in a visual medium is difficult because the sense of smell cannot be fully transmitted through any other sense than smell. A description of an odor will always fall short of the experience of smelling it in person. In light of this, a visit to a number of the case studies was necessary in order to attain a better understanding of both the odor and its interpretation and incorporation in the various exhibits. The case studies visited were the Tenement Museum, the Morgan Library, Colonial Williamsburg, the Jorvik Viking Centre, and the Dennis Severs House. The Skansen Open-Air Museum and the multitude of landscapes associated with the Japanese Ministry of the Environment's 100 Most Fragrant Landscape list could not be visited due to time and monetary restrictions. The NASA space odor recreation was never created, so it has never been experienced by anyone.

The Clevenger Scale of Authenticity's Judging Parameters

The Clevenger Authenticity Scale that I am proposing for judging the authenticity of odor preservation projects is yet another challenge because three of my categories in particular are contradictory to commonly held beliefs in preservation practices. The categories are Significance, Intention, and Duration.

Significance

My scale's notion of Significance is quite different from the contemporary definition which states that only objects that are famous and well known should be preserved. Objects such as museums, skyscrapers, monuments, and so called traditional art are the only pieces that should be preserved because those are important to "our" culture. In the 1931 Athens Charter for the Restoration of Historic Monuments, the only objects that are considered to be culturally significant enough to be worthy of being preserved are ancient monuments.¹ Cultural heritage is not a static concept; it is a concept, an idea and as such it is not an objective fact but instead it is fundamentally subjective and in a constant state of flux. My generation's definition of what is culturally important is not the same as the generation that preceded me and accordingly my children's definition of what is culturally important will not be the same as mine. That is the nature of evolution and time. The fact that smell seems to be a truly experimental form of preservation has led me to believe that traditional preservation authorities have no right to judge experimental preservation projects because their evaluation tools for judging their authenticity do not apply well to the projects.

When considering the significance of an object to preserve, I must speak about two of preservations most respected and admired theorists, John Ruskin and Viollet-le-Duc. John Ruskin was a conservationist whose ideas about art, architecture, and theory pioneered the preservation profession. His views for all intent and purpose were quite antiquated by

¹ ICOMOS, The Athens Charter for the Restoration of Historic Monuments, 1931.

contemporary standards.² He was strongly opposed to the restoration of the built environment be it building or monument. Ruskin believed that structures were similar to people; they are born, they have their life, and then they die. He believed that instead of restoring buildings after they have been neglected, they should simply be cared and they will not need restoration. However, he did believe that if a building were to be damaged that the restoration should be stylistically authentic. If the building being restored was a Renaissance cathedral, it should be restored back to a Renaissance cathedral using the same materials and methods that the builders would have implemented at the time when the building was first constructed. We find that he is principally focused on traditional objects of preservation, buildings and monuments. His contemporary Viollet-le-Duc proclaimed and practiced a very different philosophy.

Eugène Emmanuel Viollet-le-Duc was a French theorist and Gothic Revival architect of the Victorian age who became well-renowned for his interpretative restorations of numerous medieval buildings. According to Viollet, “to restore an edifice means neither to maintain, nor to repair it, nor to rebuild it; it means to reestablish it in a finished state, which may in fact never have actually existed at any given moment.”³ In his opinion, the best way to bring a building back to life, was to find a proper use for it. If this were done, there wouldn’t be any need to make any more changes to it. Looking through Viollet’s eyes at the genius-loci of the

² Ruskin, J. (1849), *The Seven Lamps of Architecture*. New York: John Wiley.

³ Viollet-le-Duc, E. (1866) *Dictionnaire raisonné de l’architecture française du XIe au XVIe siècle*, vol 8. Paris: B. Bance and A. Morel. [Viollet-le-Duc, E. (1866) *Dictionary of French Architecture from the 11th to 16th Century*, vol 8. Paris: B. Bance and A. Morel.]

building, its spirit, he would take into account its contemporary spirit whereas Ruskin only believed that the building had any value because it aged and eventually died.

Viollet believed in the flexibility of objects and their potential. I found that his restoration of Chateau de Pierrefonds exemplifies his beliefs best.⁴ It is located north of Paris and originally built in 1406. Much of the structure had been destroyed and dismantled over the centuries and it wasn't until 1868 that Viollet was finally appointed to execute a full restoration by Napoleon III.⁵ He decided to capture the spirit of the picturesque with this building instead of reconstructing its fortress figure. He added many elements that were not original to the building including dozens of cat statues contorted in every way possible. Gargoyles were quite familiar at the time but the manner in which he represented the cats was definitely not. He wanted to showcase the common cat in unfamiliar poses. He contorted the cat form into every possible position such that many of them seem to have a demonic presence. It's with this example that I find kinship between Viollet-le-Duc and my authenticity scale.

Their criteria for judging what is culturally significant and what is not are totally different than that of Experimentalists. In *Experimental Preservation* by Jorge Otero-Pailos, he states that "the fact that experimental preservationists tend to choose objects that are often not considered worthy of traditional preservation raises the question of whether the same old intellectual frames - the criteria - that preservation typically relies upon to establish the value of

⁴ Vinegar, Aron. *Chatography*. Report. University of Exeter. CA: University of California Press, 2016.

⁵ Viollet-le-Duc, Eugène-Emmanuel. *Description Et Histoire Du Château De Pierrefonds: ; Par Viollet-Le-Duc, ..Paris: Vve A. Morel, 1877.*

historic resources are fit to analyze these unconventional objects. Some of preservation's criteria such as that of "historical significance," were established in the late nineteenth century. They are old ideas."⁶ They hold that the only objects that are worthy of being preserved are those connected with momentous events or people. Preservationists are now looking beyond traditional monuments to preserve. Reinhard Kropf chose to preserve waste. "He sees waste as an object necessary for us to organize socially, but which we treat as if it did not exist. Kropf therefore describes waste as a quasi-object, something that appears to have no value but in fact has enormous potential to gather and make communities visible to themselves."⁷ Kropf's definition of authenticity is perfectly in sync with my scale's definition. My scale defines the familiar as least authentic and the unfamiliar as most authentic. In this instance, waste is something that is quite common in our world but it is unfamiliar as an object that is not represented as culturally significant, so it is unfamiliar and therefore very authentic. In a similar way, chemicals are found in nearly everything we eat, breathe, and wear, so they are considered inauthentic.

Intention

The nature of the intent of a project is the second category where my scale conflicts with traditional notions of authenticity in preservation theory. Often, historic objects are being preserved by both professionals and amateurs without their knowledge. When such items are discovered it is simply an unexpected bonus. When one of my case studies, the Skansen Open-

⁶ Otero-Pailos, Jorge. *Experimental Preservation. The Potential of Not-Me Objects*. Edited by Eva Ebersberger and Erik Fenstad Langdalen. Lars Muller, 2016, 17.

⁷ Ibid, 16.

Air Museum, decided to preserve a number of buildings they were intentionally preserving the buildings but not the odor.⁸ On my scale for Intention, it receives a low score because they are doing so unwittingly. The low score assigned lies in the museum's ignorance. The danger in accidental or incidental preservation is that because they are not aware of what they are doing, they very easily could destroy it. Whenever a traditional project is conceived, a strict plan of action is created to execute an object restoration, preservation, reconstruction. If a detail of that plan is neglected or missed, the results can be disastrous. At Colonial Williamsburg, the designers wanted to restore the town back to its Colonial Era style. In order to accomplish this, Rockefeller had workers demolish many buildings and remove aspects of buildings that he believed to be inauthentic to the period. Having few accurate sources pertaining to what was authentic to that time period, he unknowingly destroyed many historic buildings and altered many more.⁹

Duration

My definition of the authenticity of duration is problematic with traditional notions in preservation practices because it states that in order to be considered truly authentic the object must be focused on a particular event or day. I decided that this was necessary when it pertains to odors specifically because they are in a constant state of movement and change. Often, preservation projects seek to capture centuries or eras as was the case of Colonial Williamsburg, where they failed miserably. An example of this would be if I were to preserve

⁸ Sten Rentzog, *Open Air Museums: The History and Future of a Visionary Idea* (Sweden: Carlssons, 2007); Richard W.E. Perrin, *Outdoor Museums* (Wisconsin: Milwaukee Public Museum, 1975).

⁹ Huxtable, Ada Louise. *Unreal America: Architecture and Illusion*. NEW YORK: W.W. NORTON, 1999.

the odor of Central Park in autumn. The topic is too vague and the time period is too long. There is simply no way to accurately capture the odor of a four month period of time that covers an area so large. It would be a better idea to preserve the odor of Central Park's Hooverville on October 13, 1931 at 5pm. By choosing a specific date and time, a person is far more likely to be able to recreate the odor because an olfactory preservationist can research a specific time and day but not an entire season or century and trying to recreate a long period of time would lead to problems with interpretation and the exhibition of such odors. The Dennis Severs' House has this problem as well. The museum seeks to preserve a two-hundred years period of time throughout its four stories and myriad of rooms through recreations which includes odors.¹⁰ By choosing such a long period of time there is really no way of being certain of the authenticity of the odors. In order to experience all of the odors, visitors have to walk throughout the entire building which forces them to develop their own understanding of the designer's intention. This leads me to the authenticity of aesthetics where my definition aligns with the traditional definition of authenticity, as do my remaining categories.

Aesthetics

My scale measures authenticity based on how the project is being perceived by visitors in the Aesthetics category. If they receive a fragmentary impression then the project is inauthentic and if they receive a unified impression then the project is authentic.¹¹ A real world

¹⁰ Severs, Dennis, *18 Folgate Street: The Tale of a House in Spitalfields*, 2002, Vintage; Milne, David. (February 2018). *David Severs House Tour*, Spitalfields, London, UK.

¹¹ Everts, Sarah. "Authenticating Pieces of the Berlin Wall." *Artful Science*. August 13, 2012. <http://cenblog.org/artful-science/2012/08/13/authenticating-pieces-of-the-berlin-wall/>.

example of this is how the Berlin Wall has been preserved. On August 13, 1989, the concrete wall which separated East and West Berlin came down. Shortly thereafter, pieces of the Berlin Wall were sold as curios to the public. The wall was 96.31 miles long and 11.81 feet high.¹² By cutting the wall into pieces the size of standard American doors and pieces even smaller the impact of the object was totally destroyed and has lost much of its meaning. If the Wall had been left in place, unified, then it would receive a high score on my scale, however because it is in pieces that are scattered across the planet, it would receive a very low score. The same goes for odor recreations. If a visitor has to walk all around an exhibition space in order to assemble an impression of a single odor because it is fragmented, the impression will never be cohesive and will never really be discovered. It is better to give a single unified impression that a visitor can understand at a single time than to have them be forced to assemble it for themselves.

Evidence

In order for a project to be considered truly authentic on both my scale of authenticity and the traditional scale, it must be very well documented. This falls under my authenticity scale's Evidence category. Documentation is everything in the field of preservation. A phenomenal example of the importance of documentation to preservationists is found in China with Liang Sicheng. He strove to preserve China's traditional timber buildings and he did so at a time when most people were calling for war.¹³ He wrote *Why We Must Research Chinese*

¹² Miller, Roger Gene (2000). *To Save a City: The Berlin Airlift, 1948–1949*. Texas A&M University Press. ISBN 0-89096-967-1.

¹³ Liang Sicheng, "Why We Must Research Chinese Traditional Architecture," *Bulletin of the Society for Research in Chinese Architecture*, v 7, n 1-2, (October,1944), 5-12.

Traditional Architecture while he was running for his life, living in a temporary settlement. WWII forced him to leave his home along with his wife, two children and research partner, architect Lin Huiyin. At the time, he was conducting a major research project and he feared that the war would interrupt it. He was working with colleagues of the Society for Research in Chinese Architecture (est. 1931), to identify traditional timber framed buildings throughout China that were still standing. Documenting and preserving those historic buildings was paramount to the survival of Chinese culture from the ever increasing Westernization of his culture and the threat of Japanese imperialism. Liang's essay is considered one of the founding essays of Chinese preservation and in it he argued that in order for his Chinese culture to survive, the historic timber buildings needed to be preserved because it was only by studying them that reliable lessons could be learned and from them could a truly Chinese modern architecture and culture, free from foreign entanglements be developed.

Fabrication & Sourcing

It is always best to retain, maintain, or use natural sources when preserving historic objects and that is why on my scale and the traditional scale that is the most authentic option. Antoine-Chrysostome Quatremère de Quincy devised the theory that preservationists must distinguish between what is a copy that is simply imitating a historic building and the original.¹⁴ He believed that to copy an object was nothing more than a mechanical procedure, however he believed that in order to imitate a person had to possess an intellectual comprehension of the

¹⁴ Antoine-Chrysostome Quatremère de Quincy, *The Historical Dictionary of Architecture*, trans. Samir Younés (London: Andreas Papadakis, 1999), pp. 62-67, 69, 217-220.

architectural design principles which govern a building. To him copying was only acceptable as a mindless way to infill areas of loss in historic buildings. He believed that since Greek and Roman architecture were composed of many of the same constituent elements, missing parts could be easily restored by using copies of the same components. He did warn that in order to build a new building in the classical style required far more than simply finding and piling copies on top of one another. To do that a person had to understand the principles of composition that the Romans and Greeks used to assemble the components of a building into one harmonious piece. He called such an act imitation. An imitated work was far more than a simple display of the architect's intimate knowledge of historic techniques, it was a test to determine how he measured up to the ancients. As such, he believed that only the greatest architects and artists could really imitate.

One such person was his good friend Antonio Canova. A uniformed or ignorant association became established between copying and restoration and imitating with new design and because of this it created a hierarchy that placed new construction architects above restoration architects. Chrysostome Quatremère de Quincy fought for his belief that the integrity of architecture could be maintained through proper executed restorations, and he vehemently opposed museums that accepted valuable pieces of buildings that had been removed and the entire practice. He hated that when such pieces were removed and displayed in architectural museums such as Alexandre Lenoir's Musée des Monuments Français (1795), that the elements were out of context and therefore could no longer be properly understood in relation to their original architectural composition. The best option is to simply maintain an

object in-situ so that it can be fully comprehended as a composition. He hated architectural museums for their encouragement of copying which denied even the possibility of imitating. This is at the core of both of my categories Fabrication and Sourcing. In my Sourcing category, recreating an odor is least authentic, especially by chemical means, but imitation is more acceptable but still not completely authentic. I would refer you to John Ruskin's position that maintaining an object is much preferred than active restoration after the object has been neglected (See pages xiii-xiv). The concept of relocating objects leads me to my next authenticity judge, Location.

Location

In my scale of authenticity, when a project is executed or taken away from its original location, ex-situ, it is considered to be inauthentic. It is always best for a project to be presented in its native locale. The traditional authenticity scale agrees with me and so does the aforementioned Chrysostome Quatremère de Quincy. When objects are taken away from their original location, they cannot be properly contextualized. This is the case with virtually all architectural or art pieces in museums. This is the same problem that happened with the Berlin Wall. Once that wall was broken into pieces and scattered across the planet, it lost all context and a great deal of its meaning. Sometimes the only way to save an object is to take it away from its original location such was the case with Abu Simbel Temples.¹⁵ The Egyptian's wanted to build the Aswan Dam in order to contain and minimize the impact of the annual rise and fall

¹⁵ Michigan State University. "Abu Simbel Temples: Relocation Due to Aswan Dam." Rise of Civilization. February 06, 2013. <http://anthropology.msu.edu/anp363-ss13/2013/02/06/abu-simbel-temples-relocation-due-to-aswan-dam/>.

of water levels of the Nile River. The dam's construction endangered the site, so the temple was moved above the original site 200 feet by carefully documenting, cataloging, disassembling, and reassembling it. In total, the project cost approximately \$40 million dollars in 1963. This was an extreme instance and in normal cases historic objects like building and odors should not be removed or exhibited ex-situ, instead they should be left where they originally were, in-situ.

To further expand on the differences and similarities between my authenticity scale and those that have been traditionally used in preservation practices, chapter one is going to examine the beliefs of several professionals in the field of preservation as well as the Athens Charter (1931), the Venice Charter (1964), and the Burra Charter (2013).

Chapter 1

An Introduction to the Bias against Odor Preservation

1.1. Smell as an Object of Preservation

This chapter is really an explanation of why artificial smells are considered “inauthentic” in western cultures and therefore not “truthful” objects of preservation. This is the cultural challenge that I want to overcome with this thesis. The preservation of odor seems to a great many in the profession as inauthentic. Many go so far as to say that the very term “historic olfactory recreation” is oxymoronic. How can the scent of a place or an event authentically be recreated? These are common questions that arise when the topic gets broached. Restoring a building back to its original state is perhaps the most commonly used concepts in historic preservation. This idea was set forth in the guidelines of the Athens Charter for the Restoration of Historic Monuments (1931).¹⁶ The charter focuses primarily on archaeological sites, monuments, and the areas surrounding such historic sites. The fact that the charter focuses on historic monuments and sites differs from my scale because my scale’s Significance category values unfamiliar objects as being more important than those that are familiar. It also states that while it is acceptable to use modern materials and techniques to restore damaged or deteriorated buildings, such materials should be easily recognizable to visitors and that any original materials that can be reused should be put back into their original place. Article IV states, “The experts...approved the judicious use of all the resources at the disposal of modern technique,” and Article VI states, “steps should be taken to reinstate any original fragments

¹⁶ First International Congress of Architects and Technicians of Historic Monuments, The Athens Charter for the Restoration of Historic Monuments, 1931.

that may be recovered (anastylosis), whenever this is possible.”¹⁷ These guidelines coincide with my scales idea of authenticity in the categories of Sourcing, where it is best to maintain an object as opposed to recreating it, and Fabrication, where it is best to use natural materials instead of artificial ones. The idea that materiality is fundamental to preservation and that the original material should be preserved and used whenever and wherever restoration is required is at the core of both the Athens Charter and my authenticity scale as is the concept of proper evidence.

The Athens Charter expresses the indispensable value of documentation in Article VII, section c – Value of International Documentation. It states, “Each country, or institution created or recognized competent for this purpose, publish an inventory of ancient monuments, with photographs and explanatory notes.”¹⁸ This idea that documentation is important is echoed in my authenticity scale’s Evidence category. The principles of materiality and documentation being important to the preservation set down in the Athens Charter were the foundation for the Venice Charter (1964). The charter focuses primarily on ancient buildings and historic sites, instead of just monuments. This charter, unlike the Athens Charter, does give value to objects besides historic monuments and sites when it mentions ancient buildings as being valuable. This can refer to any building that is old, not just those that are well-known to the public. In the category of Significance, my authenticity scale and the Venice Charter have some common ground. It also states the importance of the materiality and documentation of such objects

¹⁷ Ibid.

¹⁸ Ibid.

when it states in Article 9, “The process of restoration’s...aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for the original material and authentic documents” and in Article 16 where it states, “There should always be precise documentation in the form of analytical and critical reports, illustrated with drawings and photographs.”¹⁹ The Venice Charter brings the idea that for an object to be authentic it must remain in-situ. Article 7 states, “A monument is inseparable from the history to which it bears witness and from the setting in which it occurs. The moving of all or part of a monument cannot be allowed except where the safeguarding of that monument demands it.”²⁰ My Clevenger Scale of Authenticity echoes this sentiment in the Location category where in order to achieve the maximum score, the odor must be presented in its original location, in-situ.

The 2013 Burra Charter further expanded the principles of the conservation and management of “places of cultural significance.” The Burra Charter and my authenticity scale have a great deal in common including the idea that objects besides historic sites and monuments are significant. Article 2.1 of the Burra Charter states that, “Places of cultural significance should be conserved.”²¹ It defines Place as, “a geographical defined area. It may include elements, objects, spaces, and views. Place may have tangible and intangible dimensions.”²² It goes on to state the importance of location and how it is of the utmost importance that culturally significant objects remain in their original locations. In Article 9.1, it

¹⁹ International Council on Monuments and Sites, The Venice Charter, Article 9, 16, 1964.

²⁰ International Council on Monuments and Sites, The Venice Charter, Article 7, 1964.

²¹ ICOMOS, *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance*, Article 2.1, 2013.

²² *Ibid*, Article 1.1, 2013.

states, “The physical location of a place is part of its cultural significance. A building, work, or other element of a place should remain in its historical location.”²³ This exactly echoes the Location category’s requirement for a perfect score in my scale of authenticity. My scale and Burra’s also agree on the idea that for a source to be authentic it should be maintained and not recreated or altered. Article 3.1 of Burra states, “Conservation is based on a respect for the existing fabric, use, associations, and meanings. It requires a cautious approach of changing as much as necessary but as little as possible.”²⁴ My authenticity scale and the Burra Charter also agree on the fundamental importance of documentation. Burra explains the importance of it in Articles 19 and 31. Article 19 states, “Restoration is appropriate only if there is sufficient evidence of an earlier state of the fabric” and Article 31 goes on to state, “A log of new evidence and additional decisions should be kept.”²⁵ The 2013 Burra Charter and my authenticity scale have a great deal in common including that it agrees that odor is culturally significant and should be protected. Article 1.12 defines setting as, “the immediate and extended environment of a place that is part of or contributes to its cultural significance and distinctive character.” In an explanatory note, it explains that setting may include “other sensory aspects...such as smells.”²⁶

Traditional preservationists such as Roger Scruton believe that that preservationists should strictly follow the rules of organizations such as UNESCO and only restore historical

²³ *Ibid*, Article 9.1, 2013.

²⁴ *Ibid*, Article 3.1, 2013.

²⁵ *Ibid*, Article 19, 31, 2013.

²⁶ *Ibid*, Article 1.12, Explanatory Notes, 2013.

artifacts to some form of visual and material authenticity. His theory of preservation is all about the concept of “pleasure” in architecture. He has made it very clear that he is not referring to sensual pleasure but instead he advocates intellectual pleasure.²⁷ By doing this, he essentially declares that the only sense that has any place in architecture is vision and hearing. He states that vision and hearing are objective sense while, the senses of smell and taste are subjective and therefore do not lend themselves to serious intellectual evaluation and contemplation. According to his theory, genius-loci and feelings have no place in preservation and therefore he would have no place for smell in preservation practice. Those who actually practice smell preservation have something to say to such naysayers. While constructing historic olfactory recreations in preservation practice does seem like a radical concept in comparison to the more traditional examples of preservation such as restoring a cornice to a New York City brownstone, when examining the preservation field itself, smell is in reality simply the next logical step forward. After all, preservation as a professional practice has always been a radical experiment. The very preservation practices that we consider to be mundane and normal today were in fact revolutionary concepts at their inception.

The concept of preserving natural wonders seemed ridiculous when first conceived. However, when Yellowstone National Park was established on the 1st of March, 1872 it forever changed the way people see nature. At the time, nature was a commodity that was rich for the taking. It was the fuel by which humanity pushed itself and its industry onward into the future. Very little concern was given to its well-being. As of today, in the United States alone, there are

²⁷ Scruton, R. (1979) *The Aesthetics of Architecture*. Princeton, N.J.: Princeton University Press.

417 national parks that span across 84 million acres in each of the 50 states and all of the territories.²⁸ In the same way, preserving smell today might seem like a stretch of the imagination but that is the social role of preservation. As Carlos Huber said at the 2017 LMAK Gallery's *EVOCATIVE ENCOUNTERS: THE (S)PACE OF SCENT* panel discussion, "everything we are doing in preservation, even though we think we are taking it back to its origins is artificial itself. We are stopping the decaying of a building, which is natural, and we are very experimental. (It is a) very radical approach. This is an intervention, not just a little conservative idea of taking the building back to its origins."²⁹ He went on to say that, "preservation is not this idea of a conservative world. It's a very radical idea. If we were to be conservative about the way we see preservation and the way we see our interpretations of moments, you would simply let them [preservation projects] be."

Just as preservation methods change through time, the very idea about preservation's role in society is also evolving. Whereas in decades past, the role of the traditional preservationist was to find the historic object that seemingly already existed in the world and declare to society that the object was their cultural heritage, experimental preservationists believe that it is their duty to create a dialogue with society in order to determine what is and what is not cultural heritage. Typically, said objects are outside the traditional mainstream of what would be considered cultural heritage. Such objects include warehouses or even literal

²⁸ "How Many National Parks Are There?" National Park Foundation. October 17, 2016. <https://www.nationalparks.org/connect/blog/how-many-national-parks-are-there>.

²⁹ *EVOCATIVE ENCOUNTERS: THE (S)PACE OF SCENT*. Conducted by Jia Jia. LMAK Gallery, New York City, November 29, 2017.

trash. These objects are presented to the society and it will then either declare them to be important to their culture or not. This is the concept of the quasi-object. For experimental preservationists such as Jorge Otero-Pailos and myself, smell is the object that we want to preserve. All odors originate from a source, however with olfactory recreations the original source [the original odor] is gone, so the odor [the recreation] itself becomes the object of preservation. At the LMAK panel discussion, Jorge Otero-Pailos, eloquently stated, “Scent is always a collaborative effort. Very rarely does someone go into a room and just say, Vola! I came up with it! There is always a kind of testing and call and response. The collaboration is what makes the smell.” This idea of preservation being a collaborative experience is central to how we can begin to consider the preservation of smell. It is similar to the idea presented about the table in the article titled “(Pre)Served at the Table” by Eva Ebersberger and Erik Fenstad Langdalen in the 2016 edition of *Future Anterior*.³⁰ It presents the reader with the concept of the table and how the table is a setting throughout the ages where great discourse can occur. It is a place of equality, where all ideas can be heard and debated and where all ideas are valid and respected. It is through such open discourses in the cultural heritage field that smell is transforming from a perfume to make spaces appealing to visitors into an object of architecture and preservation. Professionals such as Juhani Pallasmaa believe strongly in the concept of phenomenology in architecture. He believes that architecture acts as a mediator between people and their senses. Pallasmaa stated in *Eyes of the Skin: Architecture and the Senses*,

³⁰ Otero-Pailos, Jorge. *Experimental Preservation. (Pre)Served at the Table*. Edited by Eva Ebersberger and Erik Fenstad Langdalen. Lars Muller, 2016.

“scent is important for evoking places long neglected in our memory.³¹” Therefore, scent has the ability to trigger memory and people’s imaginations and can better connect people to what they are perceiving. All three, imagination, memory, and perception, are connected and intertwined with one another. As Pallasmaa wrote, “the nose makes the eyes remember.” By intertwining memory in his theory with perception and imagination, one can make the leap that smell is connected to memories of the past and therefore odor preservation is acceptable.

In order to create odors, designers often have to work with others because everyone’s sense of smell is different. In order to create an odor that will be perceived by the maximum number of people, designers need more than one nose at work. It then goes further to talk about preservationists in the field today and how they feel that the profession needs to evolve with the time in order to stay relevant. It needs to incorporate new ideas and bring in new concepts as well as other professions in order to generate new ways of thinking about preservation and cultural heritage. There is a need for experimentation to push the field into the next century by finding, creating, and preserving the objects that people need to make sense of the present. It also needs to have an element of both academic and workshop to it. This allows for subtle negotiation, open conversation, non-hierarchical interaction, the circulation of ideas and a pleasant experience. Preservation should be about conveying information through pleasing experiences.³² Preservationists have already implemented a wide variety of

³¹ Pallasmaa, J. (2005) *Eyes of the Skin: Architecture and the Senses*. Chichester: Wiley-Academy. (Reprint of article published in 1996).

³² Ibid.

techniques in preserving odors such as with Jorge Otero-Pailos's Philip Johnson Glass House olfactory recreation in 2008.

The project started as a typical restoration project. Jorge was contacted by the National Trust for Historic Preservation which tends to the needs of the building itself. The building's ceiling was old and stained by decades of cigarette smoking and general inhabitation. The Trust wanted Jorge to come and get his opinion on what could and should be done about the historic but stained ceiling. After inspection, Jorge came to the conclusion that the ceiling tiles should not be restored or replaced but left in kind. These tiles were original and the stains left upon them were the very history of both the space itself and the people who lived, worked, visited, and partied there. Philip Johnson, Robert Stein, David Whitney, and Andy Warhol to name just a few of the many illustrious inhabitants the house had held. These people would gather around the table and drink, smoke, and talk. The stains on the ceiling told that story better than any plaque ever could do. This sentiment connected with the National Trust members and in conjunction with Jorge decided to sponsor the creation of three separate historic olfactory recreations.³³ The three odors created by Jorge were distinct from one another in that they were each created to represent a specific time period in the life cycle of the Glass House. The aromas were meant to be smelled in a specific sequence ranging from oldest to latest time period. The first-time period is when the house was newly constructed in 1949. This odor, "is a blend of newly lacquered wood closets, newly painted steel, fresh plaster from the ceiling,

³³ Otero-Pailos, Jorge. "An Olfactory Reconstruction of Philip Johnson's Glass House." *AA Files*, no. 57 (2008): 40-45. <http://www.jstor.org/stable/29544691>.

cement mortar from the floor and a hint of leather from the new Barcelona chairs and the bathroom ceiling.” The second-time period that was created was meant to convey the mid to late 1950’s. It was meant to convey the aesthetic that men preferred at that time. The scent, “is composed of lavender, bergamot, rosewood, lemon, geranium, clove, amber and tobacco.” The scent is meant to reproduce the colognes that were popular amongst the men of the 50’s which included Acqua Velva, English Lavender, Canoe, and Old Spice. With this odor, the chemical odor is eliminated and the human element is introduced. After the house had been inhabited for a decade, the off gassing from the materials would have long since stopped and been replaced by the activities taking place in the house, including the smoking and various colognes worn by the men. The final scent that was created sought to evoke the odor the house possessed in the late 1960’s. By this point in time, the fabrics and other porous surfaces in the house were filled with the stench of “thousands of cigarettes and cigars. It is composed of a mix of absolutes of dry leaves of tobacco with pure cigar effect, black tobacco from Bulgaria, scents of smoke and incense, burnt logs, aged leather and wood.” A staggering level of research was devoted to the creation of each scent including collaborating with Rosendo Mateu, who is a perfumer and the head of the Puig Perfumery Centre. Also, samples and notes were taken from multiple on-site visits to the house to attain a greater understanding of the odors at play. In addition, the Puig archive of smells was instrumental in the creation of the scents as it possesses over 20,000 different smell elements. In the end, the odors were put on display for a brief period and then retired and the plaster ceiling was eventually replaced as it was at the end of its lifecycle.

This odor reconstruction was an important milestone for both experimental preservation and historic odor reconstructions in America because the object of preservation was the odor, not the building. This is a radical concept because odor is not considered an object worthy of preservation by most professionals, it is simply a byproduct of an object or even a distraction. Also, it presented the cultural heritage field with a new way of understanding authenticity by presenting an object that was artificially generated through meticulous research, that was executed in-situ, and that focused on specific time periods. By hitting these key points, Jorge was able to produce an authentic historical object that was as close to the original smell as possible. It also helped to push the concept of olfactory reconstruction into the 'eyes' of the public and helped to spread awareness of the field.³⁴

1.2 Literature Review

1.2.1. Smell as the Object of Historical Study

In past centuries scents were typically utilized for one of two purposes; personal beauty regimens or religious practices. They were not perceived as an art form in of itself.³⁵ The first true attempt to transform the perception of scent from a religious artifact into a personal commodity was by Queen Hatshepsut, who ruled from 1508-1458 BC, during Egypt's Golden Age. It was Hatshepsut who also made the discovery that one could press aromatics into fatty

³⁴ Black, Amelia. "SVA MA Design Research." Design Smells: Criticism in an Olfactory World – SVA MA Design Research. July 2014. Accessed October 18, 2017. <http://designresearch.sva.edu/research/design-smells-criticism-in-an-olfactory-world-2/>.

