A Familiar Space
an exploration of background noise and aural architecture

by

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Part One: Background History

Preface

The summer before my senior year at Wesleyan, I bought a Zoom H1 Handy Recorder. Excited to experience New York City for the summer, I carried it around with me everywhere I went, recording the tiny chirping sounds of dropping pebbles on the sidewalk to the longer forms of entire subway rides home. When I would return to my apartment each night, I would listen through my daily findings, recalling particular moments throughout the day, and discovering things in my recordings that I did not pick up on at the time. As the summer went on, I became more familiar with the Zoom H1. Most importantly, what I learned that summer as I recorded my life was how to listen.

I used these recordings in the compositions I was working on at the time in Logic Pro 9, mostly to add texture and percussive elements to my pieces. By combining these recordings with my instrumental tracks, I began to understand more about the roles of background noises in spaces and how sound may be perceived differently depending on how rooms and spaces framed them. I realized that my recordings on the subway provided my Logic compositions with a different texture than the recordings of me walking down the street outside, or sitting in my apartment. I found this relationship intriguing and wanted to investigate it further.

As the summer came to a close, I began to consider the idea of exploring background noise through a project during the school year. Having no knowledge of the field, I started to come up with ideas about how I could play with the sounds to
alter the way inhabitants of a room perceive that space. I wanted to know how these varying sonic environments could alter how we interact with a space. How does the architecture contribute to the sonic textures in the room? How do the items in the room affect how one might navigate the space? How do these same items also alter the way sound travels in the space? These are all questions that I aimed to explore in my own installation.

My first idea was to recreate various rooms, stripping them down entirely so that all that was left were the walls, and noise, which I would play through speakers placed throughout the room. The noises in each room would represent sounds that I associated with particular spaces – kitchen, bedroom, bathroom, etc. It was my intention that the noises alone would be able to convey a feeling in the space that allowed for the observers to associate it with a room they were familiar with.

Upon coming up with this idea, but having little experience with sound art or experimental music, I contacted Professor Matthusen, asking if she would advise me on this project. We began a conversation about sound and space, and I was introduced to the world of sound art. There was so much more to this field than I initially imagined. Overwhelmed, I found myself wanting to change my topic every time I read more about a particular artist or piece of work.

Having spent my past three years at Wesleyan as a student of music, it was strange that I had almost completely overlooked the importance of Wesleyan in the experimental music scene. I was not aware of Alvin Lucier’s work, and did not know anything more about John Cage than that he was famous for creating a silent piece of
music. This was a field that I knew almost nothing about, but I suddenly found myself completely intrigued by it. I knew that, of all places, Wesleyan would be one of the best to attempt to create a work as an experimental musician.

As my first semester of senior year floated by, I spent a lot of time reading about experimental music, soaking in as many ideas as I could. I had let go of my original sound installation idea, and was looking to find other ways to explore background noise, spaces, and perception. I would not have arrived at my current project had I not gone through a process of coming up with and discarding numerous others.

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I am interested in how we perceive a space based on sound, and how the architecture of a space plays a role in its sonic qualities. How does sound travel differently in various spaces? How does each environment have its own distinct set of sonic attributes that may go unnoticed by the public? And what about the less audible background noises within a space? I toyed with ideas of recording the same sound from various points of a room, and played these sounds back through speakers at different locations in the space to see how my perception of them changed. I captured sounds distinct to one environment and then played them back in another in an attempt to highlight the importance of background noise and aural architecture in our perception of spaces.

Though my ideas continued to flow, I encountered issues surrounding implementation. I had initially wanted to use a few spaces upstairs in the Davison Art
Center, which seemed fitting. The spaces that interested me were the old vacated office rooms, tucked away and underused in the corner of the second story of the building. I toyed with ideas about forgotten and uninhabited spaces, and how this too would play a role in my work. Sadly, toward the end of my fall semester I was told that these spaces would not be available.

While searching for new spaces, I played with the idea of writing a piece that could take place in any space. At this time I had been particularly interested in Alvin Lucier’s scores, and how they allowed for specific yet seemingly infinite outcomes. This is because of the open ended nature of Lucier’s scores, providing the players with many of their own decisions to make. This intrigued me, and I started to worry less about finding a particular space to use, and more about how I would be able to utilize whatever space I found. I spent much of my winter break and the beginning of second semester thinking more about coming up with a conceptual score that could work anywhere. As it came time to find a space, however, I noticed, much as I did in the Davison Art Center, that each space I considered appealed to me in different ways. When temporarily considering an installation in the Eclectic House, I thought of both Eclectic’s history and how it is simultaneously a home and a creative space/concert venue. When working in the Meditation Room, a space beneath the Wesleyan Memorial Chapel, I thought about how my work could relate more to mindfulness and mental wellbeing. I spent many hours in both spaces, envisioning how their unique attributes (both sonically and contextually) would have roles in my work. Through exploring these spaces, I came to the realization that I wanted to create a piece that was site specific to some degree.
It was not until over a month into my spring semester that I settled on the Music Seminar Room (on the third floor of the Olin Memorial Library at Wesleyan University) as the space for my installation. At this point, many of my ideas had come together about how I wanted to work with the background noise and aural architecture of whatever space I ended up using. I did realize, however, that the space would likely take me in another direction. Upon entering the Music Seminar Room for the first time, I was struck by how “ordinary” it looked. There seemed to have been a class in the room not long ago, as the chairs were scattered around a table at the center of the room, and both the projector and speakers were still on. There was a white board, windows, some sound equipment, and a piano among other things. At first, I was worried about how bland the space looked, and thought that it may be hard to work with. I was told to impose upon the space as little as possible, as classes and meetings would be continually held there throughout the semester and that it would be ideal for me to not disrupt the flow of the space.

