SPEAKING THROUGH ARCHITECTURE:
THE SOUND AND THE STRUCTURE OF THE STORY MADE MATERIAL

thesis work of 2008-2009

ELIZABETH BARRETT
SPEAKING THROUGH ARCHITECTURE:  
THE SOUND AND THE STRUCTURE OF THE STORY MADE MATERIAL

act one: THE MARKET
act two: OFFICE SPACE
act three: SPEAKEASY
act four: THE AUDITORIUM

A BUILDING IN four ACTS

MAY 1st, 4PM
Thesis submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of:

MASTER OF ARCHITECTURE

May 1, 2009
College of Architecture and Urban Studies
Washington Alexandria Architecture Center
Alexandria, Virginia

PAUL F. EMMONS, Ph.D.
COMMITTEE CHAIR

MARCIA FEUERSTEIN, Ph.D.
COMMITTEE MEMBER

SUSAN C. PIEDMONT-PALLADINO
COMMITTEE MEMBER
This is an architectural thesis for the creation of stories. Through the collection of memories and ideas, stories are discovered and then assembled to form objects of intent. The proposed design is also a hybrid - a hybrid of spaces, both formal and mundane, structured to form a unique body that is an extension of city from which it originated.

The architectural project, located at the Dupont Circle North Metro exit in Washington, DC, houses performance, teaching and office space for the Speakeasy DC organization. The collection of spaces delineated in this design was inspired by characteristics of storytelling, structure and sound, and by the specific nature of the site. These spaces were then assembled to create a place for discovery (in markets and offices), reflection (in libraries and workrooms), and performance (in auditoriums and cafes).
It is only now with the distance of time that I can truly appreciate the experiences gained by returning from the professional world to the academic realm for even a short time. Some part of the imagination necessary for the conception of architecture weakens in the daily exercise of budgets, documentation, and meeting minutes. However, it is imperative to step away from the rote learning which occupies our daily lives and to see the world anew. It is only when we challenge ourselves that we find a balance between the known and the unknown, the riskless and the reckless. It is my hope that my newly balanced scale will be able to judge an architecture based on both experience and experimentation.

I would like to thank my thesis committee - Paul Emmons, Marcia Feuerstein, and Susan Piedmont-Palladino - for challenging me to discover, not dictate, architecture.

And many thanks. . .

to the all those - especially Jaan Holt and Henry Hollander - who ensure the WAAC is an institution for experimentation and independence.

to my friends and colleagues - Lesley Golenor, Josh Housdan, Katie Barrett, Alec Luong, Brian Sykes, Kevin Hanlon, Jon Hensley, Amy Nieberline, Sarah Shipp, and Katie Slattery - who supported me in the journey.

to my family for your constant encouragement.

to my husband, Ted, who reminds me that there is a world beyond the studio.
ABSTRACT v
ACKNOWLEDGEMENTS vii
CONTENTS ix
BEGINNING 1
CONSTRUCTING THE STORY 3
CONSTRUCTING ARCHITECTURE 9
FINAL PROJECT 19
PROJECT SITE 21
FLOOR PLANS 25
ELEVATIONS 33
SECTIONS 37
SPEAKING 43
BIBLIOGRAPHY 45
IMAGE CREDITS 47
Through the means of language and sound the storyteller reveals worlds both past and future. But the speaker does not tell stories alone. They require the active participation of the listener. For the worlds develop and find their home in the mind's eye. Here in the mind sound transforms into image. And here personal experience commingles with the narrative to conceive a shared imagination. The storyteller, through the narrative, asks the listener to understand and in turn the listener engages with the story through imagination.
Storytelling is unique from written literature in that the oral narrative allows for an organic evolution based on the acoustic nature of its narrative form. Inherently temporal, the story is based not on fixed visual printed letters but on the transitory spoken word. As such, each time the story is spoken it becomes a product of its time and place. Since the speaker manipulates the story based on the audience’s reaction, the exchange between listener and speaker is of prime importance. The immediate nature of the oral narrative demands an attention to the reaction that the words evoke as opposed to the form that the words take. Never stagnant and always aware of its presence, the oral narrative is in a constant state of evolution.

Noise, or interference, is essential to the constant state of flux in which the story lives. Within the oral narrative, noise brings ‘ambiguity and complexity’ to the story’s interpretation. For example, the use of homophones in storytelling allows the speaker to subversively insert secondary meaning. This complexity is derived from the acoustically ‘imperfect and incomplete transmission’ of the story’s message. Noise in the story should not be considered a negative attribute. It is what brings life to the story allowing the listener to perceive new meanings.

1 Cazelles, Soundscapes in Early French Literature, 15.
2 Ibid., 21.
3 Ibid., 16.
The dynamic evolution of the oral narrative is generated by noise. However, this noise is contingent on the narrative’s construction in sound. As the basis for the story’s evolution, sound is an inherent characteristic of storytelling. But what particulars of sound are transferred to the nature of the oral narrative?