³⁵ In one of the oldest civilizations, Mesopotamia, the people would burn incense as a way to please their gods. This had the added effect of sweetening the scent of the cooked animal meat during their ritual sacrifices. In the more modern era of the Victorian age, women would drink a few drops of violet oil in order to make their breath more pleasing for their gentlemen callers and guests.

oils. This procedure is known as effleurage.³⁶ The book *Aroma: The Cultural History of Smell*, reveals that “malodors” were associated with sinners during the Middle Ages in Europe. This refers to the very nature of criminal acts being perceived as being unpleasant in both the action and the odor. During the late Renaissance perfumes were used to try and disguise the foul odor of festering human waste in the magnificent Palace of Versailles. It’s difficult to imagine that such a beautifully designed building and landscape would be accompanied by such an obscene stench. *Aroma* presents such historical facts brilliantly but it doesn’t inform the reader how much of the meaning and historical authenticity of Versailles is lost today because these foul smells have been deodorized. The book never informs the reader about the preservation of such buildings and how they have changed their smell from their inception. It simply states static facts and implies that time is standing still and that a visitor can go to Versailles and still smell chamber pots. Of course, the purpose of the book is not about preservation, it is more of a historical account of key events in the history of smell. Also, the preservation of buildings, monuments, memorials, and art was not considered as much of a mainstream ideology in centuries past as it is today. In the nineteenth century, a personal hygiene revolution burst forth into western society and shifted perfumes out of the pharmacies and into the cosmetic shops.³⁷ Again, *Aroma* neglects to tell the reader that the personal hygiene revolution had burst forth because there was extreme concern about the spread of diseases. In architectural design practices, impermeable surfaces became extremely popular as they could be easily cleaned. Porcelain and metal replaced more permeable surfaces such as wood in lavatories and kitchens.

³⁶ Diane Ackerman, *A Natural History of the Senses* (New York: Vintage Books, 1991), 55–59.

³⁷ Constance Classen, David Howes, and Anthony Synnott, *Aroma: The Cultural History of Smell* (London, New York: Routledge, 1994), 51–92.

It was during this time that odors first became utilized in American society as a means of ordering spaces in the home. This was done in part as a response to the fact that there was simply more living space in American dwelling and as such people were able to segregate spaces more easily. Spaces were now given their own corresponding scents. The kitchen, the lavatory, and the dressing room all had their own specific scents which were never intended to mix with one another.³⁸ It was during this time that the smells of perfumes and lotions started to define and sense of status and hierarchy in society, as they were replacing people's natural body odor.³⁹ The idea of utilizing odor as a means to propagate discrimination in both racial and hierarchal systems has perpetuated to this day and seemingly refuses to die. This manifests in the form of stereotypes such as westerners smelling like sour milk and aboriginal tribes smelling like the earth.⁴⁰ In March of 2017, the UK news organization *The Independent* wrote an article about Fergus Wilson, one of the UK's biggest buy-to-let landlords telling his landlords not to rent his nearly one thousand properties to "colored" people because the smell of curry "stick to the carpet."⁴¹ He also instructed them to not rent to battered wives, single parents, low income and zero hour workers, or plumbers.

³⁸ Caro Verbeek, "Kunst Inhaleren - Het Gebruik Van Geur in Hedendaagse Kunst" (University of Amsterdam, 2003), 10.

³⁹ Ibid, 17.

⁴⁰ Constance Classen, "The Odor of the Other: Olfactory Symbolism and Cultural Categories," *Ethos* 20, no. 2 (1992): 133–166; Benjamin Aldes Wurgaft, "Incensed: Food Smells and Ethnic Tension," *Gastronomica: The Journal of Food and Culture* 6, no. 2 (2006): 57–60; Alain Corbin, *The Foul and the Fragrant: Odor and the French Social Imagination* (Cambridge, Mass.: Harvard University Press), 1986.

⁴¹ Bulman, May. "Landlord Who Banned 'coloured' People 'because of Curry Smell' Insists He's Not Racist and Is Happy to Rent to 'negroes'." *The Independent*. March 30, 2017. <https://www.independent.co.uk/news/uk/home-news/landlord-who-banned-coloured-people-because-of-curry-smell-says-hes-not-racist-a7657231.html>.

Far from the influence of Western society's perception and utilization of odors, smell has managed to cling to its roots as a deeply spiritual and social order. Tribes that are indigenous to New Guinea, the Andaman Islands, Colombia, and Senegal actually have transformed odor into smell classifications and interpretations which are unique to each tribe. It is in these places, and a number of others, that smell is utilized as a means of personal, tribal and class identification, as well as a way to select potential mates, and for interpreting the words from their gods and spirits. Smell is part of their daily lives from the moment they awaken to when they go to sleep.⁴² In Western society, scent is treated as a commodity that can be used to promote products and make money by major corporations such as the International Flavor & Fragrances Inc. which as of 2018 is valued at \$10.4 billion by Forbes.⁴³ It is a means of distinguishing class and culture as well. It's used in the form of chemicals to treat dashboards in new cars, it is pumped into the ventilation system of malls in the form of fresh baked goods in order to entice people to stay longer and buy more, and it's even used in the promotion of supposed human pheromones.⁴⁴ None of the readings analyzed for this thesis that mention tribes that have established a code of conduct and ritual describe the reasons as to why these tribes prioritize the sense of smell over vision and the other senses. Along with the more consumer oriented creations such as better aroma diffusers and customized scents for personal homes and businesses that are provide by companies such as AromaTech,⁴⁵ there

⁴² Classen, Howes, and Synnott, *Aroma: The Cultural History of Smell*, 97–122.

⁴³ "International Flavors & Fragrances on the Forbes Global 2000 List." Forbes.
<https://www.forbes.com/companies/international-flavors-fragrances/>.

⁴⁴ G. Neil Martin, "Smell: Can It Be Used to Influence Behaviour?" *RSA Journal* 147, no. 5490 (1999): 82–83; Bijal Trivedi, "The Hard Smell", *New Scientist*, December 15, 2006, 36-39.

⁴⁵ "Scent Marketing, HVAC Scent Machines, Custom Scent For Businesses." AromaTech Systems.
<https://aromatechsystems.com/>.

have also been more scientific epiphanies. In 2004, the Nobel Prize was given to Linda Buck and Richard Axel for their discovery of the so called “lock and key” odorant receptors.⁴⁶ Smell remained the least understood of our senses because the basic principles for recognizing and remembering about 10,000 different odors were not understood. Buck and Axel solved this issue and in a series of ground-breaking studies clarified how our olfactory system works. “They discovered a large gene family, comprised of approximately 1,000 different genes, which is three percent of our genes, which give rise to an equal number of olfactory receptor types. These receptors are located on the olfactory receptor cells, which occupy a small area in the upper part of the nasal epithelium and detect the inhaled odorant molecules.”⁴⁷ Despite the ongoing discoveries being made, there is still a great ongoing debate amongst scientists concerning smell perception and its function. A number of models exist including one that posits a vibrational recognition theory for scent molecules. This theory was proposed by Luca Turin in *A Spectroscopic Mechanism for Primary Olfactory Perception* in 1996.⁴⁸ Even with all of humanity’s great scientific pushes forward, there is still much that is unknown. The ability of certain odors to trigger specific reactions, the manner in which smell can so easily disrupt conscious thought, and how the human brain forms odor memories into coherent vivid “smell-pictures” are all topics of ongoing scientific research and debate.⁴⁹ Smell and odor memory are studied prolifically in scientific circles and studies have proven that odors can create deep, meaningful, lasting impressions in visitor’s memories yet in the cultural heritage discourse it is

⁴⁶ “Press Release: The 2004 Nobel Prize in Physiology or Medicine,” Nobel Assembly at Karolinska Institutet, Nobel Prize, October 4, 2004. http://www.nobelprize.org/nobel_prizes/medicine/laureates/2004/press.html

⁴⁷ Ibid.

⁴⁸ Luca Turin, “A Spectroscopic Mechanism for Primary Olfactory Perception,” *Chemical Senses* 21, no. 6 (1996): 773-791

⁴⁹ Rachel S. Herz, “Scents of Time,” *The Sciences* (2000): 34–39.

considered to be inauthentic and unworthy of preservation. Our own brains recognize that odors should be preserved in our memories as odor memories are remembered the most vividly yet the profession of historic preservation refuses to recognize it as authentic and worthy of preservation. This is especially unusual given that evolutionarily speaking the sense of smell is the oldest of humanity's senses, is the quickest sense to inform people when something is good or bad, and has the ability to create long-lasting memories.⁵⁰ Historic preservation exhibitions are all about creating long-lasting memories and with odor recreations designers have the opportunity to both inform people about the past and to create new memories in the minds of their visitors. In these projects, authenticity is found in the experience of the odors and not so much in the material fabric of the physical objects.

1.2.2. Odor and Stigmatization

Smell preservation presently resides at a point of great scrutiny and even stigmatization in the cultural heritage discourse. Such projects are considered to be inauthentic because they are a creation that is meant to represent the historic object. They are believed to be a kind of perfuming of space similar to air fresheners that are designed to please and entice visitors. However, preservationists seek to create odors that are authentic by conducting research into every aspect of the historical event or object they are trying to bring back to life. This perception of odors as a means of appeasing the masses is strong in contemporary America yet

⁵⁰ Sarafoleanu, C., C. Mella, M. Georgescu, and C. Perederco. "The Importance of the Olfactory Sense in the Human Behavior and Evolution." *Journal of Medicine and Life*. April 15, 2009. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3018978/>.

it has its roots in antiquity.⁵¹ It was in ancient Rome, Greece, and various other pagan cultures that odor was utilized as a means to acquiring pleasure and as such when Christianity arose to power it initially rejected it.⁵² However, it adopted odor and transformed it for its own purposes, as it so often did with many local and regional customs in order to attain more followers. Christmas is a prime example of this. Supposedly Jesus Christ was born in Spring or early Summer, however the Church moved the celebration align with the pagan holidays of yuletide in order to make it easier to alienate fewer people and in so doing attain more followers. It reinterpreted odor in the form of incense as a means to better connect to God in Heaven in approximately 4 A.D.⁵³ It was from this point onward different odors acquired different spiritual meanings such as the Holy Spirit being connected to a lovely sweet scent and sin as an unpleasant odor.⁵⁴ Odor then became connected to physical well-being and was seen as a means to infer the truth about an individual. This seems rather mad and even paradoxical given the fact that Smith states in *Sensing the Past: Seeing, Hearing, Tasting and Touching in*

⁵¹ Drobnick, "Reveries, Assaults and Evaporating Presences: Olfactory Dimensions in Contemporary Art," 10. - The perception that the sense of sight is the "noblest of senses" and the power of smell was first established firmly in Western culture in the time of Plato in ancient Greece. Constance Classen, *Worlds of Sense: Exploring the Senses in History and Across Cultures* (London; New York: Routledge, 1993), 17–18; Plato and Xenophon, *Socratic Discourses*, ed. Alexander D. Lindsay (London: J. M. Dent, 1910). - Socrates believed that odor was a vital tool for distinguishing between slaves and free men. He believed that they had different odors and these odors should not be concealed with perfumes as odor was a critical tool for regulating society's daily operations. Neither Constance, Lindsay nor Drobnick mention that it is well known that Socrates had a great passion for arguing with people. In Xenophon's *Symposium*, he is asked why he married a woman with whom he constantly argues and seems to almost despise. He replied that he married her because she is so terribly argumentative. He believed that if he could contend with her temper then he could speak with any other person in the city of Athens. Keeping this in mind, it is difficult to really know if his statements about odor classification were true or if he was simply trying to start a pleasant argument.

⁵² Harvey, Susan Ashbrook. *Scenting Salvation: Ancient Christianity and the Olfactory Imagination*. Berkeley: Univ Of California Press, 2015, 20.

⁵³ Mark Smith, *Sensing the Past: Seeing, Hearing, Smelling, Tasting and Touching in History* (Berkeley: University of California Press, 2007), 62.

⁵⁴ Susan Ashbrook Harvey, *Scenting Salvation: Ancient Christianity and the Olfactory Imagination* (Berkeley: University of California Press, 2006), 25–26, 60–64.

History that smell was perceived as an “authenticator for socially generated and politically motivated truths” while vision’s value, popularity, and dominance increased.⁵⁵ Odors told the truth. This is an important cultural reason why we might reject the manipulation of odors – because we expect and want “truth” from odors. The historic preservation of smell is like altering truth and therefore considered to be a gimmick. However, it is not an “inauthentic” thing. This is a historically contingent interpretation of smell.

It was due to this paradoxical sensory perception that led to the concept of the ‘other’. Like in the time of Socrates, smell became a well received and much believed indication that there was a difference between the influential and the insignificant and the rich and the poor and true and false. Natural body odor neutrality became an indicator of one’s higher status and regard in society. Only literature concerned with architectural history seems to inform the audience that this became institutionalized in the hearts and minds of the populace because only the very wealthy could afford to take regular baths. Indoor plumbing was still relatively new and as such it was quite expensive to install and was not present in older buildings. Another increasingly popular indication of status in society was the use of artificial scents such as perfumes and colognes, although colognes were not initially popular with men. It was during this time that public bath houses became en vogue. This served as a measure of societal control; higher class, better smelling people, were discouraged from intermingling with lower class malodorous people.⁵⁶ George Orwell wrote in *The Road to Wigan Pier* that, “the real

⁵⁵ Smith, *Sensing the Past: Seeing, Hearing, Smelling, Tasting and Touching in History*, 59.

⁵⁶ Classen, Howes, and Synnott, *Aroma: The Cultural History of Smell*, 166–167.

secret of class distinctions in the West” emanated from “four frightful words... the lower classes smell.”⁵⁷

Unpleasant odors became bound to the masses and the corporeal. Contrarily, the ever growing middle class perceived deodorization as a calm, enjoyable, clean, and controllable environment.⁵⁸ Orwell also gave no reason as to why this was the case but this is a fantastic illustration of the public’s perception of those lower classes who couldn’t clean themselves on a regular basis. During the nineteenth century, writers spoke of their disgust over the sheer presence of lower-class people in public spaces such as museums. They stated that the odors of the lower class were “falling like vapor upon the pictures” and that their vapors were a threat to the physical integrity of the art pieces.⁵⁹ Evocative writing such as this may have been the inception for the idea that smell is “dangerous” to preservation. This could possibly be another reason why smell is not worked on in historic preservation. As a society, we have a tendency to think that such ridiculous and unwarranted opinions have been abolished as they simply have no factual, logical foundation, however it would be pure hubris to believe that such established ideas have not left a mark on Western society into the twenty-first century. Such marks can be seen in what museums choose to exhibit and how they do it.

⁵⁷ George Orwell, *The Road to Wigan Pier* (San Diego: Harcourt Brace, 1958), 128.

⁵⁸ Corbin, *The Foul and the Fragrant: Odor and the French Social Imagination*, 85, 214–216.

⁵⁹ Colin Trodd, “Culture, Class, City: The National Gallery, London and the Spaces of Education,” in *Art Apart: Art Institutions and Ideology Across England and North America*, ed. Marcia R. Pointon (New York: Manchester University Press, 1994), 42–43.

1.2.3 The Cultural Challenges of Exhibiting Odors

Despite scent being so fundamentally important to our perception of the physical world around us, it is still not truly perceived as a medium for either artistic expression or historical interpretation. Even wine, being so popular and long-lived, has never truly been accepted as a true art form.⁶⁰ This is likely due to the cultural and historical reasons just discussed. Despite this lack of recognition, as early as 1884 *Against Nature* by J.K. Huysman, the French novelist and art critic,⁶¹ proposed that presenting odors is just as legitimate as presenting sounds or visual stimuli to an audience because they are both perfectly valid senses that act upon the brain.⁶² Even though well-known writers and scientists praised odor for its ability to create and evoke strong memories, most museums still do not exhibit odors nor do they collect smell art. Smell art is often presented to the public for short periods of time such was the case in 2008 with the Reg Vardy Gallery's *If Ever There Was* aka *Impossible Smells* where various odor art was exhibited for a one month period of time.⁶³

The arguments against using smell in exhibitions is largely based on cursory findings that odors are too subjective and cannot be analyzed in a critical manner as well as on odor installations that executed scent improperly. In *Reveries, Assaults and Evaporating Presences:*

⁶⁰ Harold Osborne, "Odours and Appreciation," *British Journal of Aesthetics* 17, no. 1 (1977): 37.

⁶¹ Britannica, The Editors of Encyclopaedia. "Joris-Karl Huysmans." *Encyclopædia Britannica*. April 09, 2015. <https://www.britannica.com/biography/Joris-Karl-Huysmans>. – His original name was Charles-Marie-Georges Huysman.

⁶² Joris-Karl Huysmans, *Against Nature* (North Charleston: CreateSpace, 2011), 119, 159.

⁶³ Gyton, Georgi. "Art As A Smell At The Reg Vardy Gallery, Sunderland." *Art As A Smell At The Reg Vardy Gallery, Sunderland* | Culture24. April 26, 2018. <http://www.culture24.org.uk/art/art56538>.

Olfactory Dimensions in Contemporary Art (1998), Drobnick who is a Postdoctoral Fellow at the University of Manchester, editor of *Aural Cultures* (2004), co-author of *Museopathy* (2002), and *CounterPoses* (2002) stated that the arguments are as follows: Smells are only capable of evoking and as such cannot represent reality. They are too ephemeral and cannot be defined and cannot attain a true vocabulary. This is important because truth is always at stake with smell. Smell is also more biological than it is cultural which attributes to its ability to evoke but inability to represent. In light of the fact that smell is subjective, people cannot detach themselves from their own biases and analyze works in a controllable experience. Drobnick states that such concepts about smell are archaic and many of them have been proven to be fiction.⁶⁴ Drobnick's work clearly states why some in Western society believe smell to be the incomprehensible illogical sense; it gives the reader logical reasons as to why smell is so underutilized in scholarly works to this day but he doesn't go into detail as to why these arguments have become so cemented in the western psyche. Perhaps it's the perception that the recreation of an odor is untruthful is why it is so underutilized and unappreciated by preservationists.

1.2.4. Appreciation is in Short Supply

Odors have the ability to affect us on social, biological, and psychological levels. Despite its power, we essentially think of it as a passive experience. Classen has emphasized that while only some people are color-blind the vast majority of people are odor-blind unless a particularly

⁶⁴ Drobnick, "Reveries, Assaults and Evaporating Presences: Olfactory Dimensions in Contemporary Art," 18.

strong or pungent odor comes our way.⁶⁵ The fact that most people, unless otherwise trained, will not perceive subtle odors is a great hindrance both to those wishing to create olfactory exhibitions and to those professionals attempting to legitimize its use as a mechanism by which to tell a narrative. Most people have to be inundated with an odor in order for them to be consciously aware of it and when this occurs smell-fatigue rapidly takes place. This refers to the phenomenon when the olfactory system becomes accustomed to the scent, or overloaded, and is incapable of perceiving it any longer.⁶⁶ He doesn't tell us what the proper level of odorant is for an olfactory event simply because no one really knows at this point in time. *The Philosophy of Olfactory Perception* by Andreas Keller argues that odors can be presented successfully to audiences.⁶⁷ Olfactory events are quite rare when compared to their visual counterparts, however when we do make a conscious attempt to perceive odors we do have events.⁶⁸ The results from numerous studies have confirmed that people must consciously try to perceive odors in order for them to be consciously perceived including those performed by Lorig in 1992 and Degel and Köster in 1999; the level for ambient odors is still an unknown factor.⁶⁹ If there is too much odorant people will become frustrated and leave, if there is too little odorant people will become frustrated and bored and then leave. Also, due to there being a lack of odor awareness, there are going to be very few scent installations created and very few people going

⁶⁵ Classen, Howes, and Synnott, *Aroma: The Cultural History of Smell*, 1, 10.

⁶⁶ Nef, "How We Smell: The Molecular and Cellular Bases of Olfaction," 1.

⁶⁷ Andreas Keller, "Attention and Olfactory Consciousness," *Frontiers in Psychology* 2, no. 380 (2011): 9–11, doi:2011.00380.

⁶⁸ Ibid.

⁶⁹ Tyler S. Lorig, "Cognitive and 'non-cognitive' Effects of Odor Exposure: Electrophysiological and Behavioral Evidence." In *The Psychology and Biology of Perfume*, Edited by Steve Van Toller and George H. Dodd (Amsterdam: Elsevier, 1992), 161–173; Joachim Degel, and Egon Peter Köster, "Odors: implicit memory and performance effects," *Chemical Senses* 24 (1999): 317–325; Keller, Andreas, "Attention and Olfactory Consciousness," 10.

to those that are created. There is a direct correlation between awareness and implementation. It is noteworthy to state that in recent years, the number of scholarly odor exhibitions is indeed on the rise. This rise in scholarly scent exhibitions will likely result in an increased professional, societal and personal awareness and dialogue concerning odor as an apparatus for scholarly interpretation and exhibition. However, awareness does not have a direct relation to acceptance in this case. The people going to such exhibitions will have their own biases toward smell preservation and its authenticity and as stated previously most of the preservation field believes odor preservation to be untruthful and inauthentic. New discoveries in neuroscience are changing cultural attitudes toward smell as a marker of truth and shifting the discussion to memory.

1.2.5 Understanding the Human Sense of Smell and Its Connection to Memory

The biological manner in which human beings smell is remarkably complex. Entire books have been written about this topic, as such this thesis is presenting the reader with a condensed explanation of it. Compared to many other animals on the planet, the human body's sense of smell is incredibly weak, however it is still very capable of giving useful information to the mind. Odor information is passed through the human olfactory tract where it is then processed by the brain's olfactory cortex. Odors are created by diffused molecules that emanate from the various solid materials around us. So, when a person smells the odor of a pine tree at Christmas, they are literally inhaling the molecules from a pine tree that is expelling its own molecules. The human brain utilizes the various chemical signatures of these odors in order to identify the specific scents. It is widely believed that the sense of smell is the oldest of

all of the senses, and it is also the sense that is most associated with memory. The heritage industry is all about connecting people with their past and their culture, so it seems to me that odor preservation is a perfect way to do this. The concept of odor memory cannot be mentioned without mentioning Marcel Proust and the Proust Effect, or it is sometimes referred to as the Proust Phenomenon.

Often it is the case that scientific terminology and theories are difficult for the average person to conceptualize and incorporate into their lives. Fictional examples have proven time and time again to have the power to grab people's attention and teach them complex scientific theories. A key piece of fiction that has helped people understand the concept that odor can activate long forgotten but powerful emotional memories is *A la recherche du temps perdu*. It introduced the concept of odor memory in popular culture. The Proust Effect is well-known in the field of olfaction and is widely regarded as fact. The Proust Effect is the term commonly given to the phenomenon of an odor actually possessing the ability to evoke the memory of a past episodic event. Between 1913 and 1927 Marcel Proust, who was a French author wrote his fictional seven volume, 4,200-page novel about the narrator's recollections of childhood and experiences into adulthood during late nineteenth century to early twentieth century aristocratic France, while reflecting on the loss of time and lack of meaning to the world. This novel is fundamentally important to the popularization of the concept of sensory memory. It really deals more with taste, touch, and hearing. This is, however, the series which coined the term, the Proust Effect. It must be noted that the phenomenon itself was already

well established before this work, it simply was not well known to the general public.⁷⁰ Being that this book is a work of fiction, it doesn't dive into any scientific information, however it does imply to the reader that smell is a perfectly legitimate tool to travel back in time and experience history truthfully. As such, it can be used by people to imagine historical odors based on their own contemporary examples.

The book, *A la recherche du temps perdu* is a fundamental piece of literature one needs to read to begin to conceptualize odor memory and the power that they possess over people. The book was a shift in the nineteenth century about the appreciation of smell which presented readers with the idea that odors have the ability to embody and evoke strong memories. By invoking sensory memories, the protagonist is able to relive precious long forgotten events and sensations. The book can be interpreted in a variety of ways. For the purpose of this thesis I am interpreting the book as a powerful examination of the potency of human memory. "He discovers that his senses allow him to rediscover time that has been lost."⁷¹ It's important to clarify that Proust described sensory memories. He doesn't describe odor memory but instead focuses on taste, touch, and sound. The concept of voluntary vs involuntary memory is introduced. Voluntary memory is described as being governed by the will of the individual. Involuntary memory functions largely independent of one's own personal will. "(It breaks) into consciousness unbidden and at unexpected moments."⁷² The experience of sensory memory is

⁷⁰ Proust, Marcel. *A la recherche du temps perdu*. Grasset and Gallimard, 1913–1927.

⁷¹ Campen, Crétien Van. *The Proust Effect: The Senses as Doorways to Lost Memories*. Oxford: Oxford University Press, 2014; Proust, Marcel. *A la recherche du temps perdu*. Grasset and Gallimard, 1913–1927, Ch.2, 4.

⁷² Ibid, Ch.2, 9.

described as being similar to that of a collage of memories as opposed to a vignette of images. “A picture of life brings with it multiple and varied sensations. [...] What we call reality is a relation between those sensations and those memories which simultaneously encircle us – a relation which a cinematographic vision destroys because its form separates it from the truth to which it pretends to limit itself – that unique relation which the writer must discover in order that he may link two different states of being together forever in a phrase (Proust 1917-1922/2006, *Time Regained*).” This particular passage is perfect at conveying the true difference between sight evoked memories and odor evoked memories. Vision is terribly analytical and based in the world of the modern whereas smell is connected to the world of emotion, sensation, and memory. Sensory memory is more involuntary whereas visuals are more controllable. Proust was modern.

It goes on to inform the reader how the concept of sense memory was already well established in fictional French literature; however, it was Proust that seemed to popularize it. In fact, Proust describes flavor memory in his book, not odor. Since the early nineteenth century the “Proust Effect” was well established and even described by the French historian Alain Corbin in his study of smells called, “The Foul and the Fragrant.”⁷³ French philosopher Pierre Maine de Biran wrote in his journal as early as the end of the eighteenth century about the remarkable power of odor memory. He wrote about this nearly 200 years before the professional memory psychologists came to the same conclusion. It is often the case that science lags behind people’s imagination and often it is the case that fiction helps to inspire

⁷³ Ibid, Ch.3, 1.

scientific research. Biran argued that odor memories were connected more to emotion than intellect.⁷⁴ Also, in the nineteenth century literary circles, smell was an important player as a means to convey emotions and memories to the reader. It was not at all unusual for odor memory to be incorporated into literature and in fact it was quite common.⁷⁵

Psychologist and cognitive neuroscientist Rachel Herz and numerous other scientists have studied this phenomenon of the Proust Effect, or odor memory. Herz proposed that odor memory is a unique memory system and that it possesses special features linked to odor-associative learning.⁷⁶ In the book she was describing the memory of odors vs odor evoked memories. The first distinguishing characteristic that she described was our ability to distinguish odor due to previous encounters and the second was having an odor evoke the memory of a past episodic event. This is called the “Proust Effect.” Engen once stated that, “time seems to play no role in odor memory.” Odor evoked memories are not so much connected to the scent as they are about an event linked with the scent. In contrast, memory for odors depends entirely on associative learning and this is informed by experience. Also, trained experts, such as perfumers, have the ability to actually imagine the scent whereas the lay person does not; this seems to be connected more with taste than smell though. Also, emotion seems to come before awareness of the content.

⁷⁴ Ibid, Ch.3, 2.

⁷⁵ Ibid, Ch.3, 4.

⁷⁶ Herz, Rachel. "Olfactory Cognition. From perception and memory to environmental odours and neuroscience." *Chapter 6. Odor memory and the special role of associative learning*, January 2012. doi:10.1075/aicr.85.12her.

Other forms of recall are primarily analytical, which are then followed by emotional reflection. Emotion is secondary. Perhaps this is why olfaction is left out of many aspects of academia? Academia is concerned primarily with scientific fact rather than emotion; feelings have no place in a scientific discourse. This is biologically proven true by the fact that the olfactory cortex and the amygdala are directly connected to emotion and stimulus reinforcement association learning. Also, olfactory information does not need to be integrated in the thalamus prior to processing in the cortex. Herz, like many others, describes methodological challenges in studying olfaction recollection and recognition. Scent has the ability to make memories that would not be strongly remembered, remembered very strongly. However, it would seem that odor memories that are formed have a tendency to be from an earlier time of life, most commonly from childhood. Since odor is primarily the sense that parents use to teach children what is good versus what is bad, it is logical that when people are young and still learning what is good and bad for them, this sense would be most prevalent in people's long-term memory. This is of course a cultural practice and not something that is innate unlike olfaction which is a constant across our species.

The nose's smell cells are olfactory receptor neurons. These are located on the olfactory epithelium; this is a one inch by two inch strip of tissue inside the nose located toward the back. This strip of tissue is actually nearly three inches above the nostrils, where the odorant molecules enter into the nose. The nose even has a supporting cell system that excretes mucus which in fact makes it easier for the receptor neurons to grab and hold the odor molecules. It's the olfactory receptor neurons that detect all of the myriad of odor molecules. The mucus holds

and traps the odor molecules on the receptors, when they are inhaled into the cavity of the nose. These olfactory receptor neurons are directly connected to the olfactory bulb, which is the olfactory cortex of the brain, by nerve tendrils called axons (I am not referring to the architectural drawing). The human nose utilizes nearly 10 million of these neurons in order to process smell. Human beings have the ability to recognize and distinguish at least 10,000 separate odors however, this pales in comparison to man's best friend, the dog. Their sense of smell is anywhere from 10,000 to 100,000 times as acute as any humans.⁷⁷ That means that they can distinguish at least 100,000,000 different odors.

1.2.6 The Challenges of Studying Smell

In congress with the scientific study of olfaction, the preservation of smell has its challenges. The two most commonly held difficulties with even attempting to gain a greater understanding about smell preservation are the lack of standard testing methodologies and the lack of a standard vocabulary for the preservation field. From the myriad of tests that have been conducted by Rachel Herz and Engen Trygg, Andrew Dravnieks, J.P. Aggleton and L. Waskett, and a myriad of others, there is one blaring omission that comes through; the lack of a standard testing for people's perception of odors is a huge problem in advancing the study of olfaction and therefore its advancement as a legitimate preservation medium. Each time a test is conducted, a new method is employed. However, two of the most prevalent testing methods seem to be exposure to an odorant first and then an explanation about it or vice-versa. In

⁷⁷ Tyson, Peter. "Dogs' Dazzling Sense of Smell." PBS. October 04, 2012. <http://www.pbs.org/wgbh/nova/nature/dogs-sense-of-smell.html>.