After visiting the Music Seminar Room a few more times, however, I began to grow very fond of it. I realized that it felt very familiar. It was much like any classroom that I had entered before, and classroom that I could imagine myself entering again in the future. I felt that this sentiment would also be shared by others who visited the space. It was this idea that lead to me wanting to see what I could do with a room both so familiar and so ordinary, utilizing these attributes to my advantage. After playing with the concepts of how we perceive classrooms, libraries, and “normal” rooms among other things, I integrated these thoughts with the concepts
of background noise and aural architecture that I had been considering throughout the year. Through this journey of exploration, I finally had concrete ideas to act upon.
Introduction

Every space has its own sonic attributes, both in its architecture, and in the noise that are present. The way sound interacts with architecture from space to space varies based on size, materials, angles, and placement of other objects. The noise most prominently tends to come from vents, pipes, light fixtures, and certain electrical items. By amplifying these sounds over a determined period of time, my goal is to understand the importance of background noise’s role in a space, both in how it is perceived naturally and how that perception changes as the sounds are highlighted. By exploring these aspects of sonic environments, I aim to shed light on the importance of noise and architecture in how a space is experienced. Furthermore, I look to present my work through a score, which will be applicable to various spaces and will garner different outcomes.

The sound installation, *A Familiar Space*, realized in the Music Seminar Room looked closely at the architecture of the room, the sounds in the room, and at its use and function. By altering the sonic environment, my installation changed the way the room presented itself to the observer. This is the essence of the installation, which questioned and challenged the relationship between the observer and the sounds within the room.

In exploring the concepts of background noise and aural architecture, I have come across several artists whose work relates to my present interests. In particular, I have found it helpful to explore the works of Michael Asher, La Monte Young, and Max Neuhaus among others. In this thesis, I will focus on works by each of them and
how they relate to aspects of my own. The relationships stuck by these artists
to between sound and architecture have also been taken up powerfully in the writings of
numerous composers, artists and scholars including Alvin Lucier, Brandon LaBelle,
and R. Murray Schaeffer. I will also discuss how their writings have played a role in
my understanding of perception of sound and noise in various settings.

After discussing the relevant works and literature, I will spend the remainder
of my writing explaining the intentions in my own work, and the processes necessary
to realize the installation.
Part Two: Relevant Works and Artists

Spatial Perception and Navigation

I was first attracted to Michael Asher’s work because of his focus on small perceptive changes in aesthetic and sonic environments. While not specifically (or even primarily) focused on sound, Asher’s work highlights small perceptive elements of a space and brings them to the fore.

Michael Asher is known both for implementing subtle, yet deliberate interventions in particular pre-existing environments, as well as creating spaces of his own within the context of galleries as a form of “institutional critique.” While his work never solely focused on sound, the sonic and architectural relationships in his work impacted my personal dialogue with sound and sound installations. Through looking at Asher’s work, I have given much thought to the ideas of perception, and subtle alterations.

In *Spaces* (1969), a work displayed previously at the La Jolla Museum of Art, Asher modifies a “self-contained museum space by adjusting its sensory properties.” In this work, “he engaged three modes of sensory perception: tactile, visual and auditory.” Asher created a space within a museum that had been materially modified

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3 Ibid, 53
to create one “unified sensory situation” within the context of an art gallery.\textsuperscript{4} Spaces consisted of white walls, floors, and ceilings, upon which Asher installed rugs and sound proofing materials. Asher, who dampened reflections in the space, transformed the normally quite reverberant gallery into one beginning to more closely resemble an anechoic chamber. The space was meant to have very little sensory stimulation. In this focused environment, the visitor could pay close attention to the few things occurring in the space. The work has been compared to sensory deprivation, and viewers felt that they were in an “infinite space.”\textsuperscript{5} In a room adjacent to the installation, Asher set up sound equipment including an audio oscillator, amplifier, and speakers that produced a constant low-level sound which was described by Asher as “background noise.”\textsuperscript{6}

\textsuperscript{4} Ibid, 53
\textsuperscript{5} Ibid, 59
\textsuperscript{6} Ibid, 55
Figure 1 – Photograph of *Spaces*, taken from Tacet (1969)
As shown in Figures 1 & 2, these photographs of Michael Asher’s *Spaces* taken from *Tacet* highlight the space’s minimal nature, with focused openings for both sound and light.

The aspects of Asher’s work that form so-called “sensory deprivation” endow the subtle elements within the space with significance. Most notably, the way an observer would perceive the space would change depending on where he or she was positioned in the room. Low humming “background noise” was most audible in the corners of the room, and very quiet at the center. The levels of light perceived also varied for the observer as he or she navigated the space. In this way, the space

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7 Ibid, 59
8 Ibid, 53
became an interactive medium for the observer to explore. While initially seeming like a blank canvas of a room with little to offer, the emptiness of the space pushes the observers to take a step further in looking for what the space is saying.

The navigation of a space comes down to acoustic awareness and a sensitivity to sounds in space. This sensitivity requires active engagement. As Barry Blesser and Linda-Ruth Salter explain in *Spaces Speak, Are You Listening?*:

> “The native ability of human beings to sense space by listening is rarely recognized; indeed, some people think such an ability is unique to bats and dolphins. But sensing spatial attributes does not require special skills – all human beings do it: a rudimentary spatial ability is a hardwired part of our genetic inheritance. For example, when blindfolded, nearly all of us can approach a wall without touching it just by attending to the way the wall changes the frequency balance of the background noise.”

While many people are not aware, navigation of a space can be subconsciously dictated by sound. Blesser and Salter discuss the importance of aural architecture. “Architecture is concerned with the design, arrangement, and manipulation of the physical properties of a space.” Blesser and Salter argue that, in order for architects to communicate the artistic, social, emotional, and historical context of a space, they “almost exclusively consider the visual aspects of a structure.”

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10 Ibid, 1
the space. These acoustic aspects can alter the way we experience a room without us realizing it.