As we perceive them, sounds are a temporary phenomenon bound in time. Since, unlike objects, sounds do not endure, they are therefore ‘event-like particulars’ rather than ‘object-like particulars’. Sounds occur through time, and they require memory to perceive their entire contextual series. Whereas the written narrative is distinct as it endures in the form, which it was generated, oral narrative relies on memory to perceive its entirety. ‘To read is to name; to listen is not only to perceive a language, it is also to construct it.’ As memory is dependent on individual perception, it is the memory of the spoken word that is a unique characteristic of the oral narrative.

---

4 O’Callaghan, Sounds: A Philosophical Theory, 26-28.
5 Barthes, Image Music Text, 102.
The thick, dark poison was everywhere now, obliterating the colours of the streams of Stream of Story, which Haroun could no longer tell apart. A cold, clammy feeling rose up from the water, which was near freezing point. ‘As cold as death,’ Haroun found himself thinking. Iff’s grief began to overflow. ‘It’s our own fault,’ he wept. ‘We are the Guardians of the Ocean, and we didn’t guard it. Look at the Ocean, look at it! The oldest stories ever made, and look at them now. We let them rot, we abandoned them, long before this poisoning. We lost touch with our beginnings, with our roots, our Wellspring, our source. Boring, we said, not in demand, surplus to requirements. And now, look, just look! No colour, no life, no nothing. Spoilt!’

- from Haroun and the Sea of Stories
Though the spoken and written word impart different impressions upon the ‘reader’, oral and written literature share commonalities in their narrative structure. Both are composed of what Roland Barthes calls functional units, which are assembled together in ‘storeys’.

To understand a narrative is not merely to follow the unfolding of the story, it is also to recognize its construction in ‘storeys’, to project the horizontal concatenations of the narrative ‘thread’ on to an implicitly vertical axis; to read (to listen to) a narrative is not merely to move from one word to the next, it is also to move from one level to the next.6

These levels of the story bring a complexity, which allows one level of meaning or intent to reinforce another level. Conversely, these levels of meaning can bring ambiguity if the functional units between levels appear contradictory. Whether complex or ambiguous, all units of the narrative are infused with meaning. Despite the fact that the noise, involved in the process of storytelling, may disrupt the communication of the intended meaning, the functional unit’s primary purpose is to represent the intent of the story.7

One of the most effective tools that the storyteller can use to communicate intent is the concrete events. Though a narrative can explicitly say that a character felt an emotion, abstract concepts are often best described through illustration. Representative examples are expressive enough not only to describe the depth of abstract thought but also to catalyze the narrative thread. It is through the assembly of representative elements that the abstract intent is communicated.

---

6 Barthes, Image Music Text, 87.  
7 Ibid, 89.
Through the understanding of the oral narrative, how can an architecture for the creation of stories be conceived?

It is understood that the oral narrative is formed through a dynamic process, which initiated with the memory of a place or time or character develops into an abstract concept. The story does not begin at the beginning. It starts with a moment and is assembled with other moments into threads. Threads of the story are then constructed with purpose along multiple levels. The intent of the narrative is discovered within the threads. Narrative does not come fully formed like Athena from Zeus's forehead. It is formed from fragments of the imagination, which allow us to discover the story.

The architectural imagination can be understood in the same way: it begins with a fragment. These fragments of imagination become points between which we draw lines, joining the moments together in a unifying geometry. Just as a narrative intent can only be described through the functional unit, it is through these lines that we define the descriptive reality of intent.

From where do the fragments emerge? I began my exploration of architecture with the site.

---

Since this was to be a space for storytelling, an analysis of acoustic qualities was essential to imaging the site as a place for the oral narrative. To initiate the analysis, it was necessary to determine the characteristics of sound and how those characteristics should be recorded. As this was a study based on perception, I placed myself at the center. From this center, a sound rose, a diagram based on the cardinal directions, was created to describe direction and loudness. In addition, time, expressed in multiple sound roses, and echo, as represented as line quality, were chosen. Each sound rose recorded three dimensions of sound, and the use of multiple roses allowed for the introduction of a fourth dimension, time. In developing the models of these experiences, I used the stacking of the roses to express the fourth dimension within the limitations of our three dimensional world.
Sound allows us to perceive not only direction and distance but also space. It is directly affected by the space in which it was generated, and this effect of volume and material is translated into the nature of the sound. To imagine an architecture based on sound would be to imagine the volume of the negative space rather than the delineation of the positive construction. Rather than begin by drawing lines, I began by erasing mass in order to create space.
Though the process of exploring the plan by imaging sound was a necessary step, it was not until I explored a fragment of a space, rather than the entire plan, that I was able to truly imagine an architecture for storytelling. I began with the auditorium, the space for the performance of stories. It was in the auditorium that I found the first point around which the geometry of the building would develop.

My exploration came from a desire to have the audience understand their location in space through sound. In the initial section, I imagined the raked floor, constructed of steel beams and exposed to both the lobby and the auditorium, allowing sounds to transfer between the two spaces. Initially this concept of suspension led to the placement of the space on the upper levels of the building.