Dravnieks *Odor Quality: Semantically Generated Multidimensional Profiles are Stable* 218, no. 4574, an odor test is described that was conducted on participants in order to determine if people were able to correctly detect what scent they were smelling.⁷⁸ It described that there are really only two methods for characterizing odors. One is the semantic method by which the odor is described by words or noted for the applicability of various odor descriptors. The second is the direct comparison to a series of reference odorants. The article goes on to essentially describe a series of different tests that eluded to the point that there is no one proven method for assessing people's ability to judge scents. This is why it is difficult for science to test olfaction. It did state that further testing with larger groups, more than 100 people, is probably required. The book also includes a list of descriptors for reference purposes which stole liberally from the dictionaries of the other senses. The lack of an olfactory dictionary of terminology is a great detriment to the field of preservation as well.

Edward Sagarin wrote about this point more fifty years ago when he stated, that the profession is a "science in search of a language", due to our inability to describe smell by means of exact terms.⁷⁹ Despite the fact that there have been great technological leaps in the field such as the headspace technology that the International Fragrance and Flavors utilizes to capture and analyze odor molecules being expelled into the atmosphere, the field of olfactory study still lacks that most basic of tool, a universal vocabulary by which to describe itself.⁸⁰ It

⁷⁸ Dravnieks, Andrew. "Science." *Odor Quality: Semantically Generated Multidimensional Profiles are Stable* 218, no. 4574 (November 19, 1982): 799-801. http://www.jstor.org/stable/1689759?seq=1#page_scan_tab_contents.

⁷⁹ Edward Sagarin, *The Science and Art of Perfumery* (New York, London: McGraw-Hill Book Company, 1971), 137.

⁸⁰ Classen, Howes, and Synnott, *Aroma: The Cultural History of Smell*, 3.

seems comical that there is such a plethora of words to describe sounds, touch, sights, and tastes but there are really no words to describe smell besides 'bad' or 'good.' Since there is no established list of words to describe smell, participants in odor identification studies are forced to describe what they perceive with terms stolen from the other senses dictionary such as 'sweet', 'sharp', etcetera. Equally as unfortunate, they are forced to turn to metaphors and analogies such as 'cool', 'green', etcetera. Many different attempts have been made to create a vocabulary for the field such as the fragrance wheel. This is a circular diagram that shows the inferred relationships between olfactory groups. These relationships are based on the similarities and the differences in their respective odors.⁸¹ This was first attempted by the Austrian perfumer Paul Jellinek in 1949 and published in his book *The Practice of Modern Perfumery*. Despite this and numerous other attempts, no vocabulary has ever been established and these odor diagrams still rely heavily upon terminology that comes from the other senses. Of all the various attempts to create terminology for smells by so many different professionals, it remains unclear why it has yet to be successfully adopted by the public. Perhaps it is because smell is so ethereal and ephemeral in nature that simply cannot be defined in the language of the other senses such as sight and sound. There are examples of cultures outside of the West that have successfully created and continue to utilize odor vocabularies.

As discussed in the book *Aroma: The Cultural History of Smell*, there are entire cultures that exist outside of western society that have established their own unique odor vocabulary, such as the Kapsiki of Cameroon and the Ndut of Senegal. These various cultures and others will

⁸¹ Jellinek, P. (1949) *Praktikum des Modernen Parfümeurs*, Vienna

be analyzed in more detail in Appendix A of this thesis. While there is no established and agreed upon reason as to why western society cannot seem to create terminology for odors, one theory suggests that because odor and odor memory are so unbreakably bound together with emotion and feeling, there is simply no room for intellectual analysis and classification. This alludes to the notion that odor is also very connected to taste and that they blur together more than vision and hearing. This theory is echoed by Car Verbeek who goes on to state that this is due to its immediate feedback from the limbic system. This is in contrast to sight and sound which can be and are analyzed with cerebral separation.⁸² It is difficult to escape from an odor once you have been exposed to it. If odors are so terribly present in our environments, the laymen would imagine that it should be easy to capture and study. Technology does exist, and has existed for some time, for the singular purpose of capturing and analyzing odor molecules. This technology is called headspace.

Unfortunately, the headspace technology itself is far from perfect. Headspace is a technology that was developed in the 1980's which is used by International Fragrance Flavors and olfactory recreation artist Sissel Tolaas to capture odor molecules being expelled by material in order to analyze their compounds and replicate them artificially in a lab setting by a perfumer. In theory this should work very well, however in practice the technology is quite limited. The purveyors of this technology don't like to tell their consumers that while the device is able to detect what molecules are in the air, it is not able to inform the perfumer or the

⁸² Verbeek, "Kunst Inhaleren - Het Gebruik Van Geur in Hedendaagse Kunst," 64.

scientist what odors will be most strongly detected by the human nose. At present, the best way to determine that is by using one's own nose.

The historical association of smell with truth makes it difficult to accept artificial smells as "truth" for many in the preservation field. They have been trained to believe that the original object is truth and anything recreated is a lie. Unfortunately, as discussed previously science is not helping to alleviate this connection because it cannot duplicate smells truthfully, it has been unsuccessful in creating a smell vocabulary, and it doesn't understand how our brains interpret and store odor memories. Due to the fact that historic preservationists believe that only the original historic artifact is authentic, it may be impossible to convince them that a historic olfactory recreation could ever be authentic.

Chapter 2 Indoor Odor Preservation Projects

Exhibiting anything that possesses historical significance to the public is often a challenge. Sense the object is as important as its interpretation, there is always some kind of intention behind the way objects are presented to visitors. A common example can be found in how museums choose to exhibit paintings. Paintings are terribly fragile objects. They are susceptible to damage from light, air, and humidity so they must be protected yet still be visible to the public.

Naturally, they are sometimes placed inside glass cases so that people cannot touch and potentially damage them but equally important is the amount of light that touches them. Over time, light discolors and fades the pigments of paintings and destroys them. Museums have known this for ages and intentionally utilize a wide range of methods to both protect the paintings but allow public access. Museums will make certain that they are not hung in areas that will receive direct sunlight, encase paintings in ultraviolet filtering materials, and store them in total darkness when they are not on display. The institutions have learned from the mistakes that were made over the centuries and are now able to both allow maximum accessibility and protect the paintings for decades and even centuries to come. However, odor exhibitions are different. The preservation and showcasing of odors in traditional indoor museum settings has only started to be experimented with in the latter half of the twentieth century. Odors are not physical objects – they are ephemeral and are difficult to control. In order to showcase odor, museums have to have a great understanding about how air moves in

their spaces. Ventilation systems, windows, doors, and people moving through the space affect the air and the way odors move with a space, so designers of exhibitions have to be very aware of what they are doing. In this chapter, Indoor Odor Preservation Projects, I will explore two case studies, the Tenement Museum and the Morgan Library, that have encountered the challenges and opportunities regarding the interpretation of odors as “authentic” heritage when odors are included in a museum setting that is enclosed in a building.

2.1. Tenement Museum (1988)

2.1.1. The Building and Its History

The Tenement Museum in New York City’s Lower East Side uses period reconstructions of apartments which belonged to its tenants to allow visitors to learn about the lives of some of the thousands of newcomer immigrants who rented one of the apartments at 97 Orchard, located in one of the longest-lasting immigrant neighborhoods in the country. The Designation Report for the building reads very much like any other report in that it describes how the building is located on the west side of Orchard Street between Delancey and Broome Streets in the Lower East Side. It tells how the street consists of five and six story nineteenth and early twentieth-century tenements. It says how the tenements all had stores at the street level and how 97 Orchard is quite typical of the tenement design during the time. It is a five-story Italianate style building with a basement, the facade is red brick, and it features early cast-iron pilasters and the cellar has rubble stone walls and exposed wooden beams.⁸³ The report

⁸³ 1993, Tenement Building at 97 Orchard Street, OMB No. 1024-0018, 4.

describes the architecture of the building very well but it predictably neglects to say anything about the smell of the building's basement cellar which once was an active saloon or the odor of any of the rooms' wallpaper which came into contact and absorbed decades worth of food and air pollution.

The museum, which was created in 1988, began its new life as a museum dedicated to showcasing the lives of the immigrants who lived in the area in the early twentieth-century when Anita Jacobson and Ruth Abram discovered the building. They were originally searching for a storefront to create an interpretive center on the immigrant history of New York City. Upon initial inquiry, they realized that the landlord had closed the building's upper floors in the 1930s instead of bringing the apartments up to code as was required by the city's new housing ordinances. Essentially, the two of them had unearthed a kind of "time capsule." Sealing the upper floors had preserved the cramped, dim apartments as they had existed in 1935 when they were still occupied. The museum acquired all of its marvelous stories of the time through a painstaking research process that involved digging into city and census records, oral histories from previous tenants, newspapers, and documentaries. In total, the lives of approximately seven thousand people who lived in the tenement over the course of its seven decades as a tenement were reconstructed. It was from all of this information that Abram and Jacobson restored seven apartments in the building that represent specific historical events from the lives of the families who lived there.⁸⁴ Information pertaining to the smells was acquired mostly

⁸⁴ Sharon Seitz and the Lower East Side Tenement Museum, *A Tenement Story: The History of 97 Orchard Street and the Lower East Side Tenement Museum* (New York, 2004); "Founding a Tenement Museum," Lower East Side Tenement Museum, <http://www.tenement.org/about.html>; Jack Kugelmass, "Turking the Slum: New York City's

through photographs, interviews and historical research. There were photos of tenants drinking beer and smoking cigarettes, so they knew that the smell of lager and cigarette smoke was prevalent in the building.

2.1.2. Walking into the Past

The real drawing force for visitors to the museum are the many interpretive tours that are led by guides into the residential apartments as well as the basement's commercial area known as "Shop Life," which was also reconstructed. Each of the tours is unique and worthy of exploration. On March 1, I took part in both the Shop Life and the Hard Times tours. "Hard Times," focused primarily on how the immigrants managed to survive the period's terrible economic depressions that occurred several times. One such apartment tour showcases the life of Gumpertz family, who were German-Jews. It was designed as the dressmaker's shop of Nathalia Gumpertz. She started it after her husband, named Julius, abandoned her in 1874. From here the tours moved onto rooms that belonged to the Italian-Catholic Baldizzi family which managed to live through the Great Depression. Another tour entitled the "Sweatshop Workers" invites visitors into Jennie and Harris Levine's apparel shop of the 1890s, located in their home, and then from there into the apartment of Rogarshevsky. Here, I found a table that was half-set for a 1910 Sabbath dinner for the Eastern European Jewish family. During these tours, the tour guides asked questions that were meant to kick-off discussions relating to broader questions which related to the family unit in societies of the past and present.

Tenement Museum and the Politics of Heritage," in *Remembering the Lower East Side: American Jewish Reflections*, ed. Hasia R. Diner, Jeffrey Shandler, and Beth S. Wenger (Bloomington, IN, 2000), 184–185.

Common themes include the uneasy relationship between religion and secular life. The tour guides explained how during this time, factory workers were expected to come to work on Saturday, yet the Rogarshevsky daughters told how their parents were committed to observing the Sabbath.⁸⁵

The “Shop Life” tour is representative of the museum’s interpretative methodology. It best depicts the interpretation techniques that have made the Tenement Museum one of the greatest places to learn about immigration and the hardships of the early twentieth-century in America. The tour lasts for approximately ninety minutes, showcases various aspects of commerce connected with the lives of the immigrants. It is primarily focused on aspects of immigrant community, what they believed to be success in America, and entrepreneurship. My tour began by walking along the sidewalk and entering the reconstructed bar, which belonged to John and Caroline Schneider. The bar was approximately half the size of the entire basement. I saw a hodgepodge of items affixed to the wall behind the bar, which included a musical horn and numerous papers as well as a beer barrel and a round table designed for card games. The tour guides dispersed playing cards to each of the visitors, including me, which had the name of a person who was a customer at Schneider’s saloon. I received the name of a cigar maker while another received a real estate agent, and there were many more. After dispersing the cards to the visitors, the tour guide then asked the visitors of any possible connections that may have

⁸⁵ “Ivory Towers and Tenements: American Jewish History, Scholars and the Public,” *American Jewish History* 98, no. 2 (April 2014): 42–46; “Tour the Building,” Lower East Side Tenement Museum, <http://www.tenement.org/tours/php>; Annie Polland; Diner, *Lower East Side Memories*, 117–18; Kugelmass, “Turfig the Slum,” 186.

brought these people together at the saloon. This then started a conversation about how this local saloon essentially served as the community center of its time.⁸⁶

From the reconstructed saloon, the tour shifted to Caroline's kitchen, which was in fact her workshop, where she made free lunches that were provided by the saloon. From here, the tour continued onward to the Schneiders' back bedroom but not before turning around and going into the other half of the basement. It was here that I was able to take a moment to peer into a very different reconstruction than those seen previously. It was an unrestored wall that featured the historic 1860s brick and lathe as well as many layers of paint, wallpaper, and paneling that were applied to it over the course of its lifespan as an apartment and business. Next to the wall was a table with a glass top that held numerous artifacts that were either found on the site during the process of the restoration or that were donated by the children of some of the storekeepers. The fact that the objects are exhibited in such a public manner is the museums way of showing visitors that everything that they were seeing was based on either materials that were found on the site or that were either replicated or found somewhere else but that would have been appropriate to the time period and the location.

From the basement, I stepped through a doorway into a rather a large room that was once the Marcus family's auction exchange. This area featured a long "sales counter," which acted as an interactive touch screen. Three businesses once used this space including a butcher shop that was owned by Israel and Goldie Lustgarten at the beginning of the 1900s, an auction

⁸⁶ "Narrative," AAM Application Narrative; Favaloro, "Schneider's Saloon Source Book," 3.

house which belonged to the Marcus family in the 1930s, and an underwear store that belonged to Sidney and Frances Meda's during the 1970s. We were then told to take one object each from the shelves and place it on the counter. When the objects were placed on the screen, images came onto it and an audio file was played which was related to the object and the business to which it related. Touching the screen further activated a more detailed history of both the family that owned the business and the business's history. From the presentations, the tour guides engaged us in yet another discussion about the businesses in the building and the larger neighborhood context. This was meant to convey the idea that these businesses served as community gathering spaces and not simply as places to buy food and wears. The video recordings were of interviews with Rafael Perez at the counter of the Chinese-Hispanic grocery store who is of Dominican descent, Yvette Ho, who owns a Panade Bakery which combines French and Chinese ingredients to make lovely treats, and many more. The interviews are designed to be a way to showcase the way in which the Lower East Side has both changed and stayed the same over the last century and a half.

The Shop Life tour represents a broader trend that is occurring in house museum exhibitions. Sarah Litvin, the former Senior Education Associate for Exhibit Development, I recalled that initially the museum was going to create a simple reconstruction of the saloon, however it was decided by the museum's exhibition team that it would be advantageous to spotlight the history of the basement as a commercial entity.⁸⁷ The museum has worked

⁸⁷ Litvin, Sarah. Interview, Director of the Reher Center for Immigrant Culture and History and former Senior Education Associate for Exhibit Development and Educator, (March 5, 2018).

tirelessly with more than a dozen scholars and historians such as Andrew Dolkart, professor at Columbia University, and Annie Pollard, the Vice President of Education, in order to accurately convey the historical themes and details that the tours and the exhibition showcase to their visitors. These learned individuals were then debriefed on how best to make connections between the issue that affected the immigrants that lived in the tenement and those people alive today. This was done in order to put such issues into a contemporary context for people presently visiting the building. With such an excellent dedication to documentation and research, an odor recreation at the Tenement Museum would be fantastic, however the museum doesn't actually have any odors on display for visitors. It has considered exhibitions that would have an odor element to them though.

One idea that the exhibition team contemplated was reconstructing Schneider's saloon in order to sell beer or at the very least give samples of the lager that had been produced during the time. This was a deliberate attempt to incorporate the sense of taste into the exhibition and by doing this the sense of smell would have been incorporated as well since smell and taste are linked. This was thought to be impractical and instead the museum decided that they wanted to create a more neutral family friendly space. A Germanic theme was chosen for Schneider's saloon, as traditionally German saloons were perceived as space for the community and for relaxation. During the early twentieth-century, German bars openly welcomed women and children as long as they belonged to a male patron's family. The women and children were perceived to be a way of subduing men's bad behavior. This can be found contemporary restaurants and this was essentially a precursor to what is known today as

“family fun.”⁸⁸ This notion of family fun was found in the Shop Life tour in the circular “family” table, which is close to the bar, and in an 1879 poster in the storefront window advertising “Lager Bier.” The poster informs visitors that lager is “A Friendly Drink,” “A Healthy Drink,” “A National Drink,” and “A Family Drink.” It actually features the mother and father offering their own baby a mug filled with lager.

Shop Life was a phenomenal tour showcasing a truly unique and thought provoking time in the history of both New York City and immigration. In total, the Tenement Museum offers potential visitors sixteen separate tours that showcase different aspects of both the building, the people, and the time. These tours are separated into three categories; Tour the Buildings, Meet the Residents, and Walk the Neighborhood.⁸⁹ Tour the Buildings offers nine tours including the aforementioned Shop Life. These tours are designed to allow visitors to go into the restored apartments and businesses that belonged to the tenants and merchants of the past. Meet the Residents features live costumed interpreters who play the roles of people who lived at 97 Orchard St. These actors answer questions that visitors pose and describe their immigrant experiences. There are three tours listed under this category. Walk the Neighborhood offers visitors a chance to walk the streets of the Lower East Side and discover just how the immigrants of the past and present have shaped and continue to shape the area’s architecture and culture.

⁸⁸ Russell A. Kazal, *Becoming Old Stock: The Paradox of German-American Identity* (2004), 88–89; Kathy Peiss, *Cheap Amusements: Working Women and Leisure in Turn-of-the Century New York* (Philadelphia, 1986), 20, 30.

⁸⁹ “Tours and Tickets.” Guided Tours of the Tenement Museum. 2018. <http://tenement.org/tours.php>.

2.1.3. Olfactory Possibilities

The odor possibilities at the Tenement Museum are incredible and the exhibition designers are aware of this even if they don't take advantage of it. Early in the development of the basement into the "Shop Life" tour, the museum was considering transforming the basement into a working saloon that would have provided beer. The smell of the fresh lager and cigarettes in such a confined space would have served as an olfactory time machine for visitors to the museum. Ultimately the concept was decided to be unviable by the exhibition team, supposedly for two reasons. The first reason being that such odors would be intolerable and off-putting for many people which leads to the second reason which is that such environments are not perceived as being family friendly today. This is ironic given the fact that during the time, German bars were a gathering place for families including men, women, and children.

The museum has shown hints that it is willing to go beyond traditional tours and exhibitions and to delve into the realm of smell with a recent inquiry from unknown individuals working for the museum to Andreas Keller, who holds a Ph.D. in genetics and author of the book *Philosophy of Olfactory Perception*.⁹⁰ "The book reconsiders the major current topics in the philosophy of perception using olfaction as the paradigm sense."⁹¹ The Tenement Museum

⁹⁰ Keller, Andreas. *Philosophy of Olfactory Perception*. Cham: Springer International Publishing, 2017.

⁹¹ The author reveals how many of the most basic concepts of philosophy of perception are based in peculiarities of visual perception not found in other modalities, and addresses how different the philosophy of perception would be if based on olfaction."⁹¹ He also collaborated with Jorge Otero-Pailos in the 2017 Columbia University GSAPP course called Experimental Preservation in which I took part. The course involved myself and five other students choosing a topic at the Morgan Library and then creating an odor to accompany it. This will be further detailed with the next case study.

contacted Dr. Keller recently about recreating and installing the odor of beer and cigarettes in the museum. Dr. Keller stated that if they wanted that odor, they could simply get a bucket and fill it with each and place it in the room out of eyesight. The museum didn't like this idea as they believed that it would likely attract insects and vermin into the building; they wanted an inauthentic synthetic recreation.⁹² There is a tension between "authentic smells," such as placing beer and cigarettes in a bucket, and current museum and preservation practices, such as not wanting vermin and insects inside their exhibitions. The museum houses historical artifacts and documents and the presence of mice and insects would be a threat to their continued preservation despite the fact that real beer and cigarettes would be most authentic.

Ultimately, the museum did not follow Dr. Keller's advice and has not incorporated any odorants, synthetic or otherwise, into its exhibition. This hesitation is likely because such odors would be offensive to many visitors and as the basement saloon recreation has shown, the museum is all about possessing an all-inclusive and harmonious concept of "family fun." This is showcased yet again on their website which clearly states below each tour that they are suitable for ages 8+. No adult only tours are offered that would perhaps showcase more offensive aspects of the early twentieth-century and the immigrant experience in New York City. The Tenement Museum may have succeeded in keeping the building and the everyday activities of its occupants alive but it has failed in capturing and conveying their souls; objects equally as real yet intangible as odors in the air. The incorporation of odors into their

⁹² Litvin, Sarah. Interview, Director of the Reher Center for Immigrant Culture and History and former Senior Education Associate for Exhibit Development and Educator, (March 5, 2018).

exhibitions would add much to the rather sterile tours that are currently being offered. When considering the authenticity of the Tenement Museum, it is important to also consider that the museum has been essentially sterilized therefore the odors that are present are completely different from the odors that were present when the building was occupied in the early twentieth century. This had to be done because the building is a museum and as a museum there are standards of practice that must be followed. Due to these restrictions, the Tenement Museum may never be able to exhibit truly authentic odors despite the narrative that the living conditions during the buildings occupation were horrible and smelled terrible being so conducive to an exhibition of foul odors.

When I judged according to my Clevenger Authenticity Scale, the Tenement Museum received the lowest score of all of the case studies I examined with a score of 31 points (Fig. 2). It received one perfect score of ten in the Location category because the museum is the original building. In the rest of the categories it never managed to receive a score higher than a six and that was for Fabrication. It received a six because they are using the original materials, so they must retain some of their original odor. However, decades of cleaning products robbed the smell objects of much of their original odors. The third best score was for Evidence as the museum has an abundance of records but very few of them actually speak to the nature of the odors that were present in the building in the past. The fact that the odors that are being preserved is purely being done so accidentally hurt it in the Intention category. It lost points in Significance because the odors that are present in the museum, mainly the smell of cleaners

and other people, are quite familiar and are not representative of the time period that the museum is showcasing.

Clevenger Authenticity Scale Tenement Museum		
Category	0 _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) 0 _____ 10	3
Significance	Familiar _____ Unfamiliar 0 _____ 10	2
Fabrication	Artificial _____ Natural 0 _____ 10	6
Location	Ex-Situ _____ In-Situ 0 _____ 10	10
Intention	Accidental _____ Intentional 0 _____ 10	1
Duration	Long (Vague) _____ Short (Specific) 0 _____ 10	2
Evidence	Undocumented _____ Documented 0 _____ 10	5
Aesthetics	Fragmentary Impression _____ Unified Impression 0 _____ 10	2
Total		31

Figure 1 - Tenement Museum Score

2.2. The Morgan Library Olfactory Recreation (2017)

2.2.1. The Panic of 1907

In order to further examine the question of how an odor can be presented to visitors within an indoor museum setting as well as the question of its intention which is to integrate a more immersive sensory element into historical exhibitions, Jorge Otero-Pailos and Andreas Keller created and taught Columbia University's Experimental Preservation course in the spring of 2017. Its aim was to introduce students, myself included, with a building in New York City and give them the creative opportunity to engineer a synthetic odor that would encapsulate a particular aspect of that building's history. The course focused on the J.P. Morgan Library located in New York City, as was mentioned in the previous case study. For my olfactory recreation, I sought to take participants back in time and tell them a lesser known but fascinating story. My aim was to utilize the olfactory senses to narrate the story of how John Piermont Morgan resolved the Panic of 1907 in the Morgan Library. It is in the choosing of what to honor and present to the public that the concept of significance is felt most strongly in preservation. Odor preservation runs entirely contradictory to the traditional notion of preservation. Traditional preservationists believe that objects which are familiar to the general public should be preserved, however the odor of an object is not well known in most cases. Unless a person has gone to a place actually smelled the object it cannot truly be understood. Experimental preservationists preserving odor seek the opposite; they strive to preserve that which is unfamiliar. It was with this understanding in mind that I began my olfactory recreation.

I decided to recreate an event, the day and night in mid-October of 1907, when the New York Stock Exchange fell almost 50% from its peak in 1906. Morgan, who was almost seventy years old, circumvented a major public panic in New York when he convinced fellow bankers to supply funds to safe guard the threatened economy. The crisis was resolved in Morgan's newly built library, after he locked the doors and refused to let out the clearing-house bank presidents in the East room and the trust company executives in the West room until they agreed to a rescue plan.⁹³ Benjamin Strong Jr., the associate from Bankers Trust who was among the investigators and George W. Perkins, Morgan's partner were assigned to inspect the trust companies, later wrote about the event in a 22-page letter to Thomas W. Lamont. He wrote that at 9 P.M. on Saturday, November 2nd when he arrived at the library, there were 40 to 50 men discussing the crisis. Morgan and his closest advisors stayed in the office of the Morgan's librarian's office and let the companies deal with the problem themselves. However, they didn't accomplish anything. Strong wrote, "an anxious throng of bankers, too uneasy to sit down or converse at ease, pacing... waiting for the momentous decisions of the modern Medici."⁹⁴ Around midnight, Edwin S. Marston, the president of Farmers Loan and Trust Company was summoned to talk with Morgan who told him that there was another very serious matter that he had to resolve as well and that it would take \$25 million. Morgan said that he was very concerned about the problems with the trusts and the risks that their problems posed to this other situation. The trusts were on the verge of bankruptcy and if they failed then it would have

⁹³ Bruner, Robert F., and Sean D. Carr. *The Panic of 1907: Lessons Learned from the Market's Perfect Storm*. John Wiley & Sons, 2008. pp. 122

⁹⁴ Bruner, Robert F., and Sean D. Carr. *The Panic of 1907: Lessons Learned from the Market's Perfect Storm*. John Wiley & Sons, 2008. pp. 123

led to New York City's economic ruin. The other situation was the rescue of Moore and Schley. This indicated to everyone present that Morgan wasn't going to intervene for the trusts and that they had to solve their problems on their own. At 3 A.M., Strong presented his full report to the trust companies, by which time there were approximately 120 men in the library. After he finished, he went to leave the building but found that the library was locked and no one could leave.

Morgan had locked the doors and pocketed the key. He wasn't going to allow anyone out until the problem was solved.⁹⁵ It was at this point that Morgan finally entered the discussions. He told Edward King, the president of the Union Trust Company, who had been appointed the unofficial leader for his fellow trust company presidents that they had to provide a loan of \$25 million to help the Trust Company of America or they would also fall. Although very hesitant, a few of the lawyers present drafted the loan and with a hand wave to the document Morgan invited Mr. King over to it. He then said, "there's the place, King, and here's the pen."⁹⁶ King and all the other trust company presidents signed it and the terror was thwarted. Morgan was regarded as a national hero. However, the use of so much power and influence by one private citizen concerned a great many people and Morgan was accused of using the crisis for his own personal gain. This eventually led to the establishment of the National Monetary Commission and later to the founding of the Federal Reserve.

⁹⁵ Satterlee, Herbert L. 1939. *J. Pierpont Morgan: An Intimate Portrait*. New York: MacMillan

⁹⁶ Lamont, Thomas W. 1975. *Henry P. Davison: The Record of Usual Life*. New York: Arno Press, A New York Times Company

2.2.2. Developing the Odor of the Event

My experimental preservation project sought to recreate the very visceral smell of possible ruin, panic and anger that the bankers and their lawyers must have felt being locked in Morgan's library that night. I executed this by recreating the smell of the atmosphere in the building that night. For the purpose of the project, I chose four particular odors to be the focus of the recreation. The odors were the cigars that the men smoked, the strong musk of so many men being confined to one space for an extended period of time, the variety of colognes that they would have been wearing and the smell of fear which was represented by ammonia. In order to replicate the odor of the cigars, I smelled the original cigars that J.P. Morgan smoked while I was present on the site. The brand he favored were called Meridiana Selectos and the Regalia de Morgans; I smelled the latter. I used a cigar odor mixture that was supplied by Andreas Keller.

Fear can actually be smelled by humans and it is often stated to smell like ammonia.⁹⁷ The key to ammonia in sweat is nitrogen. The only macronutrients in the human body that contain nitrogen are amino acids, these are the building block of protein. The body uses amino acids for energy.⁹⁸ This happens when a person is confronted with a precarious situation and the body's fight or flight response activates. The body starts to burn energy in response to this

⁹⁷ Soniak, Matt. "Can People Really Smell Fear?" *Mentalfloss.com*. January 4, 2013. <http://mentalfloss.com/article/32113/can-people-really-smell-fear>.

⁹⁸ Likness, Jeremy. "What Is That Ammonia Smell When I Sweat?" *Bodybuilding.com*. April 10, 2015. <https://www.bodybuilding.com/fun/ammonia.htm>.

condition. This is likely why fear smells like ammonia. In the recreation, I used ethylamine at a dilution factor of 1/100,000 since it smells similar to ammonia.

There were seven men's colognes that were rather popular at the time and were being represented in the recreation as these were the odors that the men present would have worn.⁹⁹ By investigating a number of their biographies, I later confirmed this.¹⁰⁰ They were Johann Maria Farina Original eau de Cologne – 1709, Lubin Eau de Lubin Parfum – 1798, Roger and Gallet Jean Marie Farina – 1806, Creed Santal Imperial – 1850, Creed Royal Scottish Lavender – 1856, Creed Cuir de Russie – 1854 and Creed Bois de Cedrat – 1875. During this time, colognes were used by businessmen as a means of conveying authority and as a way to fit into the business world. These men all wanted to be accepted by their colleagues, so they all used colognes as a way to subtly communicate that to each other. All seven had notes of citrus, wood, musk and smoke which I found interesting because it conveyed that the business world likes uniformity. I chose to incorporate these common elements into the recreation and in order to replicate a more pungent smell of perspiration I used pentenoic acid and methylpropanoic acid.

Since the smell of the creation would be rather unpleasant, I thought it would be best to isolate the scent and present it in such a way that visitors would not have to carry the scent on their person throughout the day. I did this by creating a micro climate of that night by means of

⁹⁹ "Some History on Cologne." Fragrancewholesale.com. <http://www.fragrancewholesale.com/somhisoncol.html>.

¹⁰⁰ "Perfume Through the Ages." Theperfumedcourt.com. http://theperfumedcourt.com/Products/Perfume-through-the-Ages-Mens-Sampler---1700--1900---7-samples__PERFUMAGES1700.aspx.

a glass pedestal and dome. I placed the various chemicals comprising the overall scent inside the closed dome and allowed to mix in the air. There were 120 vials representing the 120 men that were present that night. Each vial contained one of the chemicals comprising the scent. In order to smell the scent, a visitor simply had to remove the glass dome and inhale the odor. This allowed people to be able to experience the scent for a brief time. This also had the added benefit of limiting the exposure of the indoor environment to the unpleasant odor. If left exposed, as was the intent at the Tenement Museum, the odor would have likely permanently changed the odor of the room in which it was presented. The constituent chemicals of the recreated scent were ten parts orange blossom, five parts sandalwood, two parts exaltone, six parts musk original #1, three parts cigar (a pre-made mixture provided by Andreas Keller), two parts gunpowder (a pre-made mixture supplied by Jorge Otero-Pailos), four parts methylpropanoic acid, four parts pentenoic acid, and two parts ethylamine diluted to 1/100,000. The “model” served as an abstracted version of the Morgan Library on that notorious night. The participant was able to feel the influence that J.P. Morgan wielded at the time by being able to look down on the tiny vials representing the people present. The user was also able to experience the sense of unease that the 120 businessmen felt by lifting the glass dome roof and smelling the scent. By the visitor placing their nose into the glass dome, they also experienced a sense of claustrophobia which further replicated the tension that the men felt that night being locked in the library. Also, because I chose a vessel for the odor that was so different from anything in the room in Avery Hall, it naturally attracted the curiosity of the visitors.