I am interested in exploring concepts of sensory perception. In responding to Asher, I would like my work to highlight particular aspects of a space that tend to be overlooked and forgotten. Asher highlights the properties of a space by stripping it down to be as bare as possible, forcing those in the space to engage in listening closely and thinking carefully. Minimizing and removing the sensory stimulating aspects of a space also recreates it, enabling it to be explored. I am personally interested in working with a minimally altered space, and bringing to the center of focus to its natural sonic attributes, and those sonic aspects of a space that tend to be ignored. In doing this, I hope to alter the way individuals perceive a space. The boundaries that most prominently define a space for most individuals tend to be visual and physical. These specific boundaries will be altered as minimally as possible. I am leaving the space much as I initially found it, and only making changes through engaging with sounds unique to the space.

Asher focused on creating an environment in which perception is altered through the removal of sensory stimulus. This space is carefully constructed such that it eliminates any extraneous sounds and visuals. It is a meticulously put together space created for the sole reason of existing with its attendant physical and acoustical properties. I am attracted to Asher’s work due to its focus on the minute details of a space that, when brought to the center of focus, show the listeners different ways to understand the space. Asher’s ability to strip a space down and bring these elements to the fore of his work speaks powerfully to how these elements do indeed play a vital
role in how we perceive spaces. My interests lie less in the creation of a space, and more in working with what a preexisting space has to offer. I am intrigued by the notion that there is ambient noise in (almost) any space, and that this noise is usually ignored (if even noticed at all). Because of this, the score (explained later) to *A Familiar Space* is applicable to various spaces, and will have different outcomes wherever it is performed.

It is important to note that Alvin Lucier’s writings have played a key role in my understanding of both Asher’s work and my own. Having spent my first months of exploration of experimental music reading Lucier’s work, I became particularly interested in how he found all spaces to be interesting to explore, in that each space provides its own sonic environment.

“One could conceivably build an environment that would do something specific to sounds but I’m not interested in that. I don’t want to change anything. I simply want to find out what these environments do to sounds, so it’s to my advantage not to make them but to take what I can find, and in that way each performance will teach me something.”

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All spaces have something to reveal. While Asher chose to curate a particular space very specifically to what he wanted, Alvin Lucier’s quote suggests listening to the attributes of a space that are already present.

The work of La Monte Young has also added to my understanding of sounds’ role in space. Most pertinent to my work, *Dream House* (1993) exhibited the notion that sounds could physically interact with each other, altering how individuals perceive the space based on where they are situated in a room. *Dream House* is a sound installation that has been running on and off for the past twenty years in an apartment in lower Manhattan.

Figure 3 – Photo of *Dream House*, taken from The Mela Foundation (2015).
*Dream House* is a “sound and light environment”, referred to by Young as “a time installation measured by a setting of continuous frequencies in sound and light.”\(^{12}\) As described by *Die Tageszeitung*, “The mind is calmed by the environment in a meditative way, and subtle sound and light effects that are veiled at first sight then come to the fore.”\(^{13}\) Ed Howard states in a *Stylus Magazine* article about La Monte Young that, “The only time the music remains stable is when the listener is completely still: the low drones culminate in a dense jackhammer cloud as they cross over each other, forming complex rhythms. However, just slight changes in posture completely alter the sound field. Different higher pitches appear as you move your head; by rocking slowly back and forth, you can create a hypnotic two-note melody as the high tones shift and spin dizzyingly. Towards the center of the main room, the drones are thickest and lowest, while around the perimeter of the room the sound tends to be airier, dominated by chattery high-end whine.”\(^{14}\)

Having noticeably different sonic experiences only inches away from each other provides the listener with a new way to explore the space. During some earlier test runs of my installation, I played sounds at the same volume through speakers at different points in the room. I noticed that where I stood in the room drastically altered how I perceived the sounds coming from the different locations. Furthermore, I noticed that the sounds interacted with each other in numerous ways in different parts of the room. In some areas, I heard only one speaker clearly while the others were muffled. In other areas, I could hear certain tones oscillating against each other.

\(^{13}\) Ibid
creating ripple-like patterns in the air. Prior to knowing about Young, this realization brought me back to Blesser and Salter’s writings discussing aural architecture. Upon discovering Young’s work, however, I finally understood Blesser and Salter’s conceptual ideas in physical form. Both positioning of the speakers and the materials and objects in the room play a great role in how the sound travels throughout *Dream House*. Through this realization, I began to play more with the positioning of my own speakers, discovering how this alters the sonic experience in the space.

While one might argue that Young’s *Dream House* and Asher’s *Spaces* are starkly different works, there is one major conceptual overlap that I drew from them. Each work invited the listeners to explore the boundaries of the space through sound. Asher set up *Spaces* in a way such that his “background noise” was most noticed in particular areas of the room, while almost completely attenuated in others. Young similarly created a space that welcomed aural exploration by providing a set of tones that would interact differently with each other depending on the location in the room where they met.

By studying the works of both Asher and Young, I came to understand new concepts about how sounds react in spaces, and how the space’s visual and contextual aspects also play a large role in how observers understand and navigate it. Both Asher and Young imposed their own sounds on spaces physically altered to set a particular tone and create a specifically customized environment. In contrast to
Spaces and Dream House, the works of Max Neuhaus that I have studied utilize preexisting spaces, building on their unique inhabitance of social environments. The spaces used by Asher and Young both struck me as constructed spaces, curated very precisely within a gallery or gallery-like context. While one of the two works of Neuhaus that I will write about did in fact take place in a gallery, its interaction with the space is distinctly different from the interactions between sound and space that took place in Spaces and Dream House.

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Inhabitance of Preexisting Spaces

Similar to Michael Asher, sound artist Max Neuhaus also paid a great deal of attention to spaces in his work. There are two pieces in particular by Neuhaus that I was able to visit that helped solidify many of my own ideas about sounds and their relationship with spaces. The first piece I will discuss is *Times Square* (1977) and the second *Time Piece Beacon* (2005). Each piece speaks to the space it inhabits in a different manner, both of which are important to understand and distinguish.