As I began to explore the site and its relationship to the auditorium, I realized that I was not addressing one of the most important sounds on the site, the Metro exit. Located on the North side of the site, the Metro exit produces constant sounds and activity. It was necessary for the Auditorium to address the Metro either by remediating or embracing the Metro noise. The notion of the auditorium suspended in space, allowing the audience to conceptualize their location through the noises around them, informed the final decision: The Auditorium should project and filter the sounds of the Metro by cantilevering above the Metro opening.
From the auditorium suspended above the Metro, the building grew along a spine, which creates a pedestrian alley between the proposed building and existing adjacent buildings. This second element housing offices, market, and the storytelling non-profit developed around the ideas of permanence and adaptability. The thick concrete core contains the library, classroom, and offices of the storytelling organization. The steel structure with its thin floor plates supports the leasehold and market stalls.

The paths of the different functional elements were imagined as the multiple threads in a story. At times, the threads overlap, and in other instances these threads are completely isolated. The complex relationship of the functional elements inspired the network of circulation around which the structure of the building developed.
Study Model looking toward Metro exit and Auditorium
The following images represent the final design concept of an architecture for storytelling. From plans, to section, and modeling, each graphical representation is an attempt at applying Hemingway’s iceberg principle:

*I always try to write on the principle of the iceberg. There is seven-eighths of it underwater for every part that shows... If a writer of prose knows enough about what he is writing about he may omit things that he knows and the reader, if the writer is writing truly enough, will have a feeling of those things as strongly as though the writer had stated them... [But] if a writer omits something because he does not know it then there is a hole in the story.*

- Ernest Hemingway

The drawings that follow tell a story of architectural discovery. My hope is that you may discover your own stories within the lines of the drawings.

*Turchi, Maps of the Imagination, 48-49.*
Located in Washington, DC, adjacent to the Dupont Circle North Metro exit, the project site extends south along 20th St NW and is then bounded by Massachusetts Avenue at its southern terminus. The area is currently used as a parking lot; however, on the weekends, it is used for the Dupont Circle Farmer’s Market.
Historically, buildings bound 20th Street on both sides. When the Metro infrastructure was built, the last remaining buildings along 20th St NW were demolished. These structures on the west side of the block along with the buildings fronting Connecticut Ave had formed the space of Riggs Court. The proposed building recreates this Court by creating a new pedestrian alley.
a - Auditorium Lobby
b - Cafe
c - Leasehold
d - Market Stalls
e - Dupont Circle Metro North Exit
a - Terrace
b - Auditorium Back of House
c - Leasehold
d - Market Stalls
e - Listening Room
View of Model looking at Southwest corner
THIRD FLOOR PLAN

a - Auditorium
b - Auditorium Back of House
c - Recording Room
View of Model looking from South elevation up the grand stair
a - Auditorium
b - Green Room
c - Leasehold
d - Speakeasy Offices
e - Classroom
f - Speakeasy Conference Room
g - Terrace
h - Salon
i - Guest Room
Thus in silence in dreams' projections,
Returning, resuming, I find my way through the hospitals
The hurt and wounded I pacify with soothing hand,
I sit by the restless all the dark night, some are so young,
Some suffer wounds, I recall the experience sweet and sad,
-Walt Whitman, From Leaves of Grass, 1876. As carved at the Metro exit.
TRANSVERSE SECTION AT AUDITORIUM
The Planet on the Table
by Wallace Stevens

Ariel was glad he had written his poems.
They were of a remembered time
Or of something seen that he liked.

Other makings of the sun
Were waste and welter
And the ripe shrub writhed.

His self and the sun were one
And his poems, although makings of his self,
Were no less makings of the sun.

It was not important that they survive.
What mattered was that they should bear
Some lineament or character,

Some affluence, if only half-perceived,
In the poverty of their words,
Of the planet of which they were part.
In storytelling as in architecture, you begin with a fragment of space or character. This fragment may be an abstract concept or a remembered reality. However, it is from this point that the author/architect starts fleshing out the story giving it personality through concrete examples and material reality. Finally, the intent of the initial idea becomes clear, and in the end, the author/architect is left with the lineaments of the original dream made material in words and form. This architecture is my story and the drawings and models, my words.
BIBLIOGRAPHY

BARTHES, ROLAND. 1977. IMAGE MUSIC TEXT. TRANSLATED BY STEPHEN HEATH. NEW YORK: HILL AND WANG.

CAZELLES, BRIGITTE. 2005. SOUNDSCAPE IN EARLY FRENCH LITERATURE. TEMPE, ARIZONA: ACARS.

O'CALLAGHAN, CASEY. 2007. SOUNDS: A PHILOSOPHICAL THEORY. OXFORD: OXFORD UNIVERSITY PRESS.

RUSHDIE, SALMAN. 1991. HAROUN AND THE SEA OF STORIES. PENGUIN GROUP.


STEVENS, WALLACE. 1996. COLLECTED POEMS OF WALLACE STEVENS. VINTAGE BOOKS.