The Morgan Library scent reconstruction was an important preservation project in the United States because it was an attempt to preserve not the built environment, something that is tangible, but it strove to interpret the intangible heritage that the country possesses. The preservation field in the United States is interested in preserving the intangible, sounds, feelings, practices and odors, however it is not easy. American preservationists are more experienced with preserving historic buildings for future generations, so they have a tendency to practice what is tried and true. Experimental preservation projects, such as the one that was completed at the Morgan Library showed, at the very least, a willingness and understanding of both the preservation community and the public at large to try to expand the realm of preservation itself.

2.2.3. The Public's Reception

The project was truly all about utilizing people's preconceived notions of present day odors to evoke a strong reaction in their hearts and minds. This is a kind of warped version of the Proust Effect. As mentioned previously, the Proust Effect refers to the reliving of events from the past by sensory stimulation. An example of this would be encountering something rather small and inconsequential such as the smell of a grandparent's cologne or perfume. That smell then evokes an incredibly strong and emotional memory from childhood.¹⁰¹ The project, in essence, sought to preserve the Morgan Library not as a physical building but as a memory in the minds and hearts of the participants. My Morgan Library project, and perhaps most

¹⁰¹ Campen, Cretien Van. *The Proust Effect: The Senses as Doorways to Lost Memories*. Oxford Scholarship Online, 2014.

attempts to preserve smell, is different from Proust because it's not evoking a lived memory from the past but creating one now. If the responses received from representatives from the IFF, the Morgan Library and Columbia University were to be used for evaluating the project, then the exhibition seemed to be a success. Both the scent and the delivery mechanism, the glass pedestal and dome, were very well received and understood to be an attempt to create the tension and unease that was felt by the 120 people present in the Morgan Library on the night of November 2nd 1907. Also, the audience did not need to be told about the intention of the glass dome or the odor in order to truly comprehend and appreciate the project. It succeeded in proving that there is an interest already instilled in the public for new and interesting forms of preservation. At the very onset of this project the online news publication HyperAllergic wrote about it in their article entitled, "Researchers Bury Their Noses in Books to sniff out the Morgan Library's Original Smell."¹⁰² The New York Times then wrote their own article entitled, "What's That Smell? Rare Books and Artifacts from a 1906 Library."¹⁰³ Although, it did capture the public's attention, only time will tell if it has swayed the opinions of the cultural heritage elite. However, public opinion should never be used as a measure for truth or authenticity. When I look at my project objectively, while the odor that was created was artificial it was done so by studying the true materials, the cigars and the colognes that the men used, and copious amounts of historical research. The interpretation that I created gave

¹⁰² Meier, Allison. "Researchers Bury Their Noses in Books to Sniff Out the Morgan Library's Original Smell." HyperAllergic.com. February 28, 2017. <https://hyperallergic.com/360698/smelling-the-old-books-of-the-morgan-library/>.

¹⁰³ Kennedy, Randy. "What's That Smell? Rare Books and Artifacts From a 1906 Library." TheNewYorkTimes.com. March 3, 2017. <https://www.nytimes.com/2017/03/03/arts/morgan-library-book-smell.html>.

participants the truth of that event as I believed it to be. From the perspective I believe that the recreation was authentic.

When I judged my Morgan Library Olfactory Recreation using my scale, I received fourth place with a score of 47 points (Fig. 3). My project received three perfect scores, an eight, and a nine. The three tens emerged in the Significance, Intention, and Duration categories. In Significance, I created an odor that is not known by the public, in the Intention category, I received a perfect score because I did intentionally create the odor, and finally in Duration, I focused on a particular event which was the Panic of 1907. For Evidence, my project received an eight because while there was a great deal of information that I was able to find, there were no records that specifically stated how it smelled in J.P. Morgan's library that night. I had to create an odor that was based on an educated well-researched guess. In the Aesthetics category, the project scored a nine because while the odors could be experienced in a unified manner due to the glass dome because the odor was mixed in the air inside the dome because the individual odors were in isolated tubes, the odors never fully mixed together. In Sourcing, Fabrication, and Location my project scored zero because the odor was created through chemistry therefore the odor was artificial and it was ex-situ.

Clevenger Authenticity Scale Morgan Library Odor Recreation		
Category	0 _____ Level of Authenticity _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) _____ 0 10	0
Significance	Familiar _____ Unfamiliar _____ 0 10	10
Fabrication	Artificial _____ Natural _____ 0 10	0
Location	Ex-Situ _____ In-Situ _____ 0 10	0
Intention	Accidental _____ Intentional _____ 0 10	10
Duration	Long (Vague) _____ Short (Specific) _____ 0 10	10
Evidence	Undocumented _____ Documented _____ 0 10	8
Aesthetics	Fragmentary Impression _____ Unified Impression _____ 0 10	9
Total		47

Figure 2 - Morgan Library Odor Recreation Score

Chapter 3 Outdoor Odor Preservation Projects

From the comfort and security of the indoor museum environment, this chapter shifts to the unpredictable and seemingly uncontrollable outdoors of open-air museums. Outdoor museums are very different from indoor museums in that instead of locking their historical pieces behind glass cases and velvet ropes they allow their pieces, buildings, to live outside. Since the locations are so different from each other, they have very different concerns, the biggest of which is that the architectural pieces are exposed to the elements. This poses an ever present danger to them. Also, interpretation and presentation is at the core of these places. The following two examples are quite different from one another yet they share a common goal; to proclaim national values and preserve the past.

3.1. Skansen Open-Air Museum (1891)

3.1.1. The Beginning of the Open-Air Museum

Fabrication is at the very core of preservation. The big underlying question to every preservation project is how is the object being preserved, artificially or naturally? The Skansen Open-Air Museum is good in its use of fabrication in that preserves its objects in their natural state as opposed to recreating them through artificial or foreign means with artificial materials. It was the first cultural heritage project that preserved odors and informed audiences of their collective past in an outdoor setting. It is located in Stockholm, Sweden and officially opened in October of 1891.¹⁰⁴ It was the brainchild of Artur Hazelius who both created the concept of the

¹⁰⁴ Richard W.E. Perrin, *Outdoor Museums* (Wisconsin: Milwaukee Public Museum, 1975), p. 9)

open-air museum and Skansen itself. He very adeptly anticipated the change in the way museums portray their history that supplemented the traditional showcasing of history with a story that was based more on folk traditions. This allowed a shift away from the representation of “politics, wars, and great men” toward a more rich and full story of the nation’s cultural evolution, “from the nobility to the very poorest.”¹⁰⁵ This new museum typology was fully utilizing its ability to create “a combination of culture and nature, material and spiritual history, visitors as active participants, knowledge through ‘edutainment,’ and even living history”¹⁰⁶ by the dawning of the twentieth century.

It was with a seemingly unimportant doodle that his idea was given life.¹⁰⁷ With Skansen, Hazelius fully adopted King Oscar II’s idea of an embedded nationalistic pride in a

¹⁰⁵ Sten Rentzog, *Open Air Museums: The History and Future of a Visionary Idea* (Sweden: Carlssons, 2007), 5.

¹⁰⁶ *Ibid*, 25.

¹⁰⁷ It should be noted that even though Artur Hazelius is indeed the father of the first permanent installation of an open-air museum, the concept of moving buildings to a designed setting was nothing new to Europe. King Oscar II, King of Sweden and Norway, had his own assemblage of five dislocated buildings in Bygdø in Oslo, Norway in 1881. It was his intention to both show that he had great interest in Norway and “thereby strengthening the ties between the monarch and the nation.”¹⁰⁷ Although the buildings that he had relocated were initially only meant to be a temporary installation, the ensemble eventually found a home at the Norsk Folkemuseum. The buildings he had moved were a Stave Church from Gol in Hallingdal and a house from Hove in Heddal in Telemark. Two years later, the Norsk Folkemuseum incorporated the buildings into Norway’s own open-air museum in 1907. This was only two years after the country gained its independence from Sweden.¹⁰⁷ In conjunction with the Foreningen til Norske Fortidsmindesmærkers bevaring, the FNFB, (The Association for the Preservation of Norwegian Ancient Monuments), and Chamberlain Christian Holst, the King’s representative, a plan was created and executed for the relocation of the buildings onto a rectangular site of which was approximately 4,000 square meters.¹⁰⁷ The FNFB’s interest in the preservation of the local architecture as a way to save the wooden architecture that was the foundation of Norwegian cultural heritage very nicely supported the idea of relocating the buildings into a curatorial setting. This allowed both for the preservation of Norway’s heritage and the assimilation and pleasure of its history for the people.¹⁰⁷ Artur Hazelius was clearly influenced by the King’s collection in 1884. From the beginning he was interested in amassing historic buildings especially after his visit to the Norsk Folkemuseum. He sketched his idea for the placement and grouping of structures near Stockholm and created just one year before the creation of Skansen, the sketch – almost identical to a view of Bygdø – featured the storehouse from Björkvik, a traditional Norwegian stave church, and the Ornäs House. These architectural pieces would have acted as centerpieces on the proverbial table for his imagined collection. Rentzhog, *Open Air Museums: The History and Future of a Visionary Idea*, 48, 51.

country's vernacular architecture as employed in the King's collection and realized an indelible solution to the need to "pass on to posterity the legacy of [the] old peasant cultures being threatened with destruction by spreading industrialization."¹⁰⁸

3.1.2. Old Sweden in Miniature

Skansen has since grown to an impressive seventy-five acres, and houses over 150 buildings from every province in Sweden all of which present visitors with a variety of incredible natural scents.¹⁰⁹ The site, prominently located in the royal park of Djurgården close to Stockholm's city center, has gorgeous views of the town as well as a natural locale that is home to a wonderful assemblage of plant and animal smells which help to convey a feeling of discovering an isolated and an untouched wilderness. The collection represents Sweden's architectural and cultural evolution from 1574 to the mid-1800s, and includes many singularly relocated buildings – including flax and wool storage buildings, artisans' shops, windmills, watermills, malt kilns, several variations of regional dwellings, as well as their dependencies. It even has entire farmsteads that are complete with the smell of fresh straw and animal waste.¹¹⁰ Hazelius acted quickly to find and relocate the buildings so that he could create his "old Sweden in miniature."¹¹¹ He was able to bring together a plethora of building typologies from all over the country in the first year: Skansen truly stood apart from other such endeavors in that it included all aspects of society from the impoverished crofter's hut to the very wealthy

¹⁰⁸ Perrin, *Outdoor Museums*, 9.

¹⁰⁹ *Ibid*, 11.

¹¹⁰ Perrin, *Outdoor Museums*, 11.

¹¹¹ Rentzhog, *Open Air Museums: The History and Future of a Visionary Idea*, 7.

Blekinge farmhouse.¹¹² “He wished to show the whole range of society, not just folk life, and therefore saw to it that Skansen had belltowers, a churchyard, and a marketplace.”¹¹³ He installed a farmhouse from Kyrkhult in Blekinge and a croft from the province, the charcoal burners’ huts from Småland and the iron mining Bergslagen region, the famous Mora house, followed by a stonemason’s workshop, also from Dalarna, and even a Lapp camp with a tent shaped hut and three “outbuildings,” as he called them.¹¹⁴ In order to interpret an entire lifestyle he felt that he had no other choice but to move a complete farm, Oktorpsgården, in 1896. The over-arching purpose behind Skansen was “to provide a base for research and to stimulate public educational interest in the results of such research by giving the broadest possible exposure to everything it has to offer.”¹¹⁵ It was designed to be a museum by the people, for the people and by combining the rural and the urban lifestyles in Skansen, he created a level of contrast and intricacy that covered the entirety of their history.

Just as much as the built environment is essential to a society’s culture is the incorporation or rejection of nature. In this case that means incorporating the natural odors of Sweden. Hazelius successfully utilized the smells of nature as an interpretive element in Skansen. He believed there was a direct link between a people’s character and the natural habitat where they lived.¹¹⁶ At the inception, many of the houses had gardens surrounding them, complete with shrubs and flowers typical of the narrated region, and even hop poles and

¹¹² Ibid.

¹¹³ Ibid.

¹¹⁴ Ibid.

¹¹⁵ Perrin, *Outdoor Museums*, 11.

¹¹⁶ Rentzhog, *Open Air Museums: The History and Future of a Visionary Idea*, 8.

beehives. At Morastugan there were goats, and the shieling mountain cattle, and two piglets in the pigsty which belonged to the stone cottage which made the area smell of their waste but in a pleasing way. At Blekingestugan there were real geese, hens, ducks, and the accompanying subtle odor of dirt and musk that came from their feathers. Samples of cereals were grown in grids, and at the Lapp camp there were planted alpenines whose odor reminded visitors of the crisp clean pine smell of the forest.¹¹⁷ Hazelius strongly believed that buildings that were designed for an agricultural setting could only truly be understood when they incorporated the plants and animals that would exist there in reality which naturally brought their accompanying odors. The mutual relationship between man and nature was every bit as important as the roles of traditional clothing, furniture and accompanying accoutrements, and tools in the presentation of Sweden's native culture. The museum was successful because it was able to bring history to life for people, both in its life-sized displays of home and family life and in its incorporation of period appropriate clothed live-action actors.

Hazelius used both mannequins and real people to occupy the buildings in traditional clothing. As interpreters of the given time period, the actors hosted demonstrations of the traditional craftworks. By doing this, they were very often responsible for reviving traditional folk customs.¹¹⁸ This combined the formerly posh notions of education and entertainment into a fuller and richer museum going experience. Hazelius said that his intention with Skansen was to achieve a new museum typology that took advantage of its comprehension of engaging the

¹¹⁷ Ibid.

¹¹⁸ Ibid, 10.

public with their history, however it is unclear whether he was consciously attempting to engage people with the traditional odors of their country:

“Skansen’s open air museum has still wider and greater scope and even greater tasks. It seeks more and more to be a living museum, a museum which not only shows buildings and household goods, tools and implements of the most different types, and memorials such as runestones...and an endless number of other things...It tries to depict folk life through its living characteristics.”¹¹⁹

With this quotation, it seems that he was interested in pushing beyond the limitations of the traditional museum and making a truly living interpretation which would intentionally or unintentionally generate odors. Above the entrance to Skansen is an engraved quotation that reads, “Känn Dig Själv” which means Know Thyself. This serves as a kind of thesis statement that “the museum’s mirror image of people’s lives is there to create feelings of affinity between people, both between themselves and as related to earlier generations.”¹²⁰ For the first time in the history of museum typology, the complete narrative of the history of a people could be transmitted at a one-to-one scale by using the idea of a museum comprised of buildings upon which a narrative that was folk-based narrative could be physically engaged. However, open-air museums create a significant problem which is by moving the historic buildings to new

¹¹⁹ Ibid. Hazelius’ quote is taken from his book, *Ur Nordiska museets historia. Nordiska Museets tjugofemårsminne 1873-1898* published in 1900 in Stockholm.

¹²⁰ Rentzhog, *Open Air Museums: The History and Future of a Visionary Idea*, 53.

locations, their designers are creating new history vs creating new programming. This is precisely what Skansen did by removing the buildings from their context.

Very soon it was recognized by other nations that open-air museums promoted a feeling of family and national pride and this facilitated its duplication throughout the rest of Europe. “Soon all the capitals in the Nordic countries, and likewise many other towns, had open-air museums; Copenhagen in 1897, Kristiana (Oslo) in 1902, and Helsinki in 1909.”¹²¹ The Danish grasped the Skansen philosophy at Lyngby in the development and creation of their own museums when they utilized “the technique of grouping buildings with ample and beautifully interspersed landscaped areas which [served] as sites for future building groups, already acquired or earmarked [to be] disassembled, moved and re-erected in accordance with the master plan.”¹²²

3.1.3. The Smell of Tradition

Put on prominent display at Skansen is the smell of traditional life in the Nordic country. The smell of molten silver, burning tobacco, tanning leather, and the musk of the animals is abundant throughout the exhibition. A comment that often arises after people have visited is reflected in this TripAdvisor post in 2014. It states that, “The smell was wonderful and brought it all to life for us.”¹²³ Different from my Morgan Library historic odor recreation, Skansen’s

¹²¹ Ibid, 33.

¹²² Perrin, *Outdoor Museums*, 13.

¹²³ User, A. TripAdvisor. "Insight into another era. - Review of Skansen Open-Air Museum, Stockholm, Sweden." TripAdvisor. August 12, 2014. https://www.tripadvisor.com/ShowUserReviews-g189852-d208296-r221468313-Skansen_Open_Air_Museum-Stockholm.html.

odors are a natural byproduct of the elements featured in its interpretations and exhibitions; the odors are not engineered, although they are orchestrated by the designers of the museum. The odors are far more incidental. Skansen was best summarized by Sten Rentzog when he wrote that Skansen is “a combination of culture, material and spiritual history, (it’s a place where) visitors (act) as active participants, knowledge (is acquired) through ‘edutainment.’¹²⁴”

Skansen is an example of a successful odor preservation project. It conveys a specific place and time, the odors are genuine because the crafts and practices were fully researched and duplicated by Hazelius and his team of researchers, and because of that the genius-loci is fully presented to the audience. Also, selling merchandise is not the sole purpose of the place. The purpose of Skansen originally was to serve as a bridge for the people of Sweden who were in the transition period from the agricultural way of life to a more industrial one. Now it serves as a way to teach people about their past and to give them a solid cultural foundation upon which to understand their country and their ancestors and perhaps even their future. Skansen is presented honestly to the audience at hand. The presenters are perfectly honest about their buildings and artifacts; if something is a replication or has been altered, the visitors are informed about it. However, therein lies the one real failing in Skansen; the objects being presented are not native to that location. Skansen is an interpretation which was created by moving buildings in-situ and placing them ex-situ and the same goes for the plants and animals as well. This also means that most of the odors at Skansen are actually not authentic because they are not native to the environment. This fact is not hidden from visitors and with more than

¹²⁴ Sten Rentzog, *Open Air Museums: The History and Future of a Visionary Idea* (Sweden: Carlssons, 2007), p. 5.

1.3 million people visiting every year,¹²⁵ I thought that it was safe to declare Skansen to be a success both commercially and as a cultural heritage exhibition until I placed it in my authenticity scale.

When judged according to my scale, Skansen scored sixth among the eight odor preservation projects with 34 points (Fig. 4). It's highest scores were in Sourcing and Fabrication where it scored eight. It didn't receive tens because while the objects themselves are being maintained not all of them are original. Also, the entire museum was carefully designed and the objects were strategically placed, so everything is not really as it historically would have been. This goes for both categories. It's second best score was for Location which was a six. It scored a six because many of the buildings were relocated from other areas in Sweden but much of the odors that are being emanated are from local architectural and natural sources. In the other categories, Skansen never managed to rise above a score of three, however it never received a zero. Its three biggest losses in points came from the Intention, Duration, and Aesthetics categories where it only scored a two respectively. The odors were not being preserved intentionally, the museum was trying to preserve a long period of time, and in order to perceive the odors and acquire an impression the visitors have to tour the entire landscape.

¹²⁵ "The World's Oldest Open-Air Museum." Skansen. <http://www.skansen.se/en/>.

Clevenger Authenticity Scale Skansen Open-Air Museum		
Category	0 _____ Level of Authenticity _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) _____ 0 10	8
Significance	Familiar _____ Unfamiliar _____ 0 10	3
Fabrication	Artificial _____ Natural _____ 0 10	8
Location	Ex-Situ _____ In-Situ _____ 0 10	6
Intention	Accidental _____ Intentional _____ 0 10	2
Duration	Long (Vague) _____ Short (Specific) _____ 0 10	2
Evidence	Undocumented _____ Documented _____ 0 10	3
Aesthetics	Fragmentary Impression _____ Unified Impression _____ 0 10	2
Total		34

Figure 3 - Skansen Open-Air Museum Score

3.2. Colonial Williamsburg (1927)

It's important to remember why Colonial Williamsburg was and is such a beloved place in the hearts of Americans. Williamsburg, Virginia began its life in 1633 as an outpost that was meant to protect the lower portion of Virginia's Peninsula from tribal invasion. The palisade spanned across the Peninsula, from Archers Hope Creek to the tributaries of the York. It was originally known as Middle Plantation.¹²⁶ It became a full-fledged colony under the rule of the British Empire during the reign of King William and Queen Mary in 1699 and earned the prestigious distinction of being the capital of the colony of Virginia. It thrived as the wealthiest and most powerful colony in the early days of America from 1699 to 1780, for 81 years.

3.2.1. The Putrid Odor of the Capital

Despite the cities great wealth and privilege, its streets and its people would have smelled horrid, as they still used chamber pots and infrequently showered. To their credit, the actors do address this during the reenactments. In an editorial by Edwards Park, he writes about a moment that he witnessed when he visited in 1995. "During a reenactment, a few years ago, of the British occupation of Williamsburg in 1781, scarlet-clad British soldiers marched up Duke of Gloucester Street with shrilling fifes and thumping drums. And a foppish gentleman, playing the part of a rich Royalist, minced along beside them, but only after daintily plucking a lace handkerchief from the sleeve of his floral frock coat and clapping it to his nose.

¹²⁶ "John D. Rockefeller Jr. and the Restoration of Colonial Williamsburg." John D. Rockefeller Jr. and the Restoration of Colonial Williamsburg: The Colonial Williamsburg Official History & Citizenship Site. http://www.history.org/foundation/journal/winter00_01/vision.cfm.

The meaning of this little pantomime brought home to twentieth-century watchers the indisputable fact that eighteenth-century troops-American and French as well as British and German-stank. The citizens of Williamsburg would have smelled pretty ripe, too."¹²⁷ It's important to understand that it wasn't until the end of the eighteenth-century that the first copper bathtub was installed in the town by St. George Tucker. In order to get clean, most people would simply sponge themselves off and even then, they typically only did this to their face and hands. The fact that the reenactors in Williamsburg show any indication of the foul odor of the people is a promising sign, however it would be best to have the odor of human waste in the air. There is evidence that Williamsburg is incorporating odors more and more into their exhibitions though such as the incorporation of animals such as horses and pigs. They can now be seen wandering through the streets and leaving their droppings as they go, although they are more like set pieces; the pigs do not wander aimlessly scavenging food from the garbage. The waste is very quickly and quietly cleaned so that the odor does not become too offensive. Also, animals have been brought in by the exhibition staff as breeding livestock to further add authenticity to the town.¹²⁸ These unpleasant odors are few and far between though. The town tries to focus the visitor's attention on more pleasant odors such as the lovely herb gardens. They are located just behind the historic Shields Tavern and are filled with rosemary, thyme, and basil. Such plants would have been planted and used by the colonials for culinary and medicinal purposes. As an added bonus, they smell phenomenal during spring

¹²⁷ Park, Edwards. "To Bathe or Not to Bathe: Coming Clean in Colonial America." *CW Journal*, 1995. <http://www.history.org/foundation/journal/autumn00/bathe.cfm>.

¹²⁸ Handler, Richard, and Eric Gable. "The New History in an Old Museum: Creating the Past at Colonial Williamsburg." *The New History in an Old Museum*, 2012, 4. doi:10.1215/9780822398523-001; Huxtable, Ada Louise. *Unreal America: Architecture and Illusion*. NEW YORK: W.W. NORTON, 1999, Ch. 1.

when they come alive and fill the air with pleasant olfactory notes.¹²⁹ A garden volunteer for Colonial Williamsburg, Linda Lucas, routinely takes nearly two dozen visitors for thirty minute tours of the herb gardens during the spring and summer months which are held at 10:30am every day of the week. When the herbs bloom with their shades of white, yellow, and pink the entire area is filled with a pleasant sweet-clover like scent. The strong yet pleasing odor only lasts for approximately three weeks while the herbs are in bloom, then the odor shifts to their more well-known odors. Despite the animals and plants being incorporated into the exhibit, it must be noted that these things have changed over the course of the centuries and they likely do not smell as they did in the Colonial era. Humans have selectively bred and crossbred these things so that they are totally different than how they were even a century ago. In this case, Colonial Williamsburg is relying on our contemporary understanding of the smell of these animals and plants in order to act on our olfactory memory. It is a kind of warping of the Proust Effect. So, adding the animals and plants that the colonials kept back into the park is not truly authentic.

3.2.2. Correcting Past Errors

The addition of these odorants by Colonial Williamsburg is really just part of their ongoing campaign attempt to correct past mistakes in their recreation and their decreasing attendance numbers, especially with African-Americans. Colonial Williamsburg essentially

¹²⁹ Bay Area News Group. "Colonial Williamsburg Herb Garden Smells Delicious." The Mercury News. September 6, 2011. <https://www.mercurynews.com/2011/09/06/colonial-williamsburg-herb-garden-smells-delicious/>.

always presented a whitewashed perspective of American history. It showcased very little if any aspects of the lives of African-Americans in the town during the Colonial era. Recent historical documents have proven that, “fully half the population of the 2,800 residents in eighteenth century Williamsburg was black... yet visitors at Colonial Williamsburg did not see that population among the costumed guides in the town.”¹³⁰ When I think back to my visit to the park years ago, I can’t recall more than three or four African-Americans present during my time there. To try and correct this oversight, or whitewashing, Williamsburg now features a section on their website dedicated to the “African American Experience” and has hired African American reenactors, although they are fewer than fifty in number.¹³¹ The experience of seeing the reenactors portray slaves must be very uncomfortable for both the visitors and the actors. “You interview people, and they’ll say: ‘I just can’t do it. I can’t put on that costume,’ ” said Tricia Brooks, Colonial Williamsburg’s African American initiatives manager. “It comes with a lot of baggage. If you haven’t unpacked that baggage before you put the costume on, you’re going to have problems.”¹³² Generally speaking, it is financially wiser to supply the public with something that is palatable, than something that will leave a bad taste in people’s mouths. This is just as true with odors. Odors are a terribly subjective matter; an odor that is pleasing to one person, isn’t necessarily pleasing to other people. This is what lays at the heart of the contention of preserving and exhibiting odors. The idea is to preserve historical places for future generations but these places require funding which often comes from the public and if

¹³⁰ Lawson, Anna Logan. "The Other Half: Making African-American History at Colonial Williamsburg." PhD diss., University of Virginia, 1995. Abstract in September 1995, ix. doi:10.18130/V3DK99

¹³¹ "Colonial African Americans." Colonial African Americans: The Colonial Williamsburg Official History & Citizenship Site. <http://www.history.org/almanack/people/african/index.cfm>.

¹³² Lac, J. Freedom Du. "Slavery Is a Tough Role, Hard Sell at Colonial Williamsburg." *The Washington Post*, March 9, 2013. http://www.highbeam.com/doc/1P2-34441812.html?refid=easy_hf.

the public doesn't come due to unpleasant odors then there is no funding to keep the place alive. While this is a problem, it is merely a symptom of a larger failure at Colonial Williamsburg. That problem is the legacy that Rockefeller created when he essentially took over the town and with very little historical understanding became the final word for whether or not a building was authentic. His uninformed decision making has led to the merging of fact and fiction that has occurred there. The incorporation of odors into the park, and at this point it is more like Disneyland, is merely an attempt to generate revenue. The only redeeming success that it possesses is that it has attached itself to the beloved idea of the American Revolution during the colonial era that is so beloved by patriotic Americans. As a preservation project, I believe that Colonial Williamsburg has failed spectacularly but as an amusement park it has done quite well. This belief is reflected and substantiated in the score it received from my authenticity scale.

Colonial Williamsburg placed seventh with an accumulated score of 32 points (Fig. 5). It scored highest in Fabrication and Location with scores of an eight and seven respectively. It received an eight in Fabrication because the odors were generated from natural sources, however the sources in question, the buildings, have been heavily modified and the landscape has changed significantly. It received the seven in Location because the town of Williamsburg is the original site, however many of the buildings were in fact moved to that location and so much of the town has been changed that it likely doesn't resemble itself anymore. A great deal of it is ex-situ. Its third highest score was a five in Sourcing which it received because such a high percentage of the odors being presented to the public are of modern day creation including the food, the clothing, the landscape, and even the buildings. The rest of the

categories received a four or lower, however like Skansen Williamsburg did not receive a score of zero for any category. Similar to Skansen, it lost the most points in the Intention, Duration, and Aesthetics categories where it only scored a two respectively. The odors were not being preserved intentionally, the museum was trying to preserve a long period of time, the Colonial Era, and in order to get an impression of the odors the visitors have to tour the entire landscape.

Clevenger Authenticity Scale Colonial Williamsburg		
Category	0 _____ Level of Authenticity _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) _____ 0 10	5
Significance	Familiar _____ Unfamiliar _____ 0 10	1
Fabrication	Artificial _____ Natural _____ 0 10	8
Location	Ex-Situ _____ In-Situ _____ 0 10	7
Intention	Accidental _____ Intentional _____ 0 10	4
Duration	Long (Vague) _____ Short (Specific) _____ 0 10	2
Evidence	Undocumented _____ Documented _____ 0 10	3
Aesthetics	Fragmentary Impression _____ Unified Impression _____ 0 10	2
Total		32

Figure 4 - Colonial Williamsburg Score

Chapter 4

Interpretations of Extinct Odors in Preservation Projects

The third category for the categorization of odor preservation projects is quite different from the previous two. Although the two categories were distinct from one another, the first category involving the odor preservation projects located in an indoor setting and the second category being the outdoor odor preservation projects, at the very least they did have one thing in common. That singular commonality is that the two projects were based on substantiated historical fact. The odors that were sought after to be recreated at the Tenement Museum and at Skansen were well-known and researchable through standard methods such as historical documents and first-person accounts, in some cases at least. This third category is an entirely different beast. The odors that have been recreated are less fact and more fiction; there is no real-world evidence, historical or otherwise, that can truly inform scientists in the recreation of the odors, so they are an interpretation based upon data that has been collected and interpreted. In order to recreate the odors in the following two case studies, the Jorvik Viking Centre and the Dennis Severs' House, odors were devised in order to convey a sense of a particular narrative that the author or authors wanted to transmit to visitors. The aim of both of these places was to create odors that would embody and convey the very spirit of their particular settings at a particular point in time to their visitors. Odors that could once only be found in nature can now be replicated in labs and sold to the public as authentic and this idea sparks an intriguing concept. If the sense of sight is considered to be the modern sense, the sense of science and reason, is smell the sense of postmodernity, belonging to the illogical, emotional, and personal?