*Times Square* is a permanent sound installation by Neuhaus that emanates from underneath a set of grates on a pedestrian island in Times Square, Manhattan.\(^\text{15}\) The noises coming from the grates have been described as a “deeply resonant and mildly undulating drone, its tone suggestive of low-pitched chimes or church bells.”\(^\text{16}\) As one of the most heavily trafficked locations in the world, Times Square provides a sensory overload for pedestrians. Millions of people pass over the traffic island without noticing Neuhaus’ work. I find this situation to be particularly interesting because it is in itself a commentary on the space in which it exists. Having walked through Times Square more times than I can count, I have never noticed any particularly surprising sounds coming from beneath me. I can think of two reasons to account for this. First, New York is a city that has a substantial underground existence. Its vast subterranean infrastructure runs from a maze of subway and train tunnels, to water mains and electricity cables. Thus, to hear noise coming from one

\(^{15}\) It is important to note that the first version of *Times Square*, set up in 1977, was discontinued for a period of time, partially because Neuhaus initially installed it without the permission of the city.

of them is commonplace, and often considered a normal source of ambient background noise. Second, Times Square is a location particularly known for its excess amount of stimulus. From the hoards of people to the giant electronic billboards and skyscrapers and countless things in between, it would be impossible to count how many different things one can pay attention to. This creates the perfect storm for *Times Square*, a work that both sticks out and blends in to a space so chaotic.

Figure 4 – Photo of *Times Square*, taken from *Times Square, Time Piece Beacon*. Page 4.
Upon visiting Times Square in search of Neuhaus’ work, I was first met with frustration. Unable to locate the grates for some time, I took to asking local tour guides and hotel receptionists if they knew the location of the installation. Even these individuals who would supposedly know Times Square better than anyone looked at me as though I was a bit crazy. “There are no installations up here right now, you must be mistaken” “I haven’t the slightest clue what you’re talking about”… I continued to nudge my way through the masses of people, constantly bombarded with sensory stimulus from bright advertisement to music blasting from storefronts. Feeling very claustrophobic and a bit nauseous, I began to think about heading home.

Finally, after searching for about 25 minutes, I walked over a set of grates and heard tones that were different from those produced by any subway or other
underground activity. Instantly, I felt as though I was in my own world, separated from all of the noise occurring around me. I stood on the grates for some time, looking around at Times Square, feeling distant from all of it. This installation, hidden, yet so blatantly there, provides an oasis in Times Square for those who notice it. “Even though invisible and intangible, it is like a solid place in the middle of this open space.”

Looking around, I noticed many people walk by, including giant Mickey Mouses, tour guides, and businessmen. Even as these individuals brushed past me, I felt distant from them. This installation provided the perfect escape from Times Square right in the heart of it. The experience of *Times Square* is summed up well by Neuhaus in this quote, which relates to his original 1977 installation of the work:

“The aural and visual environment is rich and complex. It includes large billboards, moving neon signs, office buildings, hotels, theaters, porno centers, and electronic game emporiums. Its population is equally diverse, including tourists, theatergoers, commuters, pimps, shoppers, hucksters and office workers. Most people are in motion, passing through the square. The island, as it is the junction of several of the square’s pathways, is sometimes crossed by a thousand or more people in an hour.

The work is an invisible unmarked block of sound on the north end of the island. Its sonority, a rich harmonic sound texture resembling the after ring of large bells, is an impossibility within its context. Many who pass

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though it, however, can dismiss it as an unusual machinery sound from below ground.

For those who find and accept the sound’s impossibility though, the island becomes a different place, separate, but including its surroundings.

These people, having no way of knowing that it has been deliberately made, usually claim the work as a place of their own discovering.

- Max Neuhaus

Fig. 6 – Max Neuhaus, score for *Times Square*, (1977)

Important to my work is the question of finding something unique, and for one’s own discovering. In *A Familiar Space*, I hope for listeners to have their own individual experiences, coming to understand the space and the notions of background noise and aural architecture in the context of their own lives.

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18 Words of the score for *Times Square*, taken from *Times Square, Time Piece Beacon*, 174.
It is through my observation of Times Square that I questioned how perceptions of sound are affected by location, the presence of other sensory stimuli, and individual’s physical and mental experiences in spaces. Times Square also sparked my interest in the notion of sound being able to subtly exist in a space and often go unnoticed. As Brandon LaBelle states in Acoustic Territories, “the experience of the city sidewalk, as a zone of pedestrian life, is partly shaped by a continual flood and movement of sonic activity.”19 This constant sonic activity provides the setting in which Neuhaus’ Times Square is able to exist.

Due to the experience in Times Square being so specifically tied to the location, it is fitting that Neuhaus referred to it as a “Place work.”20 The role that sound plays in a space is also observed in Neuhaus’ work Time Piece Beacon, which is permanently installed at Dia:Beacon. This work is referred to by Neuhaus as a “Moment work”.21 While still focused on how the sounds relate to the space in Time Piece Beacon, Neuhaus also focuses on the temporal aspect of the sounds, and how the gradual build and sudden absence of volume in the piece adds a different element. Neuhaus describes the differences between “Place” and “Moment” works in Times Square, Time Piece Beacon as follows:

“As issues of identity and history come to the fore in the Moment pieces, so do notions of community. Whatever sense of collectivity is generated by a Place work like Times Square is a function of serendipity,

19 Brandon LaBelle, Acoustic Territories: Sound Culture and Everyday Life, (New York: Continuum, 2010), Print, 93.


21 Ibid, 37
of coexistence and contiguity; it automatically involves those who
recognize and engage with the work ... Yet, this fugitive community implies
and entails nothing beyond itself at that moment: it is built on “adjacency
rather than identification with whatever exclusionary ideal. In contrast to
the Place pieces, the Moment works operate on two distinct registers. The
uninitiated, the casual passerby, attend to the silence, which they
experience more in their bodies than in their minds. However, for those
who become familiar with a Moment piece, and who therefore experience it
as part of their daily soundscape, the sound, too, plays a role.”

The relationship between moment and place is described succinctly by Neuhaus, who
states that “the basic idea of the moment works is to be without place; they
encompass places rather than being only in one. For a place work you have to go to
the place; for a moment work you can be in any of many places at the moment. That
is the real difference.”