4.1. Jorvik Viking Centre (1984)

4.1.1. Unearthing the Past

While Colonial Williamsburg and the Skansen Open-Air Museum featured odors, they were more of a natural byproduct of both site and the traditional crafts that were being executed. At both sites, buildings had been moved and plants were cultivated in order to create a pleasing interpretation of the past. The odors that came from them were meant to create an attractive backdrop for the buildings which were the main actors; they were simply an afterthought. At the Jorvik Viking Centre in England, odors were intentionally recreated, installed, and incorporated into a more traditional museum setting. At the core of Jorvik is its temporality. Duration, or the time that a preservationist wishes to capture and showcase is of grave importance when crafting a narrative. If you choose a duration that is long, such as thousands of years, it is all but impossible to showcase it with any real accuracy because the environment change on a daily basis. It is far better to choose a specific event or day and research and preserve that because it is far more easily captured. The Jorvik Viking Centre does an admirable job of capturing a specific slice of Viking life. York, England is known as an important archaeological location showcasing the Viking Period from the ninth century up until 1066, which marked the Norman Conquest of the area. However, no one in the town could have realized what laid just beneath their feet. Much to everyone's surprise, in 1972 the York Archaeological Trust started making small trenches which soon revealed there to be a dense layer of artifacts, most of which dated back to the Viking Period. The layer in question was remarkably well preserved for its age and so in conjunction with local redevelopment, a large-scale excavation was executed from 1976-1981 at 16-22 Coppergate. The location of the

excavation was located at the very core of York, which coincidentally was where Viking Age Jorvik's town center was believed to be located. The Trust used this opportunity to their advantage and opened the site to visitors while the excavation was underway. In total, 300,000 visitors came to observe the dig.¹³³

Shortly after the successful excavation and presentation of the site to the public, plans were devised to create some kind of permanent display of the excavated remains of the Viking Age village although it is unclear at this point if they were considering smell. The Trust was uncertain what kind of display to create so they conducted a survey among the visitors to the excavation site. The results clearly showed that the public had no interest whatsoever in the tried-and-true conventional archaeological museum displays. In light of these results, an entirely new method for presenting the artifacts and information gathered was designed using modern technology.¹³⁴ The end result was the Jorvik Viking Centre which officially opened in 1984. The Centre resides in the basement of the local outdoor shopping center on the original Coppergate site of the excavation. While some information was simply missing from the dig, virtually every part of the Centre's displays were based on the evidence of the Coppergate excavation. In the instances where information was missing, it was based upon either other archaeological or historical sources. While many people were involved in the creation of the excavation and the Centre, the principal designer of the initial exhibition was John Sunderland.

¹³³ Jorvik Viking Centre, 2011a. *The Coppergate Dig*. Available from: <http://www.jorvik-viking-centre.co.uk/about-jorvik/12-/>; Jones, A., 1999. Archaeological reconstruction and education at the Jorvik Viking Centre and Archaeological Resource Centre, York, UK. In: P.G. Stone and P.G. Planel (eds), *The Constructed Past*, London and New York: Routledge, 258-259.

¹³⁴ *Ibid*, 259.

He studied graphic design, animation and film at Bath Academy of Art and Birmingham Polytechnic. He used the knowledge from his time at these places to create a career in film and animation. He worked for Yorkshire Television where he was the title designer of the popular game show *3*2*1*. Thanks to his work on the show, he was hired for further animation direction projects and became director and art-director for film projects with Kenny Everett. When he heard of the archaeology being executed at Jorvik, he became inspired to create and present his concept design to the York Archaeological Trust for their plan to develop a museum based on the five-year dig in Coppergate in York.¹³⁵ His long career in the entertainment industry may have contributed to him being open to using odor in his exhibition design as the entertainment industry is known for creating set pieces that use theatricality to act upon people's senses. He was also notably involved in the design of the Provincial Archaeological Museum (pam) Enniscorthy's exhibition. The floor plan of the exhibition was highly influenced by the restrictions of its subterranean location as well as the safety regulations that accompany such spaces in the U.K. The amount of foot traffic was believed to be a problem in the confined space so a trolley car system was implemented. The trollies were nicknamed "timecars." This was a Disney-fication of the past; the experience of the Viking town was not at all how Vikings would have experienced it. They served to move people through the portion of the exhibition, which features the reconstruction of city of Jorvik during the Viking Age.¹³⁶

¹³⁵ Sunderland, John. *On My Way to Jorvik: A Memoir*. U.K: John Sunderland Design, 2013.

¹³⁶ Addyman, P. and A. Gaynor, 1984. The Jorvik Viking Centre. An Experiment in Archaeological Site Interpretation. *The International Journal of Museum Management and Curatorship* 3, 11-14; Jones, A., 1999. Archaeological reconstruction and education at the Jorvik Viking Centre and Archaeological Resource Centre, York, UK. In: P.G. Stone and P.G. Planel (eds), *The Constructed Past*, London and New York: Routledge, 259-260.

Academic research is still conducted and is used to revise past errors and improve the exhibition. The Centre has gone through two large-scale renovations since it opened to the public in 1984, the first in 2001 and the second in 2010.¹³⁷ The exhibit now features four halls, the first of which is called *Discover Coppergate*. It is here that the Centre has reproduced part of the original excavation of the site underneath a glass floor. Information concerning the dig, the preservation of the excavated artifacts and the Vikings can be found in this hall. Following *Discover Coppergate* is the trolley ride, which transports visitors back in time to the reconstructed Viking Age village of Jorvik. After visitors have completed the ride through the village, they are then led into the adjacent hall called *Investigate Coppergate*. It is here that they can learn about the scientific analysis that was and is conducted on the archaeological artifacts that were recovered. It is here that the skeletal remains are analyzed most carefully. After this, visitors are shown the hall titled the *Artefacts Alive* where the artifacts that are connected with the different Viking trades are displayed. At last, the end of Viking rule in Jorvik is showcased in the final hall.¹³⁸

¹³⁷ Jorvik Viking Centre, 2011b. *Jorvik in 1984*. Available from: <http://www.jorvik-viking-centre.co.uk/about-jorvik/14-/>; Jorvik Viking Centre, 2011c. *Jorvik in 2001*. Available from: <http://www.jorvik-viking-centre.co.uk/about-jorvik/15-/>; Jorvik Viking Centre, 2011d. *Jorvik in 2010*. Available from: <http://www.jorvik-viking-centre.co.uk/about-jorvik/16-/>.

¹³⁸ The Centre has been very popular ever since it opened in 1984. It routinely attracted up to 900,000 visitors yearly in its initial few years.¹³⁸ Visitation has calmed over the decades to a respectable 350,000 visitors per year. From the first day the Centre opened, it drew the eye of the academic community and many professionals have written about it. Meethan wrote in 1996 that it represented an entirely new kind of analysis.¹³⁸ He found the following to be important about it: “the explicit linking, or exploitation, of archaeology as a form of entertainment and commercial enterprise, representing the emergence of a new form of consumption, heritage as entertainment.”¹³⁸ Jones wrote in 1999 that the data collected proved that the Centre had been a success, both as an institution for displaying archaeological artifacts and in the misconceptions in the minds of the visitors about the Vikings.¹³⁸ It should be noted that he never specified what data he used to come to his conclusion. Merriman, N., 2000a. *Beyond the Glass Case. The Past, the Heritage and the Public*. London: Institute of Archaeology - University College London, 9; Meethan, K., 1996. Consuming (in) the civilized city. *Annals of Tourism Research* 23(2), 330; Jones, A., 1999. Archaeological reconstruction and education at the Jorvik Viking Centre and Archaeological Resource Centre, York, UK. In: P.G. Stone and P.G. Planel (eds), *The Constructed Past*, London and New York: Routledge, 260.

4.1.2. Authenticity Criticism

It is however impossible to please everyone and the Jorvik Viking Centre has most definitely had its critics, especially from the world of academia. The trolley system that is used to convey people through the recreated Viking village is the biggest critique of the exhibition. The trolleys made it so that visitors have absolutely no control over how long they are able to spend in the exhibit.¹³⁹ The second issue with Jorvik is the issue of authenticity. Halewood and Hannam wrote that the authenticity of the entire Centre is in question. They elaborated by stating that authenticity itself is something that is carefully groomed. This referred to the fact that the reconstructions were installed in such a way that visitors have to go through the two-thirds of the exhibit before the scientifically based archaeological evidence can be viewed. Spectators are presented with the “conclusion before evidence.”¹⁴⁰

Authenticity is more of a concern at Jorvik than at other museums because so much of the Centre is based upon reconstructions and not restored or original pieces, such is the case with the odors. It is unclear as to whether this stems from the initial survey which was conducted that was based on popular feedback versus the experts in the field. There is a fine line that has to be drawn between appealing to the public and upholding scholarly standards. Jorvik claims to base all of its pieces including its odors on either archaeological or historical evidence that was recovered on the site, however I was told at the very beginning that the

¹³⁹ Addyman, P. and A. Gaynor, 1984. The Jorvik Viking Centre. An Experiment in Archaeological Site Interpretation. *The International Journal of Museum Management and Curatorship* 3, 18.

¹⁴⁰ Halewood, C. and K. Hannam, 2001. Viking Heritage Tourism. Authenticity and Commodification. *Annals of Tourism Research* 28(3), 574-575.

Viking village is a reconstruction, and that no part of the village dates back to the Viking age. That being said, I was never told that while archaeological evidence of the village was excavated, the recreation was made based upon what the academics imagine Jorvik to have looked and smelled like in the past. Even an academics imagining is still just an imagined or fictitious creation, even if it is backed by archaeological evidence. Authenticity was never directly mentioned and therefore it was challenging to determine the distinction between the real archaeological artifacts and the imagined reconstructions. I felt this most strongly in the first hall where I encountered the reconstructed excavation underneath the glass floor. It should be noted that when I specifically asked, the staff told me that objects underneath the glass floor were not the original excavated artifacts and were simply recreations meant to represent the artifacts that were unearthed on the original excavation site. There was never any mention of the authenticity of the odors or how they were created, what inspired them, or why Hazelius chose to recreate and showcase them.

As mentioned above, Halewood and Hannam have criticized Jorvik's authenticity as a very carefully regulated element.¹⁴¹ They felt that the results of the research conducted should be presented to the visitors simultaneously with the exhibition pieces. It should be noted that they wrote their paper in 2001 and the exhibition has undergone alterations since then. That being said, their opinion still holds true to a point. The faux-excavation in the first hall, located before visitors go through the village, is a recent addition. It's in this that the origin of the archaeological proof was presented to me and the rest of the visitors. It is the Centre's attempt

¹⁴¹ Ibid.

at being transparent with their archaeological evidence. Although most of the true evidence is still found after visitors exit the ride. The faux-excavation is both good and bad as it did promote me to consider the reality behind the exhibition but there were no signs that the recreation was in fact a recreation. When I was there, I asked my fellow attendees if they knew that it was a recreation and they stated that they simply assumed that it was the real remnants of the dig.

The Jorvik Viking Centre has many pros and cons in relation to its smells. The inclusion of odors was admirable, however the execution was poor. Of the fourteen odors that were used during the timecar tour, I was only able to smell one of them clearly. That smell was “At Home with a Viking” which was meant to represent the smell of the Viking village.¹⁴² The odor was remarkably strong and completely overpowered all of the other thirteen odors. I was never told why the museum’s staff has the aerosol’s disbursement at such a high level. The museum does an admirable job of explaining the history of Jorvik and the excavation. For example, there was a section that informed me about the preservation of wood that was explored and made very comprehensible. However, the Centre only provided one interpretation of the excavated material. It is in this way they stay focused on their two narratives. The exhibits also did a wonderful job of conveying the Vikings who lived at the time of Jorvik. Although, a clear and ever present separation was made between the Viking of yester-year and the present day people who live in the area. It seemed to me as if the contemporary residents did not think of

¹⁴² The Centre sold a scratch-and-sniff postcard that featured four odors including “Viking Wood Turner,” “At Home with a Viking,” “Viking Leather Worker,” and “Viking Blacksmith.”

themselves as children of those Vikings or that they have anything in common with them. Another unfortunately missed opportunity was the negation of the archaeologists as protagonists in the exhibition. It was stated often that archaeologists were the experts who evaluated the information upon which the Centre was based, however they were secondary or perhaps even tertiary characters in the narrative. Even though the professionals were secondary characters, there was however a powerful connection that was made between the past and the present. This was made obvious by the frequent mentions of the excavation at this site. It was after all the original dig that was the inception for the Centre to be created at all. The recent addition of the recreated excavation was evidence of this. These seemed to be a rather obvious, perhaps even clumsy, attempt of Jorvik to provide some form of authenticity to their presentation.

The Jorvik Viking Centre employed a wide range of presentation methods. The most obvious and predominant was the reconstruction of Viking village at Jorvik as well as the partial excavation. In fact, the Centre's comprehensive presentation strategy was inspired by Colonial Williamsburg in the United States.¹⁴³ Due to the incorporation of the trolley cars in the exhibit, there was a whiff of Disneyland or unreality in the air when visitors enter the Centre, which was a similar condition found at Williamsburg. During the ride a voice narrated the experience, which gave me information about the daily life in the Viking village. The omniscient narrator also spoke about various elements of the reconstructions and even communicates with the

¹⁴³ Torre, Marta De la. *The conservation of archaeological sites in the Mediterranean Region*. Los Angeles: The Getty Conservation Institute, 1997, 48-49.

mannequin characters in Old Norse. The narration became rather annoying and I eventually stopped listening and did my best to focus on the odors. The trolley ride differentiated the Centre from other archaeological exhibits and was naturally the main attraction for visitors. The first hall used information panels in conjunction with displays of the excavated artifacts and videos. All of the display cases and screens were built directly into the wall and connected together with a black stripe that went along the wall and was used as a tool to lead the visitors through the display.

Investigate Coppergate, showcased the skeletons that were discovered on the site and were displayed in glass while information was offered on accompanying panels. In the next hall, interactive touchscreens were placed next to each display. Each of the displays were large and showcased several artifacts that were related to a particular trade. Seemingly a random, automated video recordings started in the displays which featured a character, played by an actor, connected to that trade. The character being portrayed spoke about their trade as well as their life in the Viking village. Information panels were inside the showcases but they were not very well lit. This made reading information difficult and often time impossible. Presumably, they were kept so poorly lit in order to focus attention on the videos. Adding even more so to the Disneyland whimsy of the Centre were the staff that are dressed in clothing of the Viking age. They spoke with visitors and gave them further information or explanations concerning the interpretations that were presented to them in the Centre.

4.1.3. Smelling the Vikings

One of the biggest goals of the Centre is to create a full-sensory experience for its visitors. Unlike traditional museums that only act upon the visual and auditory senses with sights and sounds, Jorvik features odors in order to create a more authentic and visceral experience. As previously mentioned, the entire Centre has a potent odor which was designed to recreate the smell of the Viking village. When I spoke with Chris Tuckley, the Head of Interpretation and Engagement, he told me that the odors were always present in the minds of the designers of the museums including John Sunderland. Even when the initial archaeology was being conducted, the odors were ever present due to the excellent preservation of the artifacts discovered. Both the artificial odors and the odor dispensers were provided by Dale Air: Aromas by Design. The company is known for being able to supply over 380 different scents, “from pleasant & attractive to speciality and themed.”¹⁴⁴ These odors are perhaps best experienced on the trolley ride through the recreated Viking village as the featured odors are directly connected with the various trades and daily activities in the Viking age village. The ride lasted twelve minutes and it was meant to be a means to transport visitors back in time to 5:30 pm on October 25, 975 AD. The odors provided by Dale Air that were featured during the ride vary wildly; the odors featured were Viking Forest, Old Drifter, Wood Smoke, Burning Wood, Smelting Iron, Oak, Fish Market, Tallow Candles, Leather, Beef, Apples, Cloisters, and Rubbish Acrid.¹⁴⁵ They were placed along the ride by Jorvik to recreate the smell of the fishmonger, roasting boar, molten iron at the blacksmith, the odors of the various foods in the marketplace,

¹⁴⁴ "About Us." AromaPrime. <https://aromaprime.com/about-us/>.

¹⁴⁵ Chris Tuckley, Head of Interpretation & Engagement, The Jorvik Group. February 2018.

and even the putrid stench of the latrine and many others. There was a clear disconnect between the names of the odors and how they were being used in the Centre. The odors themselves were dispersed through a system of incense like dispensers which threw the individual scents into the air. The result of this was that the odors mixed and combined in the air and transformed into a general pervasive moldy-beef stew or stroganoff odor which for me became overpowering within the first five minutes of the ride. I was only able to escape the odor on the rare occasions when the ride decelerated when it got close to the next presentation of life in the recreated village. Those moments were quite brief though; the beef-stew aroma quickly took over again. Upon exiting the ride and entering the more traditional museum setting, I wasn't able to smell the offensive odor. The aroma was not present and the familiar aroma of citrus from contemporary cleaners was ever present to remind me that I was once again in a twenty-first century museum. The authenticity of the odors is intriguing to ponder because scientists were able to determine precisely what the people living in the city were eating and what they were doing in their daily lives by examining the archaeological evidence unearthed such as the cesspit that was discovered onsite. The odors were then created using contemporary examples such as human waste, roasted boar, fish, etc. These odors were installed in the hopes that they would further aid in taking visitors back in time but was it effective? Can it be effective?

Psychologists Aggleton and Waskett conducted a series of experiments at Jorvik which sought to determine the extent to which re-exposure to the unique combination odors present in a museum, the Jorvik Viking Museum, aided in the recall of a previous visit to the museum,

which typically had taken place several years prior.¹⁴⁶ Three groups of test subjects completed questionnaires about the contents of the museum but in different conditions. One group was exposed to the original odors of the museum while completing the questionnaire, the second was exposed to different control odors, and the third was not exposed to any scents. The first two groups then swapped odors and retook the questionnaire. The experiment showed that the museum odors did and can act as effective retrieval mechanisms. The purpose of the experiment was to formally test the effectiveness of odors as contextual retrieval cues for a real-world experience, the testing ground being the Jorvik Viking Museum in this instance. The findings can be linked with the specificity principle found by experimental psychologists and cognitive neuroscientists Tulving and Thomson in 1973 which states that salient elements of the environment in which learning takes place are encoded and linked with the to-be-remembered information.¹⁴⁷ This was not the purpose of this experiment but it should be noted that most visitors to the museum comment spontaneously on the striking smells of “rubbish acrid” and rope/tar smells, such was my experience.

Every museum and exhibition is attempting to tell a story. At the Jorvik Viking Centre the main characters were the original inhabitants of Viking Age York. I felt most connected with this narrative through the trolley ride visit in the reconstructed village. It’s there that the narrative was presented to me through sights, sounds, and smells. I was able to have a far more

¹⁴⁶ Aggleton, J. P., & Waskett, L. (1999). The ability of odours to serve as state-dependent cues for real-world memories: Can viking smells aid the recall of viking experiences? *British Journal of Psychology*, *90*(1), 1.

¹⁴⁷ Tulving, Endel, and Donald M. Thomson. "Encoding Specificity and Retrieval Processes in Episodic Memory." *Psychological Review* 80, no. 5 (1973): 352-73. doi:10.1037/h0020071.

immersive experience there than in a typical museum setting, however the Centre failed to evenly distribute the odors. Due to this failure, I was never able to smell all of the odors with perfect clarity. The exhibition team needs to lower the level of the “At Home with a Viking” odor and increase the other odors. Also, it would be helpful to better control the ventilation system, so that the odors do not spread across the entire recreated Viking village. The story presented told me about the everyday experience during the Viking era. The differences and similarities between contemporary life and the Viking life were emphasized during the ride. The Centre also offered a secondary narrative which spoke to the meticulous excavation and analysis of the artifacts on the site. It’s in this narrative that the validation for the reconstruction can be found and the protagonists are the archaeologists, however they were not presented to me as such.

The Jorvik Viking Centre was phenomenal in its execution of the odors in its display of the past. The odors were meant to convey a sense of a specific time, place, and people which also spoke to the spirit of the place. They have the archaeological artifacts which were thoroughly researched, so they know the odors are true, or true enough, to their original source and they were presented in a straightforward manner but when I did have a question, the staff was very knowledgeable and forthright. Also, the odors were not meant to be sold; it is doubtful that anyone wishes to walk around the streets of England smelling of a Viking latrine or rotting fish. Although, the gift shop at the very end of the tour does sell a postcard that has scratch-and-sniff samples of four of the odors but this was a later addition. On the whole, the Jorvik Viking Centre is an example of an educational attraction that has managed to mix

entertainment and education properly while utilizing odors as a medium to convey a sense of the past while simultaneously preserving them for future generations. The public would seem to agree that the Jorvik Viking Centre is exceptional given the fact that since the Centre opened in April 1984, over 20 million visitors have come to experience it.¹⁴⁸ Although, it must be noted that it has captured the public's attention by latching onto historical nostalgia similar to what Colonial Williamsburg has done. It has, to a degree, created something less like a museum for educating contemporary residents of York about their heritage and more like an amusement park for entertainment. However, this did not seem to effect its score in my Clevenger Authenticity Scale.

The Jorvik Viking Centre placed third with a score of 50 points (Fig. 6). It scored three tens in Significance, Intention, and Duration. It scored a tens because the odors were unfamiliar to contemporary people, they were executed intentionally, and the Centre was focused on a very specific moment in time, so the odors could be more easily identified. It scored an eight in Location because while the Centre is very close to the original site of the excavation, it is not the exact site. It scored sixes in both Evidence and Aesthetics. In Evidence, it scored a six because while there was archaeological evidence that was found and the odors were designed after them, the odors had undoubtedly changed over time, so the odors that were recreated were not perfect recreations of the original source. In Aesthetics, it scored a six because in order to experience all of the individual odors, I had to use the timecar, however the odor of

¹⁴⁸ The Jorvik Group. "JORVIK Viking Centre: FACTS AND FIGURES." News release. Thejorvikgroup.com. <http://www.thejorvikgroup.com/wp-content/uploads/2014/01/JORVIK-Press-Pack.pdf>.

the village itself was perceivable for most of my time in the Centre. It did receive two zeros in Sourcing and Fabrication because the odors were recreated through chemistry and due to that they were artificial in nature.

Clevenger Authenticity Scale Jorvik Viking Centre		
Category	0 _____ Level of Authenticity _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) _____ 0 10	0
Significance	Familiar _____ Unfamiliar _____ 0 10	10
Fabrication	Artificial _____ Natural _____ 0 10	0
Location	Ex-Situ _____ In-Situ _____ 0 10	8
Intention	Accidental _____ Intentional _____ 0 10	10
Duration	Long (Vague) _____ Short (Specific) _____ 0 10	10
Evidence	Undocumented _____ Documented _____ 0 10	6
Aesthetics	Fragmentary Impression _____ Unified Impression _____ 0 10	6
Total		50

Figure 5 - Jorvik Viking Centre Score

4.2. Dennis Severs' House (1979)

4.2.1. From Fact to Fiction

I found that an even more difficult precedent to analyze that preserved odors by means of its exhibition was the Dennis Severs' House. A phenomenal aspect of the Dennis Severs' House is how it has consciously chosen to preserve the odors of the building and its day-to-day life. Whenever any project is undertaken, it should be executed with a deliberate intent otherwise important ideas will be lost or things will happen purely by accident. Not all accidents are necessarily bad; they can be good but it is best when they are known so that people can consciously be aware and care for them. Thankfully, the Severs' House is fully aware of what they are doing. Located inside 18 Folgate Street, Spitalfields, the Dennis Severs' House was created by Dennis Severs from 1979 to 1999 when he died at the age of 51. The house itself began its life in the early seventeenth century as a simple four-story row house residence, however the buildings destiny changed when Dennis Severs came upon it. Severs was a rather eccentric American who moved to London after falling in love with the culture over the course of his life. Severs was attracted to England by what he referred to as the "English light."¹⁴⁹ Once he had tired of America he moved to London in 1979 and made the decayed property in Folgate Street into his home. Adjacent to Spitalfields Market, this area toward London's East End, had become remarkably neglected and was in a state of decay. Local artists had started to move in. Residents since the late 1960's, iconoclastic artists Gilbert and George also chose this area to

¹⁴⁹ Severs, Dennis, *18 Folgate Street: The Tale of a House in Spitalfields*, 2002, Vintage.

purchase a similar house that was in desperate need of repair, which helped to add legitimacy to the neighborhood's value as an important and culturally rich area of London.¹⁵⁰

The house is a bit of an oddity in that the ten rooms of the Huguenot house have been designed to recreate the life of a fictional but typical family who would have lived in the area between 1724 and 1914. Severs created the family that the museum is depicting. They are totally fictional and every aspect of their lives and how they are depicted came from his imagination, which was “based on a Californian childhood spent watching old movies, especially David Lean's adaptations of Charles Dickens, (which) conjured an inhabited past - the decoration of a dwelling as a physical manifestation of its original owners.”¹⁵¹ The four floors of the buildings tell the story of the Jervis family who were silk weavers who “lived” a few hundred years ago. The spaces are filled with furnishings and the remnants of everyday life such as grocery lists, toast caddies and letters to friends.

The level of and attention to olfactory detail in the house is truly remarkable. Pavia Rosati wrote, “Walking the four floors from the basement to the attic, the visitor lives through the progression of the socio-economic phases in the family's history. From great wealth in the parlor and drawing room to the abject poverty in the attic.” When I toured the house on February 23 and 24, 2018, I was struck by how the house exuded a sense of fun and drama

¹⁵⁰ Chilvers, Ian, and John Glaves-Smith. *A Dictionary of Modern and Contemporary Art*. Oxford: Oxford University Press, 2009. 268.

¹⁵¹ Rule, Vera. "Review: Books on decorating - Balconies and Bedsteads." *The Guardian*. December 01, 2001. <https://www.theguardian.com/books/2001/dec/01/houseandgarden>.

while simultaneously teaching me about London's culture through its sights, sounds, and smells.¹⁵² The style and décor of the rooms themselves changed accordingly with the time progression beginning with the Georgian style in the basement and ending with the Late Victorian in the upper floors.¹⁵³ The tour itself was fascinating because they were conducted silently although you could hear the floorboards creaking from the footsteps of the other visitors. I was told some rudimentary information before the tour but during the tour itself everything and everyone remained perfectly quiet. Also, I was prohibited from taking photographs on the first tour but I was allowed on the second private tour conducted by David Milne the curator. In truth, the 'museum' was really more akin to a literary non-fictional novel that Dennis Severs wrote and then decided to pull that story from the second dimension into our three-dimensional plane. Severs narrated his story not with pen and paper but with the sweet smell of spiced wine and half eaten moldy smelling bread.

Gavin Stamp of *The Guardian* said it best when he wrote that the Dennis Severs House is less of a museum and more like a time machine. He went on to say that the museum is meant only for, "those prepared to enter his empathetic historical imagination and to suspend disbelief (never mind mundane considerations of historical fact, conventional museum practice or conservation philosophy).¹⁵⁴" This includes the sights, sounds, touch, and smells. The exhibit is, "aimed at those who want to make sense of the whole picture of being alive." Every room

¹⁵² "A Totally Unauthorized Look Inside the Dennis Severs' House." Fathomaway.com. <http://www.fathomaway.com/dennis-severs-house-museum-london/>.

¹⁵³ "Living with the Past." In *The Antiques Show*. 1997.

¹⁵⁴ Stamp, Gavin. "Dennis Severs." *The Guardian*. January 09, 2000. <https://www.theguardian.com/news/2000/jan/10/guardianobituaries>.

has been designed in such a manner that I was left with the impression that the owners of the house were just in the rooms, they heard people coming, and so quickly left. When inside a number of the rooms, I even heard people's voices and music and throughout the entire experience I heard the floorboards creaking from footsteps, presumably from the imagined family trying to evade them. The tour began in the kitchen in the basement, where a fire in the stove was lit and I could smell the scent of cedar wood and coal wafting in the air and there was a half-cooked breakfast that remained to be finished.¹⁵⁵ The symmetrical nature of the room, which was quite popular with the eighteenth century designers. Over the fireplace there was a painting of King George III that was framed by the walls that were painted in a glossy green paint. Interestingly, the furniture, specifically the chairs were from the William and Mary period from approximately 1700-1725. That contradiction was also a part of the intention of the house. Those pieces from different time periods were placed in a room that was meant to convey a single period of time in order to entice visitors, such as myself, to dissect the story and determine that which was truly authentic and that which was not. Also, it was meant to convey a sense that a family truly lived in this house and as with all families, their tastes changed and they changed the house and its furnishings accordingly. In the Monarchy Room on the second floor, there buttons and sashes that showed the coronation of both King George VI and Queen Elizabeth II. The room also featured an odor that was both stale and perfume which was a product of the family eating and drinking in the room after presumably celebrating the coronation and wearing expensive perfumes and colognes.

¹⁵⁵ Milne, David. (February 2018). *David Severs House Tour*, Spitalfields, London, UK.

The narrative of continual change and update ran throughout the house, however it was subtle and only a person with a trained historical eye would be able to pick up on it. However, perfect historical accuracy was not the point of the Dennis Severs House. Very little of it was in fact historically accurate. At first glance, everything seemed perfect and accurate to the time period including the moldings, however upon further inspection the prominent ceiling medallion in the central hallway on the first floor were made from plastic fruit, this was made obvious by the incorporation of bananas, and parts of the fireplace mantles were made of chicken wire and paper.¹⁵⁶ Even the odors emanating from the food was not authentic because the smell objects themselves have changed and evolved over time due to human interference. Moving upstairs, the sheets and comforters on the beds which smelled of a subtle human musk were ruffled and I found the remnants of cracked nuts around the fireplace that smelled of freshly burnt logs. Further upstairs, in the family's more impoverished years, damp moldy smelling clothing was left to dry in the staircase with mushrooms growing from the walls by the window because they could no longer afford to have their laundry sent out for cleaning. Also, I saw piles of letters with the quill and ink left out to odorize the room. It's as if the patriarch had simply surrendered to his impoverished condition.

The authenticity was in these kinds of details for me. When I inspected one of the dresses hanging in one of the posher rooms on the lower floors, there was a laundering note that read, "Let out here." This indicated that the lady of the house was putting on weight which

¹⁵⁶ "Living with the Past." In *The Antiques Show*. 1997.

I inferred to mean that life was good and that the family had plenty.¹⁵⁷ The odors themselves were clearly not originating from items that were actually hundreds of years old and to their credit, the staff clearly acknowledged that the odors are not thoroughly researched historically accurate recreations. Every day, the curator David Milne meticulously goes about the house preparing it for visitors by lighting the cedar fires in the fireplaces and lighting the many candles, cutting onions and lemons, putting out brussels sprouts, and filling the glasses with spiced wine.¹⁵⁸ For added effect, the rooms even have chamber pots that are routinely filled with real human waste that is then left out for about a week and then cleaned. While I was there the waste had been recently cleaned, so the odor was not strong. The smells along with all the other elements are meant to evoke people's present-day acquired understanding of the time, place, and lifestyle through, amongst other aspects, odors. The house uses the Proust Effect, which taps into people's own memories as well as the kind of warped version discussed in earlier chapters. This is when contemporary materials such as food and waste are used in order to tap into people's preconceived contemporary notions of their smells to induce and evoke odor memories. It is in this way people are able to interpret the odors in the exhibit and develop a deep and meaningful connection to these characters who never truly existed. However, the house often receives repeat visitors who visited the house as children and they have a genuine odor memory of the house and they are genuinely emotionally moved. This of course is the real Proust Effect in practice. It is through this full-sensory experience that the fictional family is brought to life for visitors. The house is truly an authored environment. As

¹⁵⁷ Ibid.

¹⁵⁸ Milne, David. (February 2018). *David Severs House Tour*, Spitalfields, London, UK.

Dennis Severs said, “you’re going into a collection of atmospheres.”¹⁵⁹ Although, the house itself is quite old. It got its start in the seventeenth century and trained eyes and noses can tell. The smell of spiced wine was an odor of antiquity that is seldom if ever found in contemporary times as is the odor of roasting chestnuts emanating from the kitchen in the basement. The frame of the house is from the 1620’s and the much of the house’s details are Regency, including the beautiful moldings and door surrounds.

The good and bad elements of the Old World are present throughout the house; the seventeenth and eighteenth century furniture, the chamber pots perfuming the rooms with the stench of real human waste, and the lack of electricity. That is how the people of London lived during that time and it is how it existed when Dennis Severs lived in it. 18 Folgate Street was Dennis’s home as it has been for quite a few others. For a number of years, David Milne lived in one of the rooms of the house and presently there is a local who lives in the house after business hours. For the people who work there, it is a second home as the house is now open nearly every day of the week. Once Mr. Severs passed, the house became Mr. Milne’s responsibility and he has added his own personal touches to the exhibition. In the room where Dennis slept, I discovered Dennis’ robe, shoes, and even his contemporary varsity jacket hanging on a chair behind a dressing screen. He placed them in the room as a memorial to Dennis after his death. Even though he is deceased, he is not forgotten. Also, David is a collector of old Chinese porcelain figurines and he has dozens of them prominently displayed in the same room. The pieces themselves are antiques and their presence is logical in the house as

¹⁵⁹ Ibid.

Britain has had a long history of trading with East Asia and such items were especially popular between the eighteenth and nineteenth centuries. In these atmospheres, there is a certain impossibility of adhering to one historical time period but I think this is okay because people do not exist in one time period, they evolve throughout their lives while retaining elements of their past. In so doing, it is logical to assume that their homes and their rooms change with them but still retain parts of their past.

4.2.2. Judging Fiction

It is easy to consider this to not be a proper odor preservation project. The museum does not conform to the traditional house museum typology. It doesn't tell the story of a real family; the Jervis family is totally fictitious and the odors installed throughout the building are not exactly accurate to the time period that is trying to be conveyed. Even if the same ingredients are being used, they have no doubt changed over the course of the centuries due to human intervention. That can lead to the conclusion that the odors are not authentic, however I believe that the Dennis Severs' House is most definitely a successful cultural heritage project. It is preserving both the odors of the past and the spirit of the period by using the original smell objects contemporary equivalents in order to work with people's expectations and not against them. As mentioned earlier, by using the contemporary smell objects to represent those of antiquity, the house is able to create new and evocative odor memories that will stay in people's minds for decades. In this manner, the house is using the odors in the hope that in the future the house will have repeat visitors that will recall the past odors and have a Proust Effect memory that will make them recall their last visit. The experience of the odor memory is

authentic and in this way the house is authentic. Another intention of the fictionally derived museum is to preserve and convey to audiences how the family unit has changed and how the area has changed throughout the centuries from its sixteenth century roots. Unfortunately, this is visible when inside the house; through the windows I was able to see the glass towers that have been erected around it. In fact, during construction of one of the many high-rise towers in the area, David stated that the reverberations were so extreme that it made the entire front façade of the house fall a few inches. He showed me the large visible crack on the ceiling that is present throughout the floors of the house.¹⁶⁰ The lighting in the house is one of its greatest assets as the dim lighting and flickering candle light makes these unfortunate conditions virtually invisible to all but the most-keen eyed visitors.

Jeanette Winterson who restored a house close by wrote, “Fashions come and go, but there are permanencies, vulnerable but not forgotten, that Dennis sought to communicate.”¹⁶¹ While the odors themselves are not researched to the extent to which a scholar working for a museum would like them to be researched, they are successful at executing their job, which is to work with people’s expectations and not against them. The Dennis Severs’ drew much of his inspiration for the odors and the artifacts in the house from books of novelists Charles Dickens and Henry Fielding and Hollywood films and television such as *Sherlock Holmes* and *A Christmas Carol*. In addition, he also talked to longtime residents of the surrounding streets in Spitalfields in order to piece together a better understanding of the area’s history.¹⁶² The

¹⁶⁰ Milne, David. (February 2018). *David Severs House Tour*, Spitalfields, London, UK.

¹⁶¹ Severs, Dennis, *18 Folgate Street: The Tale of a House in Spitalfields*, 2002, Vintage.

¹⁶² Milne, David. (February 2018). *David Severs House Tour*, Spitalfields, London, UK.

Severs' House has failed to do this with historic authenticity. The smell objects are not the original artifacts that were found in the house and much of the house was renovated by Severs' in order to transform it into his narrative. This involved rearranging the fireplace mantle pieces, painting the walls different colors, removing the wall in the central corridor from the time when the house was a business, and adding a room at the back of the house on the first floor that is equipped with electricity and a computer.¹⁶³

The role of the odors in the house is to ease people into the past; by making the odors familiar to present day sensibilities, I wasn't taken out of the narrative of the experience of the house tour by being confronted with unfamiliar odors in fact the odors drew me into the story further. The house does an astonishing job of capturing people's attention and imaginations with its use of eerie sounds, dim candle lighting, warm temperatures in the lower levels and cold in the higher impoverished levels, and its marvelous use of smells. Without the smells, the experience of the tour would be much like the Tenement Museum where visitors feel as if the building was transported to the future yet lacks the sense of inhabitation because the rooms have been sterilized and preserved; the building and the visitors feel out of place. At the Dennis Severs' House they feel as if they have been taken into the past to experience how the house and its occupants lived. The odors, in combination with the sights and sounds, act as sensory indicators and stimulators and visitors are able to live the past as present. Again, I have to state that the fact that the family is fictional and that the house is designed in this fictional manner was told to me at the very beginning of the tour so that there wouldn't be any confusion.

¹⁶³ Ibid.

Dennis Severs was quoted as saying that for those people who are searching for pedantic historical accuracy, “they are in the wrong house. They are well catered to; we (Londoners) have more homes and museums open to the public than any other country in the world.”¹⁶⁴ Historical accuracy in this instance refers to a building possessing only its original components or renovated using the precise methods and materials that would have been used during its construction. For the Severs’ House this would mean using the manual tools and techniques from the seventeenth century or it can also mean leaving the house in-situ and not doing any renovations to it but simply preserving it as it exists in a ruined state. However, this ruined state is not historically accurate because when it was occupied it was never a ruin, so it would be inauthentic to leave it as such. By repurposing the house into a fictional narrative, Dennis Severs’ restored the authenticity of the house when he recreated the seventeenth and eighteenth centuries. In this case, authenticity has been achieved without historical accuracy. The people of London would seem to agree that the Dennis Severs’ House is successful given the high ratings that its many visitors routinely give it and its long lines. My own authenticity scale substantiates there high ratings.

With a collective score of 54 points, the Dennis Severs’ House tied for first place (Fig. 7). It received perfect scores of ten points in Fabrication, Location, and Intention. The odor sources were the original artifacts or contemporary examples of their sources, the site of the house is in-situ, and the odors were intentionally being preserved. It received a score of nine for Sourcing because the vast majority of the objects emitting odor were the original smell objects,

¹⁶⁴ "Living with the Past." In *The Antiques Show*. 1997.

the house, however the food was being replaced on a daily basis. In the other for categories, the house did not do so well. In Significance, it scored a five due to the nature of the odors being rather familiar such as tea, wine, and human waste. While it was Dennis Severs' intention to use contemporary equivalents of historic smell objects in order to work with visitor's expectations and not against them such as sliced lemons and cinnamon sticks, the house did lose points because of it. It scored five again in Evidence due to the fact that much of the odor documentation was sparse and what did exist came from interviews. It scored a three in Duration because the time period that was being recreated was over a span of two hundred years but it wasn't thousands, so it scored higher than Skansen. Its lowest score was two in Aesthetics. In order to experience all of the odors, I did have to walk through every room on every floor of the building because the odors were different in each room.

Clevenger Authenticity Scale Dennis Severs' House		
Category	0 _____ Level of Authenticity _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) _____ 0 10	9
Significance	Familiar _____ Unfamiliar _____ 0 10	5
Fabrication	Artificial _____ Natural _____ 0 10	10
Location	Ex-Situ _____ In-Situ _____ 0 10	10
Intention	Accidental _____ Intentional _____ 0 10	10
Duration	Long (Vague) _____ Short (Specific) _____ 0 10	3
Evidence	Undocumented _____ Documented _____ 0 10	5
Aesthetics	Fragmentary Impression _____ Unified Impression _____ 0 10	2
Total		54

Figure 6 - Dennis Severs' House Score

Chapter 5

Odor Recreations in the Global Context

For the fourth and final set of preservation projects that preserve odors in their exhibitions. Ever different from the previous categories, this tier's goal is to recognize that the cultural heritage governing bodies of the world are beginning to change their attitudes about odors. It has already been established in previous chapters that odor has always been one of the primary methods by which cultural heritage acquires its authenticity. Finally, in the twenty-first century the governing bodies of the world are beginning to create legal measures to declare that odors are culturally authentic and must be protected. This chapter will examine one case study from the United States and one from Japan in order to prove this point.

5.1. Japanese Ministry for the Environment 100 Most Fragrant Landscape List (2001)

Unlike most of the previous examples of odor utilization in cultural heritage projects, the government of Japan has chosen as a unified body to recognize that the smell of a place is important to the cultural history of their nation. In 2001, the Japanese Ministry for the Environment decided to officially select one hundred different locations around Japan and declare them as the most pleasant-smelling landscapes in the nation. By only choosing to represent the pleasant odors, I feel that Japan is white-washing their culture similar to what occurred at Colonial Williamsburg. However, this is a prime example of sourcing in odor preservation which is another fundamentally important concept in preservation.

Preservationists are often confronted with the terrible notion of recreating an object when it is preferable to simply maintain the original source. The Japanese government had the great

luxury of being able to maintain their smell objects instead of recreating them through artificial means in a lab. The list was a community-led selection of aromas that was recognized as heritage by both the local communities and by a committee of eight including government officials, locals, and Japanese celebrities. The committee included a wide range of participants including Kiyohi Iwasaki, who worked for both the Tokyo Metropolitan Environmental Science Institute as a research director and for the Central Environment Council's Atmosphere Committee as an expert on odors.¹⁶⁵ He also served as the chairman for the selection committee itself. Also on the committee was Okajima Takko, managing director of the Japan Environment Education Forum, Kawasaki Masaaki, a member of the Japan Perfumery Association and committee chairperson of the Kaori Scenic Selection Method Consideration, Ryohiko Koga, a professor of psychiatry at the Kyorin University School of Medicine, Yumiko Sato, director of Suntory Epidemic Research Institute, Miho Takagi, an actress and essayist, Masataka Hata, president Matsudo-do Corporation, and finally Michi Doura, a committee member of the poet Cho Center Environment Council: Seto Island Sea Division.¹⁶⁶ The list was established in 2001 after a nationwide consultation where 600 candidate smells were submitted by 512 local municipalities and 88 individual citizens via the internet.¹⁶⁷ In order for

¹⁶⁵ To formulate the "national adaptation plan" for understanding and adapting to climate change, it was deemed necessary to ascertain what kind of impacts could be occurring due to climate change in Japan, and to develop plans based on the findings. That is why the Expert Committee on Climate Change Impact Assessment (hereinafter "Atmosphere Committee") was formed under the Global Environment Committee of the Central Environment Council (an advisory body to the Japanese Cabinet), and in the committee, "the projections of climate change in the future based on existing research" and "the assessments of climate change impacts on nature and human society in Japan" were compiled. Japan. Ministry of the Environment. Central Environment Council. *Report on Assessment of Impacts of Climate Change in Japan and Future Challenges (Comment Submission)*. 2015. 2-3.

¹⁶⁶ Japan Ministry of the Environment (2001). About Selection of 100 Kaori Landscape. [online] Available at: <http://www.env.go.jp/press/press.php?serial=2941>.

¹⁶⁷ Ibid.

the committee to choose the final 100 odors from the pool of 600 candidates, a checklist of seven criteria had to be met. They included:¹⁶⁸

1. The odor must be conducive to a condition that many of the general residents can easily enjoy. Be a landscape that can be enjoyed not only by local residents but also by visitors (It is not limited to only specific individuals)
2. The pleasant fragrant scenery is recognized as a natural, historical, cultural, living or product of the activity generated in the environment of the area, and it will be continued into the foreseeable future.
3. It must be able to continue to be conducive to relaxation and comfort for local residents and visitors through their interaction with the scenery.
4. It must be able to promote enthusiasm for regional awareness about the creation and maintenance of the odor as well as the preservation of the landscape.
5. Conservation of the good smelling scenery contributes to the improvement of the local environment or as a conservation model.
6. The good smelling scenery contributes to the creation of an environment that recalls human senses.
7. The odor must have “dignity” as a fragrant landscape and be an area of high value to be saved.

¹⁶⁸ Ibid.

The criteria that were selected to judge the odors is quite troubling to me. The two phrases “easily enjoy” and “relaxation and comfort” raise the question of should heritage be easily enjoyed and for the purpose of relaxation and comfort? This emphasis is highly problematic. There are aspects of every cultures history that are not pleasant and are quite shameful, however those aspects have irrevocably shaped the evolution of that culture and without them that culture would not exist as it does today. It is a platitude but people and societies learn the most from their mistakes and it is important to recognize them. This is just as true with odors, so I am disappointed that Japan chose not to include unpleasant odors on their list.

The one hundred chosen aromas that were spread across the eight different regions of Japan and their tangible sources are now protected and carry a seal that reads, “Scents to be handed down to our children.”¹⁶⁹ The aromas include ancient woods, sea breeze, sake distilleries and medicine and seaweed shops. The two most greatly debated sites in the country were Tsuruhashi Station in Osaka and Tokyo’s Kanda area. Tsuruhashi Station was contested and debated heavily because the two scents that were nominated were the odor of barbecued meat and kimchi which both have very distinct and strong odors. Kimchi specifically is well-known to have a powerful odor which is not pleasant to many people. Tokyo’s Kanda area was nominated for the scent of the bookstores which are abundant in the area. The areas selected to be most fragrant in the nation covered everything from natural sites to cultural sites. An

¹⁶⁹ "Ministry Compiles List of Nation's 100 Best-Smelling Spots." The Japan Times. October 31, 2001. <https://www.japantimes.co.jp/news/2001/10/31/national/ministry-compiles-list-of-nations-100-best-smelling-spots/#.WhRgitCnGUK>.

official pamphlet was released to inform and educate people about what precisely was protected and what time of the year is best to experience them. An example is the Higashisawa Rose Park in the northeast region. The park features over 700 varieties of roses totaling 20,000 individual rose plants and the pamphlet states that the scent is seasonal and that the most opportune time to experience the scent is from May to mid-late September.¹⁷⁰

5.1.1. Why Elevate Odors to Heritage?

The Japanese Ministry for the Environment created this listing in 2001. The official press release from the ministry states that they:

"Introduced the olfactory measurement method to the odor control law to further solve the odor problem which has been increasing recently in city and living type pollution. In addition to that, we adopted a new way of thinking about the kaori (kaori means pleasant fragrance) environment, "We will rediscover the good fragrance around us, conscious of the various smells around us through noticing Kaori, actively addressing the unpleasant smell improvement Regional Activities "that we would like to promote. Therefore, as part of supporting regional efforts to preserve and create good scent and its natural environment and culture - the kaori environment - 100 points that are particularly excellent as a kaori environment "100 Kaori Landscapes" We decided to implement the project."¹⁷¹

¹⁷⁰ "Kaori Landscape 100 Selection Pamphlet." におり風景 100選パンフレット. 2001.
<http://www.env.go.jp/air/kaori/pamph/index.html>.

¹⁷¹ Japan Ministry of the Environment (2001). About Selection of 100 Kaori Landscape. [online] Available at: <http://www.env.go.jp/press/press.php?serial=2941>.

This quotation leads me to believe that this is less of a preservation project and more of a contemporary strategy for combating pollution and poor public perception. This was not the first time that the Japanese government had enacted legal measures concerning the topic of odors. In fact, they possess a keen awareness of the power that odors can have on their society. In 1972, the Offensive Odor Control Law was enacted in Japan. It was created to preserve “the living environment and contributing to the protection of the people’s health by carrying out necessary regulations and by promoting other countermeasures to control offensive odors generated in the course of business activities at factories or at other places of business.”¹⁷² The law was precipitated by the ever growing number of complaints about environmental pollution pertaining to air and noise pollution, as well as offensive odors. This was caused by the expansion of industrial development and urbanization that greatly increased in Japan in the 1960’s. To combat the offensive odors, the “Offensive Odor Control Law” was designed to regulate the offensive odors that were being generated from business activities. At the time, it was thought to be very forward thinking because very few countries had laws that applied solely to offensive odors. The enactment of the law did result in the number of complaints declining, with the fewest complaints in 1993 at approximately 10,000. Unfortunately, that number has been on a startlingly rise ever since then. Specifically in 2001, when the 100 Most Fragrant Landscape list was created, the number of complaints hit a record high of nearly 24,000. The major source of the complaints concerned the service industries. This included

¹⁷² Offensive Odor Control Law, 1972, Japan. Chapter 1 General Provisions, Article 1. (1972).

restaurants and private homes. Complaints about the offensive odor emanating from livestock farms and manufacturing plants was on a steady decline though.¹⁷³

To actually officially declare that odors are cultural heritage is very forward thinking and progressive on the part of the Japanese government since most governments of the world do not consider odors to be culturally significant or worthy of preservation. Although, Japan does have a reputation for possessing a strong admiration for tradition and a strong desire to keep their traditions alive. Barney Shaw wrote how he thought it was interesting that the Japanese government actually contributed money and time to smelling the landscapes around them, He wrote, "It is hard to imagine a Ministry of the Environment in a more materialist country thinking it a sufficiently hard-headed task to sponsor a list of 'One Hundred Places of Good Fragrance' in its own country."¹⁷⁴ Their motives may not have been so altruistic as they would have the public believe. In an article published by the Japan Times, it was stated that the entire endeavor was undertaken more for monetary purposes as opposed to solely for altruistic goals. Ministry official Tetsuo Ishii was quoted in the article as stating that, "We hope that this will raise awareness of people at the local level and lead to a rediscovery of fragrant areas and their preservation."¹⁷⁵ Presumably, the smells serve as an important element of regional promotion. This is especially important to remember given the fact that the 2020 Summer Olympics are

¹⁷³ Japan. Noise and Odor Division. Ministry of the Environment. *Odor Regulation in Japan*. By Toshiro Segawa. 36-41.

¹⁷⁴ Shaw, Barry. *The Smell of Fresh Rain: The Most Unexpected Pleasures of our Most Elusive Sense*. London: Icon, 2017. Ch. 6, p.2-3.

¹⁷⁵ "Ministry Compiles List of Nation's 100 Best-Smelling Spots." The Japan Times. October 31, 2001. <https://www.japantimes.co.jp/news/2001/10/31/national/ministry-compiles-list-of-nations-100-best-smelling-spots/#.WhRgitCnGUK>.

going to be held in Tokyo and Japan had been making great strides in the years following up to 2020 to improve its public perception. This includes lifting bans on people with tattoos from entering public hot springs.¹⁷⁶ Japan has a long and unfortunate, but understandable, history of disapproving of people with tattoos because of the history with the Yakuza mafia and their members famously possessing elaborate tattoos. However, tattoos have become incredibly popular in recent years and are quite common in western countries.

Despite the ulterior motives, the Japanese government's decision to officially declare odors to be cultural heritage is important for preservation. This decision is both about specific places and times and about protecting the authenticity of these places. Also, the selections were thoroughly debated by a diverse committee and the selections were submitted by local residents, so this was a truly bottom-top approach. The stated criteria for selection was that they smelled pleasing and would help to promote business in the regions, surprisingly to me the selection committee did not hide this fact. It was actually clearly stated in the press release. After all, the list is called the 100 Most Fragrant Landscape list. This precedent is a successful example of an industrialized nation stepping onto the world stage and declaring that the sense of smell should be an object of preservation because of its cultural significance.

It would be advantageous if the government would include more 'unpleasant' odors on their protected list of odors in the future, as they are just as emblematic to a culture as the

¹⁷⁶ Tsunagu. "8 Hot Springs and Bathhouses in Japan That Even Those With Tattoos Can Enter." Tsunagu Japan. <https://www.tsunagujapan.com/8-hot-springs-and-bathhouses-in-japan-that-even-those-with-tattoos-can-enter/>.

'pleasant' ones. By neglecting to include the more "unpleasant" odors in their list, in a very real sense they have failed to capture the authentic smells of Japan; they only captured a subset and not the whole olfactory substance of Japan's landscapes. The unpleasant odors are just as culturally significant and worthy of preservation as the pleasing ones, perhaps even more so. Unlike the pleasing odors, the foul odors are constantly in threat of extinction because people are actively trying to destroy or conceal them. This is an important precedent showcasing a government recognizing odor as an aspect of heritage but I don't think this is necessarily a preservation project. Despite this, the case study managed to rank as the most authentic odor preservation project that I studied for this thesis according to my authenticity scale.

With a score of 54 points, the Japanese Ministry for the Environment 100 Most Fragrant Landscape List was ranked number one (Fig. 8). It scored perfect tens in five categories including Sourcing, because the smell objects were simply being maintained, Fabrication, because the odors were natural to the landscape, Location, because the sites of the odors were in-situ, Intention, because the odors were intentionally being preserved by law, and finally Evidence, because there was plentiful documentation and samples supporting the smell objects odors. It did receive a pair of twos in Duration, because a specific time was not being preserved, and in Aesthetics, because the odors were presented in a fragmentary manner. They could only be perceived if a person walked around the various landscapes and within those landscapes the odors would change. It received one zero in Significance because the odors were quite familiar to the population.

Clevenger Authenticity Scale Japanese 100 Most Fragrant Landscapes		
Category	0 _____ Level of Authenticity _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) _____ 0 10	10
Significance	Familiar _____ Unfamiliar _____ 0 10	0
Fabrication	Artificial _____ Natural _____ 0 10	10
Location	Ex-Situ _____ In-Situ _____ 0 10	10
Intention	Accidental _____ Intentional _____ 0 10	10
Duration	Long (Vague) _____ Short (Specific) _____ 0 10	2
Evidence	Undocumented _____ Documented _____ 0 10	10
Aesthetics	Fragmentary Impression _____ Unified Impression _____ 0 10	2
Total		54

Figure 7 - Japanese Ministry of the Environment 100 Most Fragrant Landscape List Score

5.2. NASA's Space Odor Recreation (2008)

In 2008, the National Aeronautics and Space Administration was considering integrating the odor of space into the training of their astronauts. By recreating the void of space on Earth, NASA would have been committing the crime of taking an odor from its original source and installing it in a new location, ex-situ. It is always more authentic to preserve an object in-situ or in its original place. This is why I believe that NASA's space odor recreation is the ultimate expression of the recreation and preservation of an odor away from its native locale. As radical as this concept may seem, if it had been executed it would not have been the first time that a U.S. government affiliate would have used odors to train its personnel.¹⁷⁷

To better prepare their astronauts for the unusual environment of space, NASA contacted Steve Pearce about recreating the odor of space. He was the designer who recreated the stench of the Mir space station for the Reg Vardy Gallery exhibit entitled *If There Ever Was*, or as it is more commonly known, *Impossible Smells*. When he created the odor, he wanted it to smell bad because he had talked with some of the cosmonauts and they claimed that the odor

¹⁷⁷ The U.S. army already trains its soldiers that will be going into battlefields to become accustomed, or at least familiar, with the odor of human corpses. The primary task of the Company Level Evacuation and Recovery team is the search and recovery of human remains on battlefields. The team members go through a rigorous training program where they are shown images of corpses, learn how to properly document the body, and have visits to morgues. This is done to prepare them for the real-world conditions of finding the corpse of a fellow soldier. Spc. Keith Arthur was quoted as saying, "the smell coming off those cadavers was very bad, I had to catch myself from getting sick." The experience of actually smelling a real corpse is invaluable to the soldiers but it isn't easy for them. Pfc. Brandon Bishop said, "It's kind of a desensitizing experience, so that if you do encounter a body, it's not as much of a shock, having seen an autopsy. If I had to deploy in six months, I'd be confident we could do this job." Miranda, Mark, Staff Sgt. "Soldiers Train on Battlefield Recovery of Human Remains." [Www.army.mil](https://www.army.mil). March 27, 2013. https://www.army.mil/article/99590/soldiers_train_on_battlefield_recovery_of_human_remains.

was terrible after so many years of use and the antiquated air filtration system. Similar to NASA's desire to create the odor of space, the odors that were presented to the public either never existed or they ceased to exist long ago. From April 29, 2008 to June 6, 2008, the Reg Vardy Gallery, located at Sunderland University in the north of England's east coast, hosted a once in a lifetime event that featured impossible odors. The unique exhibition was the brainchild of curator Robert Blackson. The concept was sparked after he read the book "Fast Food Nation" which discussed how artificially created chemicals are used to flavor virtually everything people eat but not actually being the food, they are mimicking.¹⁷⁸

If There Ever Was was an opportunity for the general public to experience odors that they will likely never be able to experience in reality. Blackson was quoted as saying, "there's a whole variety of different smells, including some extinct flowers. Some have been gone for hundreds of years, whilst others have only been extinct for the last thirty, due to things like deforestation."¹⁷⁹ Featured in the gallery were fourteen distinct odors that were each created by separate artists and researchers. Amongst the impossible scents was the metallic fallout of the first atomic bomb, the aroma of cloves and oranges from a medieval doctor's first aid plague kit, the stench of a meteor impact, the sweaty stink of the Mir space station, and the smell of Cleopatra's hair. The fact that the odors are impossible today would likely lead people to believe that they were simply conceived from the imagination of their creators with no real

¹⁷⁸ Gyton, Georgi. "Art As A Smell At The Reg Vardy Gallery, Sunderland." Art As A Smell At The Reg Vardy Gallery, Sunderland | Culture24. April 11, 2008. <http://www.culture24.org.uk/art/art56538>.

¹⁷⁹ Editor, Roger Highfield Science. "Impossible smells exhibition opens." The Telegraph. May 01, 2008. <http://www.telegraph.co.uk/news/science/science-news/3341281/Impossible-smells-exhibition-opens.html>.

thought given to authenticity. Each of the scents created was thoroughly researched by each of the developers. In the case of Cleopatra's hair, a high level of research was conducted in archives as to the nature of the incense that was used by women during her reign in ancient Egypt. The incense contained raisins, wine, and Cassia, which was an evergreen. Also among the odors created were a number of extinct flowers. These odors were created by James Wong, who was a botanist at Botanic Gardens Conservation International. "Our team of botanists trawled through an extensive list of extinct flowers and plants to identify entries that were closely related to existing scented species. Then combining historical reports of how these extinct plants smelt, with the fragrance of their living relatives, we can hazard an extremely good guess at what their aroma was like."¹⁸⁰ Other odors created were far more esoteric in nature. One such example is the scent of the surface of the Sun. Blackson was quoted as saying that, "It is an atmospheric smell, like walking into a room when the sun has been pouring in. It gives a freshness, a sun kissed feel with a bit of metal." The fact that he said it smelled like metal is accurate since the scientists that created the odor wanted it to smell similar to seven different metals heated to their melting temperature.¹⁸¹

In the hopes of further preparing their own personnel for living in space and help to reduce any physical adjusting, NASA wanted to similarly recreate the odor of space for its astronauts. The agency had long heard from astronauts that had returned from living in space that it possessed a distinct smell. Astronauts have described it using a plethora of descriptors

¹⁸⁰ Ibid.

¹⁸¹ Gyton, Georgi. "Art As A Smell At The Reg Vardy Gallery, Sunderland." Art As A Smell At The Reg Vardy Gallery, Sunderland | Culture24. April 11, 2008. <http://www.culture24.org.uk/art/art56538>.

over the decades including seared steak, hot metal, and welding fumes. Astronaut Tony Antonelli stated, “Space definitely has a smell that’s different than anything else” and fellow space voyager Thomas Jones said that, “It carries a distinct odor of ozone, a faint acrid smell.”¹⁸² In fact, according to research that had been conducted by one researcher, the scent that they are smelling is actually a direct result of “high-energy vibrations in particles brought back inside which mix with the air.”

Unfortunately for the NASA’s astronauts, they elected not to move forward with the project and their reasons have not been given at this time. The only “research” that was done was inquiring the astronauts about their impressions about the smell of space. It is a terrible shame that the project lost steam before it even began. The astronauts gave wonderful descriptions of the odors. Astronaut Don Petit stated that, “It is hard to describe this smell; it is definitely not the olfactory equivalent to describing the palette sensations of some new food as ‘tastes like chicken.’ The best description I can come up with is metallic; a rather pleasant sweet metallic sensation. It reminded me of my college summers where I labored for many hours with an arc welding torch repairing heavy equipment for a small logging outfit. It reminded me of pleasant sweet-smelling welding fumes. That is the smell of space.”¹⁸³ If it had been created, this would have been an instance when the United States government would have been declaring that not only is something that is essentially non-existent actually real but that it would have been authentic enough to train its own personnel. The scent would have pertained

¹⁸² Garber, Megan. "What Space Smells Like." The Atlantic. July 19, 2012.
<https://www.theatlantic.com/technology/archive/2012/07/what-space-smells-like/259903/>.

¹⁸³ Ibid.

to a specific place and its sole purpose was to educate astronauts about the spirit of the place. Also, astronauts have provided wonderful descriptions about the odors they encountered in space and likely would have been consulted on the final product.

Whereas the Japanese sought to place odors on the same pedestal of heritage authenticity as the built environment, the United States' only aim was far more utilitarian. They simply wanted to use the created odor as a training tool for their personnel. They failed to recognize an important opportunity to recognize odor as being culturally significant which would potentially would have furthered the discussion in the cultural heritage discourse. Other space heritage has been recognized such as the moon.¹⁸⁴ The moon has a long archaeological record but it is also the first extra-planetary landing site. In 1969, human beings set foot at the site of Tranquility Base on the moon - another planetary body. The site still has the remnants of the lunar lander, the lunar roving vehicle, and the American flag. The remnants of Russia's Lunokhod rovers are also present along with spacecraft that China, India, Japan, and the European Space Agency have crash landed at the end of their mission lives. In 2011, NASA created voluntary guidelines for any future missions in order to avoid damage to the Apollo, Ranger, and Surveyor sites. In 2012, H.R. 2617 (113th): Apollo Lunar Landing Legacy Act was introduced in Congress in order to establish the Apollo Lunar Landing Sites National Park on the Moon.¹⁸⁵ Even though the act failed to pass, it shows that there is an interest in the U.S.