Commissioned specifically for Dia:Beacon, Max Neuhaus’ Time Piece
Beacon “creates a zone of sound around the perimeter and in the galleries of the
museum. As each hour approaches, a low tone gradually emerges, almost

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22 Ibid, 38
23 Max Neuhaus, Notes on Place and Moment, (1993), http://www.max-
neuhaus.info/soundworks/vectors/moment/notes/, 3. First published in Max Neuhaus: Sound Works,
imperceptibly increasing in volume; the hour is signaled when the sound abruptly ends, creating what seems a silence in the ambient sonic environment.”

I visited Dia:Beacon with the main intent of experiencing Neuhaus’ work. Thus, upon arriving, my ears remained open throughout my stay there. Due to this, I picked up on various other sounds in the space. Most prominently, I noticed the constant shuffling of footsteps, and the occasional train passing by. Beyond this I would hear the occasional sound of a bird or the rustling of trees. As the end of my first hour neared, I began to notice the low, church bell sounding tones, which I instantly recognized as Neuhaus’ work. As the tones grew louder and louder, I

Figure 7 – Image of Dia:Beacon, taken from Times Square, Time Piece Beacon

explored the space searching for pockets of resonance and intense amplitude, as well as dampened spaces where the tones were almost inaudible. While navigating the space, I also looked around at the other people observing the art in the museum. Some seemed to be struck by the sound as I was, but most continued to explore the space visually, looking at the art and paying no mind to the tones. When the hour struck, however, everything momentarily stopped. Even I, who knew that this moment was coming, found that my ears particularly perked up in search of the sounds. Thus, it was no surprise that those who were not paying attention to the sound all stopped in their tracks, confused as to what had happened and why the room suddenly felt different. It was at this moment that I noticed various other small sonic aspects of the space. The subtle groan of the air flowing through the reverberant space, the echo of people shuffling around in other rooms. At this moment, I came to understand the space much more through the sudden absence of sound.

Although *Time Piece Beacon* takes place in a gallery setting, it is much less directly associated with particular aspects of the gallery visually than Asher’s *Spaces* or Young’s *Dream House*, and focuses more on how it can add to the sonic environment in hopes of subtly (yet also drastically) altering how those in the gallery perceive the space.

From this work there are two concepts that I have incorporated into my own. The first is that the gradually building sound takes place at a rate which is almost unperceivable by the listener. The tones swell slowly over a period of time. Anyone
who happens to walk by will likely not notice any discernible change to the sonic environment. This subtle increase juxtaposed with the sudden cut in volume provides a stark contrast in the space, intentionally leaving the listener left to pay close attention to the naturally existing sounds in the space. This concept is summed up well in Neuhaus’ own explanation of how he began to experiment with pieces that would take sounds away:

“This idea is not something that happens in nature; continuous things do not disappear suddenly in this way. Yet it happens in the modern world. The most startling example for me in everyday life has always been the coffee-grinding machine in a café. When somebody turns the machine on in a noisy café, you do not register it. It just seems to make talking a little harder.

That is quite amazing in itself, because the sound is quite loud. But your mind just puts it in the class of the sounds that are an expected part of the café and goes on with what it was doing.

Then, when it is finished and suddenly stops, there is a huge silence which envelopes the café, even though it is still very noisy. I've always loved that moment.”

The second concept that I have drawn from is the score, which eloquently describes the piece in just a few words and with a simple drawing. The score for this work illustrates how the listener might perceive the installation. I came across this

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score prior to visiting Dia:Beacon, yet due to its descriptive nature I already had a vivid ideas of how the work would sound.

Figure 8 – Max Neuhaus, *Time Piece Beacon* Score (2005)

“SOUND
EMERGING FROM
NOWHERE

INCREASING
IN VOLUME
AND COLOR

IMPERCEPTIBLY

REACHING ITS
PEAK

SUDDENLY
DISAPPEARING

LEAVING IN ITS
WAKE

AN AURAL
AFTERIMAGE
The words Neuhaus chose for his score speak well on behalf of the experience of the installation. Structurally, all of the verbs are gerunds, and we read it as a build up – *emerging, increasing, reaching, disappearing, leaving*… Then, there is a release. At the end of the score, there are no more gerunds – we are left simply with stillness. This writing matches the sonic experience well in that it separates the build from the aftermath. Most relevant to my own work seems to be the section of the score about an aural after image, with a sense of stillness. It is in this stillness that the listener is able to reflect on the space they are in and the sounds that they hear.

After experiencing Neuhaus’ works in Manhattan and in Beacon, I came across more of his scores, and was further intrigued by his precise choices of words and informative illustrations. Interestingly, however, these site-specific scores brought me back to thinking about Alvin Lucier’s scores, which were meant to be applied across various situations. As a prime example, Lucier’s score for *I Am Sitting in a Room* is a score that is quite literally applicable to, and even intended for, any space.

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Necessary Equipment:
  one microphone, two tape recorders, amplifier and one loudspeaker.

Choose a room the musical qualities of which you would like to evoke.
Attach the microphone to the input of tape recorder #1.
To the output of tape recorder #2 attach the amplifier and loudspeaker.
Use the following text or any other text of any length:

I am sitting in a room different from the one you are in now.
I am recording the sound of my speaking voice and I am going to play it back into the room again and again until the resonant frequencies of the room reinforce themselves so that any semblance of my speech, with perhaps the exception of rhythm, is destroyed.
What you will hear, then, are the natural resonant frequencies of the room articulated by speech.
I regard this activity not so much as a demonstration of a physical fact, but more as a way to smooth out any irregularities my speech might have.

Record your voice on tape through the microphone attached to tape recorder #1.
Rewind the tape to its beginning, transfer it to tape recorder #2, play it back into the room through the loudspeaker and record a second generation of the original recorded statement through the microphone attached to tape recorder #1.
Rewind the second generation to its beginning and splice it onto the end of the original recorded statement on tape recorder #2.
Play the second generation only back into the room through the loudspeaker and record a third generation of the original recorded statement through the microphone attached to tape recorder #1.