¹⁸⁴ Gorman, Alice. "Look, but Don't Touch: US Law and the Protection of Lunar Heritage." *The Conversation*. April 13, 2018. <http://theconversation.com/look-but-dont-touch-us-law-and-the-protection-of-lunar-heritage-20758>.

¹⁸⁵ "H.R. 2617 — 113th Congress: Apollo Lunar Landing Legacy Act." [www.GovTrack.us](http://www.govtrack.us). 2013. <<https://www.govtrack.us/congress/bills/113/hr2617>>

government to recognize and preserve space heritage. This entire endeavor was a missed opportunity that could have led to the legal protection and preservation of odors as cultural heritage in the U.S. At the very least, it did succeed in capturing my imagination and inspired me to further speculate about the potential of odor recreations. It also managed to place fifth most authentic according to my Clevenger Authenticity Scale.

The NASA Space Odor Recreation received a score of 40 points (Fig. 9). It received three scores of ten. One in Significance due to the odor being totally unfamiliar and essentially impossible, one in Intention because although the odor was not created if it had been it would have been done so intentionally, and in Aesthetics because similar to my Morgan Library odor recreation the odor would have been given to the astronauts as a single source, so it would have given them a unified impression. It received a six in Evidence because the only information about the smell of space comes from the select astronauts that have spoken about it in interviews and not from any sort of scientific analysis. It received a four in Duration because NASA was seeking to recreate the smell that the astronauts claimed that they smelled in the airlock when it was re-pressurized. However, the odor was also meant to represent the infinite void of space and time which is too vague. It received a score of zero in Sourcing, because it would have been an entirely lab generated chemical, a zero in Fabrication, due to the odor being artificial, and a zero in Location, because the odor of space would have to be perceived in the near perfect vacuum of space and not on the Earth.

Clevenger Authenticity Scale NASA Space Odor Recreation		
Category	0 _____ Level of Authenticity _____ 10 Low High	Total Score
Sourcing	Recreate (Chemistry) _____ Maintain (Smell Objects) _____ 0 10	0
Significance	Familiar _____ Unfamiliar _____ 0 10	10
Fabrication	Artificial _____ Natural _____ 0 10	0
Location	Ex-Situ _____ In-Situ _____ 0 10	0
Intention	Accidental _____ Intentional _____ 0 10	10
Duration	Long (Vague) _____ Short (Specific) _____ 0 10	4
Evidence	Undocumented _____ Documented _____ 0 10	6
Aesthetics	Fragmentary Impression _____ Unified Impression _____ 0 10	10
Total		40

Figure 8 - NASA Space Odor Recreation Score

Chapter 6 Establishing a Theoretical Framework for Judging the Authenticity of Odor Preservation Projects

Results of Clevenger Authenticity Scale		
Project	Level of Authenticity Score 0 _____ 80 Low High	Rank
Japan 100 Best Landscapes	54 points	1st
Dennis Severs' House	54 points	1st
Jorvik Viking Centre	50 points	3rd
Morgan Library Recreation	47 points	4th
NASA Space Odor	40 points	5th
Skansen Open-Air Museum	34 points	6th
Colonial Williamsburg	32 points	7th
Tenement Museum	31 points	8th

Figure 9 - Results of Clevenger Authenticity Scale Chart

This thesis establishes a theoretical framework for judging the authenticity of odor preservation projects for the preservation field. By creating this system and placing the case studies within them, it has revealed their level of authenticity. The results of judging the eight case studies according to my Clevenger Authenticity Scale were surprising to say the least (Fig. 10). The Japanese

Ministry for the Environment 100 Most Fragrant Landscape List and the Dennis Severs' House tied for first place with scores of 54 points, the Jorvik Viking Centre placed third with 50 points, and my Morgan Library Olfactory Recreation placed fourth. Rounding out the bottom four places were the NASA Space Odor Recreation with 40 points, the Skansen Open-Air Museum with 34 points, Colonial Williamsburg with 32 points, and the Tenement Museum receiving only 31 points. I was personally stunned to see just how low the Tenement Museum scored on my authenticity scale. To understand why the case studies placed as they did it's important to look at all of their scores collectively.

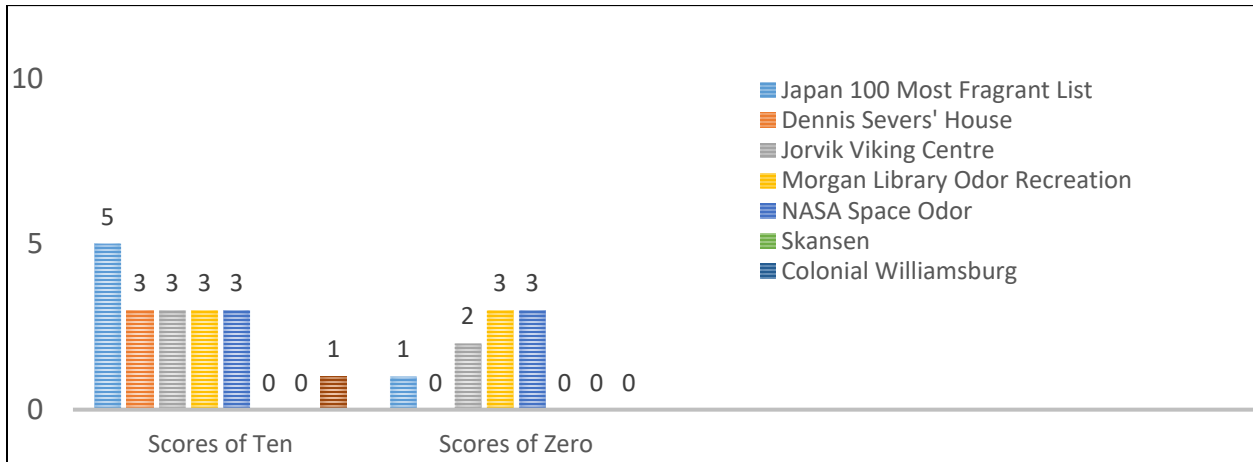


Figure 10 - Number of Times Each Case Study Scored a Ten and a Zero

When examining the scores of the top four odor projects, I noticed several common threads including the fact that they all scored perfect tens in the Intention category (Fig. 11). Each of them intentionally preserved the odor, it was not an accident. Both the Japanese 100 List and the Dennis Severs' House have several things in common including that they received tens in the Fabrication category because they were both using natural sources, tens in the Location category because they each were presenting the odors in-situ, and they both received high scores in the Sourcing category because they were not recreating an odor through chemistry but were simply maintaining the original source. The Jorvik Viking Centre and my Morgan Library Odor Recreation also have some commonalities including that we each received perfect scores in the Significance and Duration categories. We were preserving odors that were unfamiliar to the general public and we chose a specific event to convey to the public through the odors. I also found it interesting how the top four ranked projects also collectively received the most zero scores. Jorvik and my Morgan Library recreation each received zeros in Sourcing

because we used chemistry to create our odors. We each received zeros in Fabrication because we used artificial sources. My Morgan Library recreation received a third zero because the odor was presented ex-situ because it wasn't on the original site, it was at Columbia University. Finally, the Japanese listing received a zero in Significance because it was preserving familiar odors that were well known among the general public. The dichotomy of zeros and perfect tens in the top for projects is very telling. It shows that each of these projects decided to strive for the maximum level of authenticity in only three to four categories, instead of striving for all of them and falling short. I believe this is the key to achieving the highest level of authenticity according to my Clevenger Authenticity Scale. They were also not afraid to allow their odors to be offensive to people.

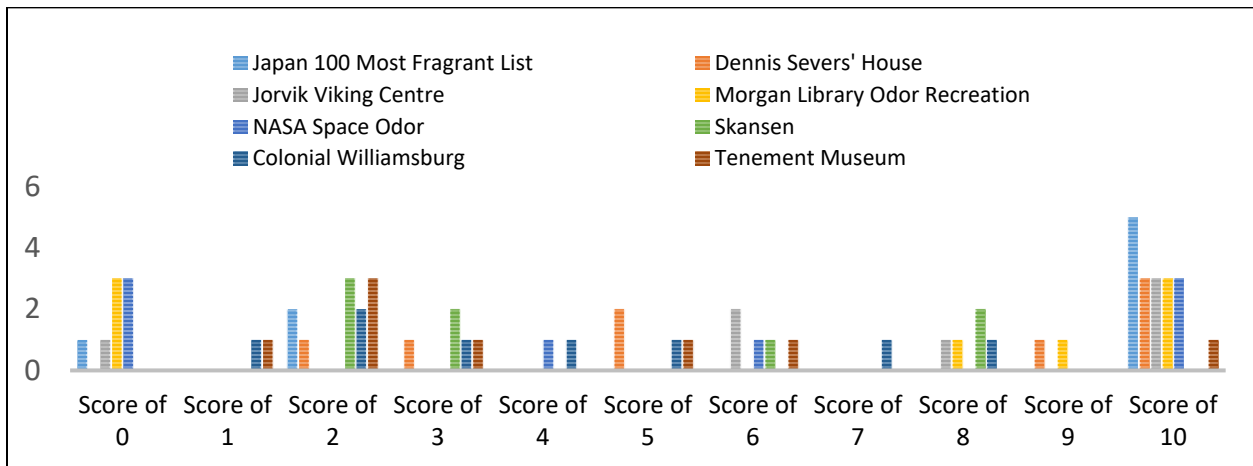


Figure 12 - Number of Times Each Case Study Received a Score for Each Number Value

Among the four lowest scoring projects, I noticed two key points. The first point was that collectively they only scored higher than a six in any of the criteria eight times (Fig. 12). Of those eight instances, only four of them were perfect tens while the top four projects received

fourteen. Three of the four tens which belonged to the bottom four projects were owned by the NASA Space Odor Recreation which was never even executed. Those three tens were for Significance, Intention, and Aesthetics. The Tenement Museum scored a perfect ten in the Location category because the building has not moved locations since it was built. I believe the key to their inauthenticity is found in two points. The first point is that I believe that these four projects strove to receive perfect scores in all of the categories and by doing so failed in all but four instances. I believe that this is the key to scoring the lowest level of authenticity on my authenticity scale. On average, the projects only scored 4.28125 in each of the categories while the top for projects averaged 6.40625. That is more than a 150% improvement. The second point is that I believe that their principle goal is to generate money, much in the same way theme parks execute their presentations to the public. It seems to me as if there was never any real intent to strive for authenticity, specifically with the Skansen Open-Air Museum, Colonial Williamsburg, and the Tenement Museum. However, all three of these three are quite popular and profitable. These places were designed to be family-friendly non-offensive attractions with the secondary objective of teaching people about their heritage. Since, the authentic odors of these places would likely be rather unpleasant, they were likely omitted so as to not deter visitors. In so doing, these places are not presenting people with their heritage but are instead presenting a narrative of their own design. These are not the only conclusions that can be discovered by analyzing these projects. Many other conclusions can be found outside of my Clevenger Authenticity Scale by simply examining the common traits among the odor preservation projects that I studied.

6.1.1. The Tenement Museum and the Morgan Library

The Tenement Museum and the Morgan Library, presented me with the various concerns that can arise from using odors in an indoor museum setting as well as different methods of executing the odors. Specific concerns include whether to use real smell objects such as beer and cigarettes, which could potentially attract unwanted pests that could damage historical artifacts and documents, or a synthetic chemical mixture with an air diffuser. In both scenarios, the institutions have to have a sufficient degree of control over their ventilation system or the odors could become too strong, deter visitors, and potentially become a permanent element of the soft surfaces within the exhibition space. The Tenement Museum's exhibition staff seemed to be terribly curious but hesitant about incorporating odors into their tours and Christine Nelson, the curator of literary and historical manuscripts, was excited about the possibility of collaborating with the Jorge, Andreas, me, and the other students in the Experimental Preservation course. However, both institutions declined to have the odors inside their spaces. When considering why they both chose not to incorporate odors, It's interesting to compare the Dennis Severs' House to the Tenement Museum and the Morgan Library because it does use real smell objects such as brussels sprouts, lemon slices, and cinnamon sticks, however the concerns of the three places are quite different. The Severs' House is a fictitious environment while the Tenement Museum and Morgan Library have collections of historic artifacts they are responsible for safe guarding. This means they must adhere to certain conservation standards, one of which prohibits vermin and insects which would damage the collections. The Severs' House is not beholden to the same standards because it's fictitious.

I created my Morgan Library odor with these concerns in mind. It seemed obvious to me from the beginning of the project that any odor released into the air would likely penetrate the soft surfaces of the furniture, the rugs, and the drapes and be almost impossible to remove without damaging the historic materials. The odor that I recreated was also designed to be unpleasant; the odor was meant to replicate body odor, sweat, colognes and cigars. With this in mind, I placed the odor intentionally inside a glass dome that an individual visitor would have to lift in order to smell the odor. The glass dome limited the exposure to the room and to the participant to a bare minimum, which never gave the odor enough time to truly adhere itself to the soft surfaces. My creation of odors at the Morgan Library was also in the context of an installation about smell, as opposed to an accoutrement to an installation about something else, and it was also temporary not permanent. Despite this, the Morgan Library decided not to showcase mine of any of the other creations from the course into their building and their reasons were never made clear.

The concerns were similar in both the Tenement Museum and the Morgan Library, although my Morgan Library odor was not installed at the library itself; neither project wanted to overly offend visitors, attract pests, or permanently affect the odor of the museum itself. The Tenement Museum is all about creating a neutral object friendly conservation environment, so it makes sense that they chose not to execute the odor. However, the Morgan Library chose to embrace the project even though the odors themselves were never put on display in the library. They were displayed prominently at Columbia University's GSAPP 2017 End of the Year

showcase in Avery Hall and they were the talk of the showcase.¹⁸⁶ This is an important distinction because GSAPP is not a museum, so it doesn't have to adhere to the same professional standards and practices as a museum.¹⁸⁷ When installing odors indoors one must be conscious of these concerns as well as the nature of the dispersal device, the air flow in the space, and how people are going to move through the space as this will also alter the air flow.

6.1.2. The Open-Air Museums: Skansen and Colonial Williamsburg

Incorporating odors into outdoor exhibitions is quite different from doing so in an enclosed setting. Skansen and Colonial Williamsburg have lessons to teach both in the chosen odors to present to the public and from the intent of the projects themselves. Both projects wanted to convey a sense of national pride in their respective nation's citizens and proclaim traditional values. Both showcase the "traditional" architecture of the time periods their authors chose. Skansen chose to showcase life as it existed in Sweden from 1574 to the mid-1800s with its both its architecture and the traditional crafts that were placed on display. Along with crafts, animals and plants that were native to the area were also showcased. The traditional crafts, which included glass blowing and baking, and the plants and animals were the primary sources of the odors that were present. Obviously, this is a mixture of pleasant and

¹⁸⁶ In total, six odor recreations were executed and displayed including mine, Andre Jauregui, and Jane Kang's. Andre recreated the odor of the room where J.P. Morgan's corpse was held before it was taken to be buried. The room was filled with roses, so he procured and distilled the essence of the rose and combined it with the chemical cadaverine, which smells like a cadaver. The chemicals were placed in glass testing tubes and allowed to spread throughout the room. While I and Andre focused on the men present in the library, Jane Kang chose to focus on the librarian named Belle da Costa Greene. She recreated two odors; her scent during the workday and her scent during the weekends when she went out to relax and attend parties. The odors were sprayed onto shawls that were popular at the time. Both Andre and Jane's odors were not contained however and dispersed into the open-air of the room and in the course of a few hours spread throughout the entire building; my olfactory recreation was contained and didn't release into the air.

¹⁸⁷

unpleasant odors, however since these odors are outside they are easily dispersed by natural wind currents and do not pose the same problem as if they are isolated inside an enclosed space.

Colonial Williamsburg is much like Skansen in that its authors also wanted to present a specific narrative to the public, that being the Colonial Era in North America. Goodwin and Rockefeller, like Hazelius at Skansen, chose a specific era but where Skansen was entirely created by moving authentic structures to a new locale, they redesigned an entire existing town. In most cases, the buildings that were erected were entirely recreated from scratch and often the recreations were inaccurate. Though, in my opinion both open-air museums are an authored interpreted fiction. Both places, especially Colonial Williamsburg have been heavily criticized for their questionable authenticity.¹⁸⁸

All preservation projects need to be thoroughly researched and analyzed before they are executed. Rockefeller and Goodwin failed in doing this with Colonial Williamsburg; they executed the majority of their restoration and preservation work from documents that were incorrect. At Skansen, Hazelius intentionally moved most of the historic buildings to his new site, ex-situ, in order to create his narrative which for contemporary preservationists is always a final option to preserve a building, not the first. However, both of these exhibitions were executed in the early days of the late nineteenth and early twentieth centuries and the

¹⁸⁸ Huxtable, Ada Louise. *Unreal America: Architecture and Illusion*. NEW YORK: W.W. NORTON, 1999.

preservation guidelines were different from today's guidelines. By contemporary standards these two projects would likely be considered failures, but for their time they were groundbreaking successes. I have to also mention that both sites utilize odors that emanate from their natural sources, including animals and plants, both of which generate waste. This waste obviously has to be cleaned on a regular basis or it will attract pests, so a regular maintenance plan is required in both cases and this can be costly. This regular maintenance also likely contributes to the inauthentic character of these sites, which would not have been maintained to such high standards in their own times. Smell in historic preservation has a long, evolving history, and we cannot judge the past by today's standards and I am creating a standard for judgement, so I believe that while my scale of authenticity can be applied to any odor preservation project, it should only be applied to contemporary projects.

While not necessarily historically accurate, both Colonial Williamsburg and Skansen were essentially attempting to capture the authentic smell of a period, which is the sole aim of both the Jorvik Viking Centre and the Dennis Severs House. Unlike the previous two case studies which had much in common, these two exhibitions differ greatly in both their goals and the execution of their odorants. Jorvik's goal is to convey to their audience a complete history of life in the Viking town of Jorvik during a typical day. This is done in three parts; the first is through the recreated excavation area, the second is done with the timecar ride through the recreated Viking village that features synthetic odors, and the third is through a traditional museum with artifacts encased behind glass. This is key because Jorvik physically separated the "real museum" from the stage set with odors. By doing this, they were able to comply with

conservation standards but they did sacrifice authenticity. Jorvik chose to utilize synthetic odors that are mechanically dispersed into the air. The result of which is exactly what the Tenement Museum feared would happen; the separate odors mixed in the air, became embedded in the soft surfaces, and spread throughout the entire exhibition space. This makes the museum somewhat uncomfortable to first-time visitors. Similar to my recreation at the Morgan Library, the odors are synthetic, which does raise concerns regarding their authenticity; in my authenticity scale, odors that are recreated through artificial means such as chemistry are considered to be the least authentic. In both cases, a particular narrative was trying to be conveyed to both myself and the audience, so we received a narrow perspective of history. However, the original historical artifacts were sampled and analyzed and an attempt was made to make the odors as close to the original historic smell objects as possible and I do appreciate that the odors were not all pleasant, as is the case with the Dennis Severs' House.

The Dennis Severs' House is an entirely different creature than Jorvik. The traditional concept of authenticity must be placed aside before one enters; in order for a preservation project to be authentic it must be maintaining the building or object in-situ or recreating or conserving it using the exact same materials and methods that were originally used. Visitors are made to understand before entering that what they are about to experience is entirely based on the fictional narrative that Dennis Severs created, so it should not be critiqued according to traditional standards because it would undoubtedly fail. However, the fictional elements are based on historical precedents and research. Also at issue here is the fact that the Severs' House is not a museum. As such, it is free to do things with smell that are simply not possible in

museums given current conservation practices. It attempted to avoid the problem concerning the authenticity of their odor sources by simply utilizing the contemporary examples of the historic smell objects. The smell objects are checked on a daily basis and if found to be in an advanced state of decay are immediately thrown away properly. Since the odorants are small in size, few in number, well dispersed in their rooms, and disposed of regularly their odors do not have a chance to have a lasting impact on the house itself. The Severs' House ran into the same problem that Colonial Williamsburg did which is that the food, the drinks, and even the human waste likely doesn't smell the same as it did centuries past due to human intervention. This is less of a problem for the Severs' House because their aim is not to be authentic but instead to convey a narrative that while based on fact is fictitious. One element that Jorvik and Severs' definitely have in common is that they are both attempting to make the narrative more "authentic". The Dennis Severs' House states perfectly clearly that the narrative for the exhibition is a fiction while myself and the other visitors at the Jorvik Viking Centre had to come to that conclusion on our own which did alienate me a little.

Whether an exhibition utilizes synthetic or genuine odorants in an exhibition that is attempting to convey the spirit of a time and place, it is of fundamental importance that visitors be made aware at the very beginning of what is and is not authentic. To this end, I think it would be advantageous for my framework to be shared with visitors to odor exhibitions. This would allow direct feedback to the installations and would suggest ways to improve their level of authenticity. Similar to the indoor exhibitions, it is important to be aware of the nature of the odorants, how they are dispersed, and in what concentrations. Equally important is to have

adequate ventilation for the odors so that they are not overpowering to visitors. The goal of preserving and using odors is to create a more authentic experience for visitors, not to distract them from it.

When I looked at odor preservation from a more macroscopic level, I discovered a number of interesting points. When I analyzed the Japanese government's recognition of odors as being cultural heritage, the Dennis Severs House's use of genuine odorants, and Skansen it seems that international projects seem to favor less artificiality and instead are drawn more toward real materials that have strong smells. I am making this distinction because the Severs' House is a self-proclaimed fiction and Japan drew an artificial distinction between pleasant smells and malodors. This bias is not about the reality of the smells of Japan, but it is instead a construct. The Japanese government officially chose to recognize one hundred different landscapes as being the most pleasant smelling and being culturally important. As such they chose to create legal measures to protect them so that future generations will be able to experience them.

In contrast, odor preservation projects in the United States seem to favor the artificial. This was the case at the Tenement Museum, with my Morgan Library recreation, and at Colonial Williamsburg. We all wanted to use artificially created synthetic versions of real odors in our exhibitions. This seems to be an attempt to have easier and better control of the odors themselves. The one aberration in the list of case studies is the Jorvik Viking Centre, however as was mentioned in chapter four, its designers drew their inspiration from Colonial Williamsburg.

As was mentioned in chapter three, Williamsburg's designers took many liberties with their exhibitions and seemingly omitted or altered many historical facts. They created a whitewashed version of the history of the Colonial era. They presented a very narrow even inauthentic version of the past.

In the modern western world, perfumes have been relegated from the sphere of the sacred to the market place. Controlling people's body odor has become a multi-billion-dollar enterprise and just like Hollywood creations, everything is artificial. Nearly everything that is sprayed onto or ingested by the human body has been created in one form or another by scientists in laboratories. Odors that could once only be found in nature can now be replicated in labs and sold to the public as authentic.¹⁸⁹ The very idea of creating an odor that cannot really exist through artificial means is the ultimate in inauthenticity. Such a creation would be the sole product of imagination and chemistry and would have no grounding in reality; the odor of space would be a fiction because the odor does not exist in space. The space odor could only exist in an Earth-like environment that is populated with air that could be inhaled by living animals. After analyzing the eight case studies in this thesis, I created a chart in order to visually

¹⁸⁹ Classen, Howes, Synnott, *Aroma: The Cultural History of Smell*, Routledge, London, 1994, 168.

assess the attempted/possible authenticity of the projects against their degree of sensory integration and the results were intriguing (Fig. 13).

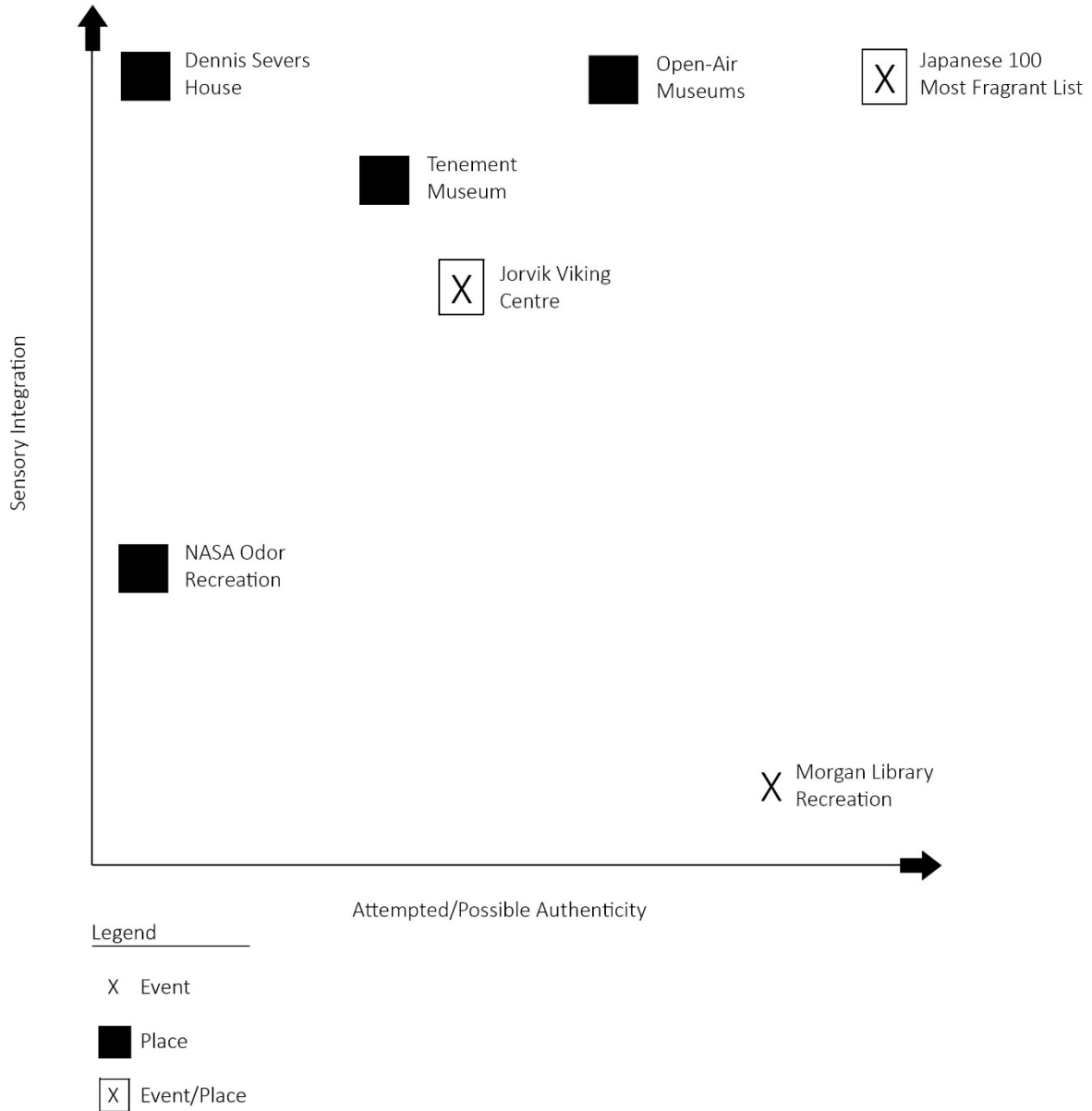


Figure 13 - Authenticity v Sensory Integration Chart

The chart seems to indicate that there is an inherent tension when exhibiting smell. Designers cannot seem to have authenticity and sensory integration unless the event/site still exists in real life. The Japanese 100 Most Fragrant List was the most authentic because nothing was being recreated. The natural environments and their sources still exist, so the legal measures enacted are simply preserving them. The two most polarizing odor preservation projects were my Morgan Library recreation and the Dennis Severs' House. While my project did score second highest in attempted authenticity, it scored lowest in sensory integration. This was due to the odor being contained in the glass dome. The Severs' House conversely scored amongst the highest for sensory integration but tied for lowest in attempted authenticity with the NASA Odor recreation. The open-air museums, Skansen and Colonial Williamsburg, scored second highest in authenticity because while the buildings being preserved are historic in nature, they were moved and altered. The Jorvik Viking Centre and the Tenement Museum are essentially tied because while each exhibition is based on historical evidence, much of what is actually on display has been altered to a certain degree. Also, the items that are displayed are done in much authored fashion and not in their in-situ state.

When considering authenticity in the preservation of odors, there are a number of key aspects that must be considered. The first being historical research. A thorough analysis of all relevant materials is a must for any project. Second, a clear smell needs to be decided upon by its author and the methods that were used to create that smell should be made aware to visitors. If this is not done at the beginning of the exhibition, then the projects level of authenticity will be put into question by the participants smelling the odor. Thirdly, regardless

of the odors being artificial or genuine, the exhibition designer must be very aware of how the smell will make its presence known in the given space. Whether in an enclosed space or an outdoor area, they must be aware of how the odors will move in the air and interact with the exhibition's set pieces. If the odor is in an outdoor setting and the air current is strong, the odor will be carried away and visitors will not be able to smell them. If the smell object is being presented in an enclosed space, people moving in the space will alter where the odor goes and the same goes for the ventilation system. The slightest air movement will alter where the odor goes and how strong it will be. If windows and doors are opened, the odor will be pushed and pulled inside and out of the space and if there is no air movement or ventilation, the smell will become overpowering and displeasing to visitors. For each installation, the designer of the odor and the exhibition must fully understand the space in which they will be presenting because each space will be different from one another and will present its own challenges.

The eight case studies presented in this thesis are very different from one another. Some of the odors were located inside buildings, some were located outside. Several of them were artificially created in a lab by engineers, while others were simply a natural byproduct of real-world materials expelling their molecules into the air and were simply incidental instead of intentional. In some cases the odors were even theoretical and could never be perceived in reality. Each of them were created by different people at different times, each of whom had their own agenda and in order to further that agenda, crafted their own narrative to convey that agenda to a large willing audience. However, they all utilize odors and use the Proust

Effect's proven ability to illicit strong odor memories to make their exhibitions all the more immersive and engaging to visitors, even if they are using an inauthentic version of it.

The case studies I chose represent the broad spectrum of cultural heritage projects that have been created that have decided to preserve and incorporate odors into their preservation in order to create a fuller sensory experience for visitors. Before the onset of any odor preservation project it is of the utmost importance to be honest with visitors and present your created narrative plainly and clearly in such a manner that they will be able to understand and appreciate it. When it does come to preserving odors, remember that foul odors should not be overly offensive as they can deter your target audience... unless that is the goal.