Figure 9 – Alvin Lucier, *I Am Sitting in a Room*, (1981)

Gathering from these two distinctly different, yet powerful means of scoring, I began to consider how to come up with scores of my own. I will discuss this in more detail below.
Both the importance of sound and its relationship to socially constructed spaces, and the precision in score creation of Max Neuhaus influenced my ideas of sound installations greatly, altering how I view the spaces I have been working in, as well as how others may view them.

By observing the works of Asher, Young, Neuhaus, and Lucier, I have both come to further understand my own ideas as well as pick up on new concepts that I was not aware of. In coming to understand their works, I have been able to consider relationships between space, place, time, and sound more thoroughly. It is through my study of these works and the artists behind them that I have been able to synthesize my own project, taking bits from each of their works as well as incorporating ideas of my own.
Part Three: A Familiar Space

A Familiar Space

The installation that I have put together explores sonic qualities of the Music Seminar Room in the Olin Memorial Library at Wesleyan University, both in the natural sounds that occur in the room, and how the architecture of the room alters our perception of those sounds. “Sounds are associated with their original source, while also becoming their own thing, separate and constantly blending with other sounds, thereby continually moving in and out of focus and clarity.”27 In looking at these concepts, I have chosen to utilize recordings of naturally existing background noise in a space, as well as the resonant tones of the space. Furthermore, I look to highlight the natural tendencies of the room by having a portion at the beginning and end of my piece consist of listening to the room without imposing any of my own sounds. In this portion of my writing, I will focus on the underlying concepts behind my work, how it was set up, and the experience that I hope for individuals to have while immersed in it.

My thesis installation is an exploration of natural sonic qualities of a space and how those qualities affect our perception of the space. Noise has traditionally been regarded as a nuisance, to be blocked out or ignored. As stated by R. Murray Schafer in *The Soundscape* (1993), “noises are the sounds we have learned to ignore”.28 Even now as I write, I cannot help but attempt to block out the sound of the


vent to my left, the clatter of other students typing, the noises of people walking on
the floor above me… As I sit in the library, a space notable for its quietude, I cannot
help but notice more noise than I do in other spaces. This focus on silence here
creates an expectation that cannot be met. Thus, the noises that exist in a library are
inherently much more audible, both due to the lack of other noise, and the notion that
the library is a quiet space. I find it interesting to observe the impossibility of silence,
most importantly in how individuals perceive it and how that perception changes with
context. ²⁹

In order to further understand how individuals interact with silence and noise,
I chose to use a space in the library. This space is a classroom, tucked away in the
corner of the third floor of the Olin Memorial Library at Wesleyan University. Upon
first seeing this space, I was struck by how ordinary it was. It seemed much like any
classroom I had been in over the previous years, and will probably be in again in the
future. After returning to the room once or twice more, I began to enjoy this aspect of
the room because it helped familiarize me with the space quickly. I felt as though I
knew the room. The next thing I began to look for in the room was its sources of
sound. I was happy to find quite a few. The main sounds that I heard were the
humming and crackling of a vent, the hiss of speakers, the wind blowing on a window,
the air and electronic noises coming from a projector and the constant ticking of a
clock. Much like a library, a classroom is a place where one goes to focus. In such a
space, it becomes distracting to hear much noise. Thus, there are two scenarios.

These sounds are often blocked out by individuals, or they can come to the foreground, like a ticking clock, creating a distraction.
Sonic and Aesthetic Choices

In playing with the ideas of sound and perception within a space, I have chosen to record and replay naturally occurring sounds within a space. To do this, I have taken recordings of various noise sources throughout the room (vents, clock, window, lights). I have also taken recordings throughout the room of general ambient tones (particularly loud in the corners of the room, and most quiet in the center). Through the recording process, I was able to collect various sonic aspects of the room that I found most pertinent. Furthermore, I was also able to re-record certain sounds to find the resonant frequencies of the space. Upon acquiring these resonant frequencies, I replicated them with sine waves to then see how they would interact with the room and with each other. The sources of noise that I was now able to work with were 1. the room’s natural background noise, 2. recordings of background noise, 3. recordings of resonance, and 4. sine tones of the resonant frequencies. The sounds were played back through four studio monitors and a transducer (along with cables, an amplifier, wires, a MOTU 828, and my computer).

My hope with the installation is to both observe how people navigate a space differently by focusing on sound, and to observe how the natural background noise of the space is perceived differently at the end of the piece than at the beginning. In looking to achieve this, I began to consider how to bring forth various attributes of the space throughout moments in my piece. Furthermore, I found myself questioning whether I wanted individuals to have to experience the piece in its entirety, or of they could simply walk into the room toward the end. I decided that it was important to experience the piece as a whole, and spoke with Professor Matthusen about various
ways to achieve this. Eventually, we came to the conclusion that we would have to set up a mechanism that allowed for the piece to automatically restart every time an individual entered the space. Thus, I set a contact microphone up to the door that would reset the piece every time it was opened. This aspect was particularly important to my work because the initial silence in the piece plays a key role in how the listeners will understand the work going forward.

I chose to place my four speakers throughout the room in distinctly different positions. Each speaker, while definitely in its own quadrant of the space, was otherwise placed in a unique manner. The first speaker I placed was the most ordinary. It was on the floor right by the door, about 3 inches from the wall. It faced directly in the opposite direction of the wall. The second speaker, I chose to place on its side inside a cupboard. Directionally, it faced the first speaker, and thus the entrance of the room. Due to both being tucked inside of a cupboard and on its side, however, the sounds coming from the speaker travel differently than they would otherwise. The cupboard has its own resonance, providing some of the sounds coming from the speaker with a different space to exist in, some which were audible and some that were harder to hear. Another important aspect of this speaker placement was that it was elevated, providing the y-axis of the room with depth, enabling the sonic navigation to happen by longitude and latitude, and also by altitude. The third speaker I placed on a small pull out desk, at a slightly lower level than the second. It faced a wall with a piano, above which there was a projector screen. I found that by moving the projector screen around I could create differing volume levels throughout the space of the third speaker’s output. The fourth speaker, I chose
to place upside down, facing a corner. I noticed that having two speakers on the floor provided quite a bit of bass heavy noise that distracted from the other sounds in the room. Putting this speaker upside down made it so that the tweeter of the speaker was now touching the floor, while the sub of the speaker floated in the air. I enjoyed having this speaker face a corner because of the way it allowed for the sounds to travel throughout the space in a very unpredictable manner. I would hear this speaker at its loudest in parts of the room where I could barely hear it at all when it was facing outward. Finally, I chose to place my transducer behind the piano – a sound source in the room that I thought visitors may overlook. Furthermore, I found the back of the piano to be quite resonant, and thus a good space for a transducer to live. This is due to the soundboard and internal cavity of the piano, integral to its structure.\textsuperscript{30}

Aesthetically, other than cleaning up some clutter on the floor and introducing sound sources into the space, I left the room as close to its natural state as I could. Inspired much by Alvin Lucier, I was determined to see what the space had to offer sonically, rather than trying to make it too visually striking.

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\textsuperscript{30} See Appendix for photos of installation
Score

A Familiar Space, by Alexander Rowland

Duration: 11 minutes

This work, in four parts, explores the perception of background noise and aural architecture in a room. Furthermore, it examines the listener's role in altering their own perception of the piece through their navigation of the room.

The sounds that compose the work consist of natural room noises, recorded room noises, and resonant frequencies of the space, found through recording processes.

The piece begins when the door is firmly closed. At first, the listener is introduced to the space in its natural state. Prerecorded naturally occurring sounds are then quietly reintroduced into the space through speakers and transducers placed throughout the room.

Just past the halfway point in the piece, the volume increases and the sounds begin to interact with each other more directly. At this point the listener is invited to slowly navigate the room in order to experience the range of sonic textures. As the piece comes to a close, it returns to its natural state, leaving the listener to hear what they choose to hear.

Fig. 13 – Alex Rowland, *A Familiar Space*, (2016)
The score reads:

*A Familiar Space, by Alexander Rowland*

*Duration: 11 minutes*

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My intentions with this score are to provide the listeners or performers with enough information about the space so that they understand what they are walking into, yet are still able to come to some of their own conclusions. Furthermore, I have provided a visual interpretation of how I see the space evolving over time, from the initial entry into the room, to the last moment before leaving. I have intentionally made this score specific enough so that it relates very directly to my installation, yet broad enough so that it can be replicated by others. Somewhere in between Neuhaus and Lucier, I have found a happy medium of specificity yet openness.
The words in my score are meant to be descriptive and direct. I provide the listener or player with enough information about the work, yet still leave everything open enough that the listener or player may have their own experience in the space. The visual aspect of my work is broken up in to four simple parts, meant to describe the four layers of the piece that occur temporally, in relation to how one understands the space. The first image of the score is a two dimensional square. It represents the simple understanding of the space that one might experience in the beginning of the piece, or while in the room experiencing it as a classroom and not a sound installation. Sonically, it represents the way one might perceive the background noise and aural architecture of the space, on a subconscious level. The second image represents the recorded sounds that I have placed into the space, adding a new layer, and thus a second square on top of the first. Now, the natural background noise is juxtaposed with the recorded background noise and resonant frequencies. While sonically they sound very similar, they nonetheless have distinct differences, thus, the two squares do not connect. The third image represents the more outright introduction of aural architecture into the piece. Here, I draw three lines as though they are forming a three dimensional X Y Z plot. At this point in the piece, as the listener navigates the space they will experience different sonic textures throughout the space. This makes the listener more aware of how sound travels and is perceived in the space, and how the attributes of the room play a role in the sonic perception. The fourth image is a three dimensional square, or cube. This is how the space is perceived at the end of the piece, once all of the recorded noises have come to an end. The listener is now more aware of the attributes of the space, and is able to listen more carefully to what it has
to say. This cube represents a deeper understanding of the space, where the background noise and aural architecture now play a larger role in the listener’s experience in the room.
The Piece

The piece itself begins with the naturally occurring background noise of the space (or as many might say, it begins in silence). Gradually, I bring forth a recording of the resonant tones of the space, playing them through the transducer behind the piano at a very low volume. This struck me as an interesting way to bring the listener away from the connection of speakers to sound. As the resonant tones coming from the piano grew, I slowly introduced various ambient recordings of the background noise into the four speakers, ebbing and flowing, interacting with each other and the piano very subtly, at times all falling silent. I chose for this part of the piece to take place for a long enough period of time that the listener would begin to feel comfortable in the space, and maybe even start to find it a bit ordinary if they were not listening carefully. All the while, these sounds were interacting with the natural background noise of the space, slowly altering the perception of the environment, building toward the third part of the piece.

Finally, at about seven minutes in, I introduce sine tones at the resonant frequencies of the space. These tones steadily build for about four minutes, while the rest of the noise in the piece falls out of the center of focus. These sine tones, coming from the four speakers, begin to interact with each other more and more as they grow in volume, creating a space much like the Dream House where each step provides a new sonic environment. This is my attempt at highlighting the importance of aural architecture of the space, both in how the sounds interact with the objects and materials in the room, and also how they interact with each other. Furthermore, as individuals navigate the room their presence will also alter the way the sound
navigates the space, thus changing the sonic environments both for themselves and other listeners. This, in turn, creates a matrix of unlimited scenarios of possible sonic explorations in the space. After allowing for these tones to build for four minutes, I bring all of my imposed sounds on the space to silence, leaving the listener with just the room. It is my hope that they experience this silence much differently than the silence experienced at the start of the piece. After having perceived and understood the space differently through varying points of the piece, the listener may now feel differently about the space, opening their ears up for more.
Set Up Process

Setting up my work after recording was an exercise in trial and error as I altered parameters in Logic 9 and Max 7. The sounds that I recorded from my Zoom H1, as well as the sine tones, were all arranged in Logic 9. In Logic, I played around with the levels of my sound sources, as well as the timing of when they should come and go. Through the use of the MOTU 828 I was able to manipulate sounds between any of my five outputs, and thus continued to explore how the sounds interacted with the space differently depending on which sound was coming from what source. Through this exploration, I noticed that the installation could provide very different feelings based simply on which sounds I decided to play from where.