The main goal of my thesis was to create a framework for judging the authenticity of smell preservation projects. The point of the framework is to add credibility to the use of odors in preservation projects and disprove in the scholarly western cultural heritage discourse that such projects are all inauthentic. Odors can be used successfully in preservation if they are thoroughly researched, conscientiously and deliberately installed, and presented to a well-informed audience. According to my scale for judging the authenticity of an odor preservation project, in order to achieve a perfect score of eighty and achieve the highest level of authenticity eight specific criteria must be met. The odor must be emanating from a historic smell object that is being maintained and not recreated because only the original material will possess the historic odor. It must be an unfamiliar odor to the general public because it is the less known smells that are in danger of extinction. The odor must also be created from natural

materials and not artificial because those materials possess the true odors of the historic materials. It must be presented in-situ because if the odor is moved the original context is gone and the odor is no longer able to relate to its original environment. It must represent a specific short period of time because if a specific period of time is chosen, such as a time of day or an event that lasted for no longer than a day, it can be more easily researched as opposed to centuries or millennia where odors were changing from day to day. Also, the recreated odor must have been supportable by a high level of documentation because if there is not there is no way of knowing if what is created is authentic to the historic odor or if it is a fictitious creation. The odor itself must be perceivable in a unified manner because it is more easily understood and remembered by the mind. If it is presented in a fragmented manner, it will be difficult to remember the individual odors and nearly impossible to imagine how they would smell combined because the participant never smelled them in a unified state. Trying to assemble an impression of an odor through memory alone is different than attempting to do the same with images or sounds.

Appendix A

Cultural and Societal Attitudes and Practices Concerning Odors

a. The Ancient World

From the time of antiquity, since before the time of Rome, people have utilized scents. This was done not simply to attract potential husbands and wives but instead they were a key aspect to virtually all aspects of life. Scents were utilized in sporting events, parades, funerals, and even dinner parties.¹⁹⁰ They were not thought of as a secondary ephemeral matter; they were as fundamental to everyday life as food. A great deal of the information that we have about the role that scent played in the ancient world primarily comes from writers from Rome and Greece.¹⁹¹ Virtually every aspect of Roman life was scented. In classical poetry, the Graces were said to be wearing clothing scented with, “crocus, hyacinth, and blooming violet and the sweet petals of the peerless rose.¹⁹²” Since the ancients obviously did not have the ability to create artificial odors the way we do now, all of their scents were from homegrown plants and natural minerals. As such they had great insight into how different odors work differently in different locations and how the weather can affect the olfactory system. In the *Natural History* written by Pliny, it was written that, “The smell of some plants is sweeter at a distance, becoming fainter as the distance is lessened; for instance, that of the violet. All perfume however is stronger in spring, and in the morning; as the dew draws near to noon it grows weaker.¹⁹³”

¹⁹⁰ Classen, Howes, Synnott, *Aroma: The Cultural History of Smell*, Routledge, London, 1994, Ch. 1.

¹⁹¹ Ibid.

¹⁹² Athenaeus, *The Deipnosophists or Banquet of the Learned*, C.D. Yonge (trans), London, Henry G. Bohn, 1854, vol. 3, bk. 15, 1090.

¹⁹³ Pliny, *Natural History*, vol. 6, bk. 21, 187.

The cultures of the ancient Middle East had a place for odor too. It can be said that in many respects the odor traditions of the Middle East were more intricate and well defined than the western world of the time. The most well-known Egyptian perfume called Kyphi was a concoction of sixteen different ingredients. It was offered to the sun god Re as he flew into the sky every evening by the people who lived in the city of Heliopolis.¹⁹⁴ The odor was said by the Greek historian Plutarch to have properties that relived anxiety, brightened dreams, and healed the soul¹⁹⁵. Scents were available in a wide variety of forms including incense, oils, toilet waters, dry powders, and thick ointments. Interestingly, the English word “perfume” literally translates “to smoke through.” Often in the ancient world perfumes were not a liquid to be sprayed on the body, as they are today, but instead they were a smoke that perfumed the air with a pleasant odor.

Our ancient ancestors took perfumes seriously. For the great state feasts and entertainments of the time, the royalty of the time had perfumers employed to their courts to prepare scents. The sheer number of flowers and perfumes that were employed on occasions such as these was remarkable. The King of Persia, Darius 3rd for instance, had forty-six garland makers and fourteen perfumers.¹⁹⁶ It wasn't just the places and things that were extravagantly scented but it was also the people. Today, a person typically will have many perfumes or

¹⁹⁴ Pliny, *Natural History*, vol. 4, bk. 13, 101-109.

¹⁹⁵ J.G. Griffiths (ed.) *Plutarch's 'De Iside et Osiride'*, Cardiff, University of Wales Press, 1970, Ch. 80, 247.

¹⁹⁶ Athenaeus, *The Deipnosophists or Banquet of the Learned*, C.D. Yonge (trans), London, Henry G. Bohn, 1854, vol. 3, bk. 13, 970.

colognes but will only wear one at a time. In the ancient world people would utilize a number of scents across their entire body. Antiphanes wrote about this custom of scenting various parts of the body. He described a rich Greek who “steeps his feet and legs in rich Egyptian unguents; his jaws and breasts he rubs with thick palm oil, and both his arms with extract sweet of mint; His eyebrows and his hair with marjoram, his knees and neck with essence of ground thyme.¹⁹⁷” This is not so much perfuming one’s body as it is wearing an olfactory outfit.

It wasn’t just the people and the special occasions that were scented but the cities and neighborhoods all had their own unique odors just as they do today. Rome was a cornucopia of odors. Each locale within the city had a distinctive scent. The gymnasium smelled of sweat and oil, the streets smelled of trash and the various kinds of food being cooked and sold by street vendors, and the temples smelled of incense.¹⁹⁸ In fact, odor was such an important aspect of the temples that not only were they scented with incense on the interior volume but perfumes were mixed directly into the mortar occasionally. “At Elis there is a temple of Minerva in which, it is said, Panaenus, the brother of Pheidias, applied plaster that had been worked with milk and saffron. The result is that even today, if one wets one’s thumb with saliva and rubs it on the plaster, the latter still gives off the smell and taste of saffron.¹⁹⁹” Since each locale of the city was so distinctly scented, a person could actually navigate their way by smell alone. The odors created an olfactory map. Scents were equally important in the domiciles of the ancient world.

¹⁹⁷ Ibid, bk. 15, 1101.

¹⁹⁸ Classen, Howes, Synnott, *Aroma: The Cultural History of Smell*, Routledge, London, 1994, 17.

¹⁹⁹ Pliny, *Natural History*, vol. 10, bk. 36, 141.

Cushions were often filled with dried herbs, baths and pool water were perfumed, and clothing was perfumed and stored in chests that were filled with various pleasant odorants. Even animals were scented. The more well-to-do households would perfume their dogs and horses with their favorite scent. One instruction for a dog was to oil his feet with Megallian.²⁰⁰

Fragrance was a fundamental aspect of public entertainment as well. Ptolemy Philadelphus, the Egyptian King in the third century BC held a large parade in Alexandria and it featured young men carrying frankincense, saffron, and myrrh carried on golden dishes, camels loaded with spices, golden-winged depictions of Victory featuring incense burners, a giant figure of Bacchus pouring wine, and too many floral decorations to count.²⁰¹ This event was quite spectacular to everyone who attended, not simply because of the extravagance, but because all of this was taking place in the middle of winter. Collective perfuming in this manner was important in that it served not only to entertain the people but it created a sense of pride in the community. Of course, odors were also utilized as a way to divide and categorize people. An obvious class division was the rich and the poor. The wealthy could obviously afford to purchase oils, ointments, and incense to perfume themselves and their homes but the poor could not. Distinctions were also made between the various trades among the working classes such as fishmongers, tanners, and fullers. These vocations dealt with strong pungent odors and as such they were considered disgusting. Perhaps the most obvious distinctions were made

²⁰⁰ Athenaeus, *The Deipnosophists or Banquet of the Learned*, C.D. Yonge (trans), London, Henry G. Bohn, 1854, vol. 3, bk. 12, 885.

²⁰¹ Athenaeus, *The Deipnosophists or Banquet of the Learned*, C.D. Yonge (trans), London, Henry G. Bohn, 1854, vol. 1, bk. 5, 313-320.

between men and women. Women were considered in Rome to be second class citizens and even though men and women generally used the same odorants, attar of roses, oil of cinnamon, myrrh, and spikenard, there was a sentiment among many that perfume should only be worn by “frivolous females.”²⁰² It was an indication of effeminacy and weakness for a man to smell the same as a woman. Young women were considered to have a pleasant scent while, prostitutes, ugly and older women who had lost their youthful appearance were associated with foul smells. In *Mostellaria*, Martial describes an older woman as possessing the foul odor of a goat²⁰³ and the foul odor attached to prostitutes reflected both the unhygienic working conditions and their low status in society. Although, high-born and/or more attractive prostitutes had the higher rank of courtesans and were thought to be more pleasant smelling. This really speaks to a kind of ingrained societal conditioning more than it speaks to the actual literal odors of the individuals.

Along with odor being a key component to entertainment and social ordering, it also was thought to play a prominent role in medicinal practices. The poet Alexis wrote, “The best recipe for health is to apply sweet scents unto the brain.”²⁰⁴ Scents were regarded by the ancient world to be a powerful form of medicine and it was considered to be such either absorbed by breathing the scent in or through direct absorption through the body. Applying a perfume of rose oil directly to one’s chest was thought to be advantageous to the heart and

²⁰² Classen, Howes, Synnott, *Aroma: The Cultural History of Smell*, Routledge, London, 1994, 36.

²⁰³ Martial, *Epigrams*, vol. 1, bk. 3: 93, 223.

²⁰⁴ Athenaeus, *The Deipnosophists or Banquet of the Learned*, C.D. Yonge (trans), London, Henry G. Bohn, 1854, vol. 3, bk. 15, 1098.

applying it to the forehead while one has been consuming wine, was thought to be able to counteract the deleterious intoxication that was caused by the alcohols' fumes that arose to the head. *Natural History* by Aliny mentions many perfume remedies including using Anise to relieve hiccoughs and sleeplessness. Also, mint was believed to refresh the soul, pennyroyal was used to protect the head from chills and overheating and thirst. For bodily wounds, perfumes were applied on the body itself. Megalium was used to relive inflammation and a mixture of wine and myrrh was used to treat burns. As we understand today, these two remedies may actually have worked as they would have acted as germicides and in fact encouraged healing.²⁰⁵

Understandably, our distant ancestors were gravely concerned about the odor of death. Immediately when thinking about ancient societies and death, one immediately is reminded of the Egyptians. Mummification, which was made famous by the Egyptians, and embalming and censing the corpses of their dead were methods of preventing the decay of the body and replacing the foul odor of death with the pleasant scent of immortality. The gods of Egypt were thought to actually sweat incense so, by using incense on their dead they believed that they were making their dead godlike in a very literal manner. It's inscribed that one dead king stated, "My sweat is the sweat of Horus, my odor is the odor of Horus."²⁰⁶ In fact, the Egyptians believed that the smoke created by burning the incense could be utilized by the dead to climb

²⁰⁵ Pliny, *Natural History*, vol. 6, bk. 20-3

²⁰⁶ Nielson, *Incense in Ancient Israel*, 8.

up to the gods themselves.²⁰⁷ In Greece and Rome, the bodies of the dead were washed and perfumed. The body was then laid on a couch with flowers and in the house incense were burned. The corpse was then carried in a procession down the streets and burnt. The pyre consisted of fragrant woods and incense. This entire ritual is modeled after the phoenix and its death and resurrection process whereby the bird of perfumes cremated itself on a pyre of spices when it died and then reborn from its own ashes. The process is truly reminiscent of the process of cremation itself; the dead are purified of their bodies, made into pure essence, and made ready to exist in the ethereal afterlife. When the body was simply buried, perfumes were sprinkled in the tomb itself. On visits after this point, offerings of perfumes, food, and drinks were brought to the grave sites.²⁰⁸

Perfumes and incenses were so greatly integrated into the various funeral rights for several reasons. One obvious reason was to attempt to mask the terrible odor of rotting flesh, as the odor itself was considered to be detrimental. Another reason was to make the dead agreeable to the various gods. Another was to give the dead sweet pleasant scents, as people believed that the dead enjoyed agreeable perfumes as much as the living.²⁰⁹ It's at this point in the ancient world where scent is found to be at its most influential and highest regard in the "educated" circles of the world. It's after this point, beginning in the fourth century that perfumes, incense, and similar scented materials begin to lose their high station in virtually

²⁰⁷ Ibid, 9.

²⁰⁸ On Roman funerary rites see Toynbee, *Death and Burial*

²⁰⁹ Lucan, *Civil War*, vol. 1, bk. 7, 431.

every aspect of society and become relegated as ephemeral and sight takes the crown among the senses. This fall can be attributed to both the fall of Paganism and the rise of Christianity and Christianity's fall and the rise of science.

b. The Middle Ages to Modern Day

In the fourth century, the use of perfume started its fall from favor in the Roman Empire with the rise of Christianity. Incense were deemed to be linked to idolatry or as the Church Father Origen called it “food for demons.”²¹⁰ There was a strong reaction against “pagan sensuality” and it became so fervent amongst Christians that many stopped bathing and were proud to say that they smelled of “honest” sweat and dirt. This was perceived as natural and as the way God made man.²¹¹ Also, incense and perfume were perceived as a means to people's innate corruption and mask it with artificial sweetness.²¹² This rejection of incense is understandable given the fact that many early Christians were executed for refusing to burn incense for the emperor.²¹³ This was a standard method of testing royalty to Rome. That being said, like many of the ancient traditions, perfumes could not be eradicated completely from society. Their hold was simply too deep and too strong in people's minds. Instead, Christianity incorporated incense became an acceptable symbol of prayer and a perfectly acceptable aspect

²¹⁰ E. Atchley, *A History of the Use of Incense in Divine Worship*, London, Longmans, Green & Co., 1909, 85.

²¹¹ T. McLaughlin, *Coprophilia or A Peck of Dirt*, London, Cassell, 1971, 11.

²¹² Wilson, *Plague Pamphlets*, 29.

²¹³ Graeme Clarke (2005). *Third-Century Christianity*. In *The Cambridge Ancient History, Volume XII: The Crisis of Empire*, edited by Alan Bowman, Averil Cameron, and Peter Garnsey. Cambridge University Press. ISBN 0-521-30199-8; W. H. C. Frend (1984). *The Rise of Christianity*. Fortress Press, Philadelphia. p. 319. ISBN 978-0-8006-1931-2.

of daily Christian rituals by the sixth century. Fragrant odors including incense and flowers are now parts of many different Christian legends.²¹⁴ A prime example can be found in the concept that that which is holy smells sweet and/or good. This is Christianity's way of incorporating some of the old pagan ideas into itself in order to win over more followers. As in earlier traditions, the gods smelled sweet or similar to incense. Since God now was perceived to smell good, naturally the Devil now smelled bad.²¹⁵ So, connotations of good and evil were now linked to good and bad smells. This became quite a problem in society at large, especially in the pre-modern Western world where Christianity took root.

People living in cities were constantly confronted with terrible smells of waste and rot and because there were now evil connotations connected to bad smells, it often generated religious and moral dilemmas. This was particularly problematic in cities, as Europe's population began increasing in the sixteenth and seventeenth centuries. The streets of European cities were less streets and more of a public dumping ground and cesspool. Blood from barber-surgeons, human and animal waste, dead animals, and the remains from food could all be found on the streets of any city. The Industrial Revolution in the eighteenth century only made things worse from a sanitation and health perspective. With it came the creation of industrial waste in the form of smog generated by coal plants which poured soot into the air and generated smoky and sooty fogs. This naturally begs the question, why did the people in Europe tolerate existing in such horrible conditions? It is true that constant exposure to an odor over a

²¹⁴ E. Atchley, *A History of the Use of Incense in Divine Worship*, London, Longmans, Green & Co., 1909, 77-125.

²¹⁵ Classen, Howes, Synnott, *Aroma: The Cultural History of Smell*, Routledge, London, 1994, 29, 42.

long period of time does result in the odor receding but there are plenty of recorded complaints about it. They were tolerated for a number of reasons. Before the Industrial Revolution, bad smells were created by organic waste and this was perceived to be a part of life that could not be avoided. Also, people had no control over industrial waste and the owners of the factories didn't want to spend money on reforming the system. Legal measures were also ineffective because they focused too much on making it the individual homeowners' burden. Another big reason is that after the Industrial Revolution took hold, most people were simply too busy working during the day and had no time to deal with cleanliness. Some foolish people actually believed the smog to be beneficial to health and the general wellbeing. Hogg who wrote *London As It Is* stated, "many persons think that the smoke is beneficial rather than prejudicial to health in London, on the idea, probably, that it covers all other offensive fumes and odors."²¹⁶ However, the Industrial Revolution didn't just create more waste and accompanying odors but also created the means by which to fix the problem which included sewers, water treatment, and plumbing. The ability to solve the problem overlapped with scientific advancements that understood such waste to be a health crisis, not just a nuisance. With such terrible odors abundant in cities people now simply believed that Earth was a corrupted beyond repair and that in Heaven there would only be pleasant scents.

With such unsanitary conditions running rampant throughout European cities, plagues became unavoidable. Today we know that it is a disease that is spread by rat fleas carrying

²¹⁶ Hogg, *London As It Is*, 229.

plague germs, however the most widely accepted cause of the plague was the pungent odor caused by putrefaction. People believed that the air itself was carrying the disease and it took the form of a foul odor. This concept today is known as the miasmatic or miasma theory. The theory itself dates as far back as the time of the Greeks and Romans, fourth century B.C.E.²¹⁷ The famous *Ten Books of Architecture* written by Vitruvius states as such when it warns about the foul air from marshes and pestilential air. However, the term miasma was not used.²¹⁸ The word miasma was not introduced until the seventeenth century. It seems to have been created, or at least made popular by Giovanni Mari Lancisi. His publication *De noxiia paludum effluvis* was cited by physicians later in time as the source of the term miasma, or “miasm” as he called it.²¹⁹ The Medical Faculty of the University of Paris in 1348 were reported as stating that to combat the putrid air fragrances and incense should be utilized because they, “hamper putrefaction of the air, and removes the stench of the air and the corruption [caused by] the stench.”²²⁰ Some of the more commonly utilized odorants were rosemary, vinegar, gunpowder, incense, juniper, and many other pleasant scents. Massive bonfires were also started that featured aromatic wood in an effort to purify the air.²²¹ It was also believed that the nose gave direct access to the brain. Therefore, the best way to administer medication was through the

²¹⁷ Last, John M. 2001. “Miasma Theory.” *Encyclopedia of Public Health*. Ed. Lester Breslow. New York: Macmillan Reference: 765.

²¹⁸ Vitruvius. 1960. *The Ten Books on Architecture*. Translated by Morris Hickey Morgan. New York: Dover Publications, Inc.

²¹⁹ “Malaria” comes from “mala aria” meaning “bad air” (“Miasma Theory.” *Encyclopedia of Public Health*. Ed. Lester Breslow. Thomson Gale, 2002. eNotes.com. 2006. <http://health.enotes.com/public-healthencyclopedia/miasma-theory>; Charles Earl Johnson (1851), “[...] have not medical men, from the days of Lancisi down to the present time, used the term miasm or malaria, as a sort of convenient cloak for covering up their real want of information upon this subject [...]?” , 10.

²²⁰ Medical Faculty of the University of Paris. 1348/2004. *Compendium de epidemia*, Book 2. Translated by Jeffrey Williams. In *The Black Death*, by Joseph P. Byrne. Westport, CT: Greenwood Press: 160.

²²¹ F.P. Wilson, *The Plague in Shakespeare’s London*, Oxford, Oxford University Press, 1927, 5.

nose. In this way it would act directly on the brain and the spirit. Also, the spirit was thought to be similar to a vapor or an odor, so smell was perceived as the best way to heal ailments.²²²

Perfumers and florists did very well during this time. The plague created an incredible level of anxiety in society. People often wanted nothing more than to stay in their homes protected by incense and herbs, isolated from the deadly odors of the European streets. Simultaneously, it reinforced ideas about odors possessing properties of good and bad and life and death.

Finally, in the mid nineteenth century, large, wide-scale programs were implemented to combat the unsanitary conditions in Europe. It was spurred into action by the ever-increasing number of deaths in cities, cholera outbreaks, and hot summers that led to the putrid stench in the cities to become intolerable.²²³ A fundamental discovery was made in the nineteenth century that forever changed cities – smells do not spread diseases, germs do. This led to proper drains and sewer systems which ended organic waste pollution in cities and the smells attached to them. This only left the industrial stench in the air which the public no longer tolerated and eventually led to government control. Pungent odors were no longer considered to be an unavoidable part of living; they were now considered to be a threat to public well-being and worthy of being purged from society. Now that foul odors had been eliminated from the streets people now focused on themselves and their own personal hygiene which led to a kind of hygiene revolution. As technology advanced, baths became readily available in the homes of

²²² E.R. Harvey, *The Inward Wits: Psychological Theory in the Middle Ages and the Renaissance*, London, The Warburg Institute, 1975, 27; R. Palmer, 'In Bad Odor: Smell and Its Significance in Medicine from Antiquity to the Seventeenth Century', in R. Porter and W.F. Bynum (eds), *Medicine and the Five Senses*, Cambridge, Cambridge University Press, 1993, 34-5.

²²³ Corbin, *The Foul and the Fragrant*, 22.

the upper and middle classes, however the poor still did not. As education and technology improved so did cleaning habits though. During this time, an interesting concept re-emerged; perfumes were a bad thing. The idea was that if one simply cleaned oneself properly then no perfume would be necessary. Thus, perfumes were believed to be a way to mask people's unhygienic practices and accompanying foul body odors. Perfumes were also perceived by many to be unhealthy because they clogged the body's pores. The idea that came from this time was best stated by Edward Chadwick when he stated that "all smell is disease."²²⁴ Perfumes and odorants finally left the shelves of pharmacies and went to the cosmetic counters.

Interestingly, the French Revolution also played a large part in society's growing distaste for perfumes. The revolution was all about the extravagance of the aristocracy, who had a great affection for perfumes because they allowed the upper class to distinguish themselves from the poor. The poor, who were perceived as smelling terrible revolted, came to believe that perfumes were an extravagance due to their ephemeral nature. They believed that it was akin to throwing your money into the wind. Perfumes were now considered wasteful. Perfumes were still used outside of France; however, they were toned down. Whereas in the past, men and women wore the same scent, now men really didn't use them and women's scents became more floral and light. Companies decided to capitalize on this and started making floral scents exclusively for women and to a much smaller extent marketed sharper scented colognes and

²²⁴ P. Stalybrass and A. White, *The Politics and Poetics of Transgression*, Ithaca, N.Y., Cornell University Press, 1986, 139.

aftershave to men. Thus, a divide was created between the sexes using scent as the wedge. In nineteenth century society, women were thought of as frivolous but pleasant like flowers and because perfumes were now seen as frivolous they were seen as perfect for frivolous creatures, like women. According to the gender conceptions of the time, floral scents were considered feminine and wood scents were masculine.²²⁵

The sense of smell lost a great deal of its power due to the Industrial and French Revolutions as well as the growing field of empirical science. The Enlightenment also devalued it as a method for communicating and attaining information. People were also now aware that odors had no healing powers. Sight, had become the king of the senses as it became the greatest sense for attaining and conveying discoveries and knowledge. Sight was the sense of science. Sight therefore became associated with men – who were scientists, politicians, and pioneers. Smell became associated with sentiment and emotion – these concepts were already connected to women. Smell was also believed to be the sense of animals and the savage. Similar to women, they were used and considered less by the Western culture of the time.²²⁶ Even the First World War had a part in the devaluing of the sense of smell in society. Nostalgia, and sentimentality, which were connected to smell, were now believed to be absurd and outmoded concepts in the fast-pace and harsh ever modernizing world. World War 1 marks the beginning of the modern era of olfaction. It is during this era that the deodorization of public

²²⁵ Classen, *Worlds of Sense*, 87-93.

²²⁶ Classen, *Worlds of Sense*, 31.

and private spaces, the restriction of odorants to personal use only, and the general public devaluing the power of the olfactory system begins.²²⁷

Smell has no vocabulary of its own, it is difficult to measure empirically, and it's difficult to recreate. All of these points were used by science to devalue the sense of smell. Darwin went so far as to propose that human beings lost a greater acuity of smell due to the process of evolution.²²⁸ It was therefore implied that any study into the sense of smell was movement backwards instead of forward. Sigmund Freud argued that sight overtakes smell as one matures and develops. Any grown adult who emphasizes smell over sight is regressing backward or their psychological development is frozen in childhood.²²⁹ There are in fact entire civilizations that utilize the sense of smell in similar ways to how the west uses sight. Both the Andaman Islanders and the Dassanetch people of Ethiopia actually use odors found at distinct points throughout the year to order time. For the Andaman, they focus on plants that bloom at regular intervals throughout the year and for the Dassanetch, they use the fresh smell of new plant growth of the rainy season and the decaying burning smell of the dry season to measure time.²³⁰ Many societies even order themselves by their distinctive odors such as the Suyu Indians of Brazil. There are three categories in order of the stronger smelling the class, the more potentially dangerous its members are to society. They are bland-smelling (adult men, small mammals and birds, most fish, innocuous plants), pungent-smelling (old men, old women,

²²⁷ Ibid, 34-5.

²²⁸ C. Darwin, *The Descent of Man and Selection in Relation to Sex*, New York, D. Appleton, 1898, 17-18.

²²⁹ S. Freud, *Civilization and Discontents*, J. Strachey (trans), New York, W. W. Norton, 1961, 46.

²³⁰ U. Almagor, 'The Cycle and Stagnation of Smells: Pastoralists-Fishermen Relationships in an East African Society', *RES*, 1987, vol. 14, 106-21.

large mammals, macaw, certain amphibians, medicinal plants), and strong-smelling (adult women, children, carnivorous mammals and birds, harmful plants).²³¹ Interestingly, the concept of a vocabulary for smell which still alludes western society today does exist within many non-western societies. The Kapsiki of Cameroon, the Serer Ndut of Senegal, the Desana of Colombia, and the Bororo of Brazil all have distinct vocabularies created for odors. Each one is unique to that culture and is steeped in their individual history.²³²

It's interesting to ponder just how much one society can differ from another and how societies' perception can change over time. The western world is perhaps the most astonishing. Whereas in the past, the upper class and the elite of society flaunted their power by possessing very personal and costly odors now that science has consumed the world and the public and private spheres have become places that are meant to be odor neutral, the powerful rule the world from a place of odorless, impersonal abstraction. On the contrast, the powerless living on the edges of society or simply the lower classes are perceived as possessing distinct odors. This can be said of immigrants, the poor, ethnic groups, and even women.

Perfumes have attained a state of frivolousness and thus anyone who uses them are considered foolish. The book *Aroma* adeptly states, "Having a noticeable odor of any sort (with the exception made in the case of women, who are allowed on occasion to wear perfumes) has

²³¹ A. Seeger, *Nature and Society in Central Brazil: The Suyu Indians of Mato Grosso*, Cambridge, Mass., Harvard University Press, 1981, 93-120.

²³² Classen, Howes, Synnott, *Aroma: The Cultural History of Smell*, Routledge, London, 1994, 109-13.

traditionally been considered somewhat disreputable in the twentieth century west, and particularly in the United States.”²³³ The ideal utopia for Western society is presented as one that is odorless. Hollywood presents them to use all the time in the form of movies that exist only in the realm of sight and hearing. This is interesting because modern forms of visual representation in the west such as photography and film cannot convey smell whereas religious ceremonies, processions and gatherings can. This is perhaps another reason for the deodorization in the west. In the modern world perfumes have been relegated from the sphere of the sacred to the market place.

When comparing the sense of smell and our present moment, it is striking to discover just how many similarities they have in common. Classen, Howes, and Synott state in *Aroma: The Cultural History of Smell* that postmodernity is characterized by several factors including an emphasis on the personal and local, the loss of faith in universalist myths, such as Christianity, the breakdown of social structures, the strength and emphasis on the imitations and artificial creations dominating the original, the past being irrelevant, the future being uncertain and the present being predominant, and finally the great driving power of capitalism and its accompanying consumerism.²³⁴ Smell personifies all of these aspects. Firstly, smell is very much ethereal in that it can both cross borders and not easily be contained or defined. Also, odors are by their very nature personal and local entities, we are unaware of how the past truly smelled, and the odors of today will not last into the future because they cannot be preserved...yet.

²³³ Classen, Howes, Synnott, *Aroma: The Cultural History of Smell*, Routledge, London, 1994, 168.

²³⁴ *Ibid*, 203.

Although we do create fakes of the originals. Scientifically generated odors are virtually everywhere in the contemporary western world in the form of perfumes, colognes, cars, houses, stores, and too many other locations to mention.

The fact that we can create or even recreate scents is an intriguing notion, especially when coupled with the field of historic preservation and cultural heritage. In recent years many exhibitions have been created by artists and preservationists that seek to recreate the scent of a long-gone place, event or time. How can this possibly be accomplished with any real level of authenticity? Is the scent that is created truly authentic to the event, place, or time?

Appendix B List of Projects That Utilized Odors

Skansen Open-Air Museum (1891)

- There are nearly six hundred open-air museums in total on the planet as of 2018, Skansen and Colonial Williamsburg were chosen to be examined because of their popularity and notoriety.²³⁵

Disneyland (1923)

Colonial Williamsburg (1927)

Book from the National Trust's Knole House (1940's)

Leonardo Bonzi's *Behind the Great Wall* (1959)

Mike Todd Jr. and Jack Cardiff's *Scent of Mystery* (1960)

Dennis Severs House (1979)

John Waters *Polyester* (1981)

Jorvik Viking Centre (1984)

Tenement Museum (1988)

Skeel and Skriver's *Babylon* (1996)

Sissel Tolaas' Smellscapes (Early 2000's and ongoing)

Japanese Ministry for the Environment's 100 Most Fragrant Landscapes List (2001)

Terrence Malick's *The New World* (2006)

Reg Vardy Gallery's *If Ever There Was* aka *Impossible Smells* (2008)

Jorge Otero-Pailos' *Philip Johnson Olfactory Recreation* (2008)

NASA's Space Odor Recreation (2008)

²³⁵ "AEOM - Open-Air Museums." International Council of Museums - ICOM. <http://icom.museum/the-committees/affiliated-organisations/affiliated-organisation/association-of-european-open-air-museums/>.

Nadia Wagner's *Recent addition to the permanent collection* (2009)

Sephora Sensorium Pop-Up Perfume Museum (2011)

Carlos Huber's Scent Dinner (2012)

Smell and the City aka Smell-walks (2012)

The Museum of Art and Design's *The Art of Scent: 1889-2012* (2012)

The California College of the Arts MAAD in History, Theory, Experiments' *Urban Olfactory*
(2014)

Miriam Simun's *Agalinis Dreams* (2014)

The Metropolitan Museum of Art's *Multisensory Met* (2015)

National Museum of American History's *Object Project* (2015)

ANAMED Gallery's *Scent and the City* (2016)

ITP Museum of Smells (2016)

Le Grand Musée du Parfum (2016)

Cecilia Bembibre and Matija Strlič's Historic Book Odor Wheel (2017)

Anicka Yi's Guggenheim exhibition *Life is Cheap* (2017)

Somerset House's *Perfume* exhibition (2017)

Siemens and Stedelijk Museum Amsterdam's *#artSmellery* (2017)

Van Gogh Museum's *Feeling Van Gogh* (2017)

Aftel Archive of Curious Scents (2017)

Columbia University's Morgan Library Odor Recreation (2017)

Brookfield Place's *Museum of Feelings* (2018)

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