I found it necessary to do my editing in Logic 9 because it is the Digital Audio Workstation that I am the most comfortable with. Thus, I was able to manipulate the sounds exactly as I liked. The most important aspect that I fine-tuned in logic was automation. In order to make the installation begin with the door closing, however, it became necessary to incorporate Max MSP 7 and a contact microphone. By connecting the contact microphone to the door and setting a threshold level that had to be reached in order for the piece to begin, Professor Matthusen and I were able to make the door a trigger for the start of the piece.
Fig. 10 – Alex Rowland, *A Familiar Space*, Logic 9 File, (2016)

Fig. 11 – Alex Rowland, *A Familiar Space*, Logic 9 File, (2016)
Fig. 12 – Alex Rowland, *A Familiar Space*, Max 7 file, (2016)
Public Reception

Looking back on the weekend of my installation there are interactions with the space that I either saw or was told about that are worthy of discussion.

One aspect that seemed to particularly alter how listeners navigated the space was the presence or absence of others in the room. Experienced alone, listeners were able to explore the space freely, uninfluenced by the actions of others. Alone, if the listener had an urge to crawl, jump, or stand on the table, they could act upon that urge. Introducing others into the space however creates a different dynamic. When multiple individuals were in the space together, they would look to each other for information. This became an exercise of observing how others navigated the space. In particular, one friend of mine was in the installation with a group of strangers and texted me to keep me informed about how it was being received. At the time, all of the listeners were sitting still. When I prompted her to stand up and move around, however, all of the strangers slowly followed. Coming into the space, it seems that individuals may have been unsure about what to expect, and thus chose to sit rather than explore so as to conform with the other listeners.

Another aspect that I find important to discuss is the piece’s return to its beginning with the opening and closing of the door. Some individuals told me that they were unable to experience the whole piece due to constant interruptions of new listeners coming to experience the space. One friend told me that, after this happening multiple times, the group of individuals inside the space actively agreed to lock themselves in, closing the outside door so that nobody else could enter. This
created an interesting group dynamic that I had not considered while putting together my piece.

It is also noteworthy that individuals who moved throughout the space more had very different responses than those who decided to remain in one location. Those who remained stationary often told me that they found the piece to be very meditative and calming. Those who moved around, however, recounted the space as being psychedelic and disorienting.

Another common response I received about the installation was that people heard things differently after leaving the room. People began to notice noises that they had not paid attention to before, and thought more about the spaces that they were in. I am happy that individuals came to this conclusion without me. I was lucky enough to also speak with one friend who has class twice a week in the room. He mentioned to me that throughout the entire semester he did not notice that there was a clock in the room until experiencing my installation. The importance of sound in the context of a sound installation opened his ears up to experience more of the room.

There was also a moment where I came in to check on the space, and noticed that there was a woman working in the room with the door open and the lights on, unaware that the installation was taking place. I was unsure how long she had been there, but the sounds that I had played through the speakers and transducer were certainly audible. Seeing this woman helped me understand that when the room is being viewed as a classroom and not as a sound installation that people do in fact navigate it completely differently. The sounds that I had imposed onto the space
were truly background noise in this woman’s experience in the space, blocked out so that she could focus on her writing. In *tchime tree* (2014), Gabriel Greenberg succinctly explains how a sound installation interacts with the space in which it exists:

“sound installations should do more than just add atop the sonic environments in which they operate. They should also create the opportunity for the sounds that were already there to be given more attention and [be] heard in a new way. Thus a relationship is created between composer, listener, and the environment at large in which each party takes an equally active role in the holistic perception of the work.”

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Conclusion

Having spent this year learning about sound art, spaces, and the study of noise, I would certainly like to spend more time fine-tuning concrete ideas in future projects, rather than conceptualizing for a year and then finding myself in a time crunch to create tangible work. Furthermore, I would love to be able to spend more time finding ways to sonically intervene in spaces without visually altering them at all. Much like the pieces of Neuhaus that I wrote about in the body of this work, I hope that my work will someday be able to more subtly and elegantly be in conversation with the spaces that I will inhabit. Working around my schedule as a student this year, as well as finding materials with very little money to spare, I am happy with what I was able to accomplish and know that in years to come my works will improve.

Speaking specifically about A Familiar Space, I thought that it was a very important experience for me to learn how to listen carefully in rooms, and to understand that, even in a room as initially unappealing as I thought the Music Seminar Room was, all spaces are different and can provide endless environments to explore. During the final weeks before my installation went up, I found myself constantly learning more and more about the space, and also feeling as though I knew less and less. I wanted to incorporate every interesting aspect of the space into my work, and had great trouble forcing myself to hone in on a few. It is because of this, however, that I already have so many new ideas passing through my head about new projects to tackle.
Acknowledgements

I would first like to thank Paula Matthusen for relentlessly pushing me to think more about my work and the works of others. Also, for helping me step by step through any technical difficulties that I experienced along the way, as well as providing me with equipment of her own to help turn my ideas into realities. Without Paula Matthusen I do not know how I could have completed this work. I hope that someday as my work reaches new heights that I will be able to work with you again.

I would also like to thank Alex Waterman for agreeing to not only be my second thesis reader but to also help guide my project during its most crucial stages. Alex Waterman opened my eyes up to new ways of considering the space that I worked in, and provided me with very relevant literature to help me understand my own work in new ways. His positivity and constant assurance that I was headed in the right direction helped me push myself toward realizing my goals, and for that I am very appreciative.

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Thank you all!
Works Cited


Appendix

Images of the Installation:

Please make sure all windows are closed securely before you leave the Seminar Room.
(This will help prevent equipment and material damage.)