Thesis submitted by

**Anna Maria Barbour**

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Approved

________________________

Paul F. Emmons, PhD

________________________

Jaan Holt

________________________

Marco Frascari, PhD

________________________

Susan C. Piedmont-Palladino

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abstract

The urban realm is a collage of ruin, artifact, and modern invention. Whole pieces and fragments linger untouched or prosthétized onto new constructions, creating a landscape of monsters. These creatures, beautiful or grotesque, metamorphose through time. The tendons that tie these body parts together tell the story of architecture. This thesis explores the joint between such members: the detail of the space between.
acknowledgements

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PS
Wags to the #1 pooch, Ashley, for making those late nights at studio a bit less lonely.
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“The joint, that is the fertile detail, is the place where both the construction and the construing of architecture take place.”
Marco Frascari
Located in Old Town, Alexandria this site belongs to a block of row houses on King Street. The row house typology has commercial use at street level and residential above. Dating back to the early 1800’s, the main building of 1011 King Street remains intact after several lifetimes of programs.
site elevation
Originally built for commercial use, 1011 was converted into a church in 1975, The United House of Prayer for all People. Its presence on King Street has faded with vacancy, and needs a new identity.
There are three main spaces needed for making violins: **Seasoning**-for drying of wood, aging it for up to 20 years before use; **Carving**-hand tools shape wedges of wood into the curved instruments; **Curing**-after crafting, a varnish is applied for protection and beauty.

The main tools needed for hand crafting a violin: A sturdy work surface, sharp tools, and plenty of light.

The walls are intentionally thicker than needed, to buffer the city from the violinmaker’s realm. A western facing light well filters light down onto the main work surface. The glazed stairwell on the east also offers indirect light. All tools have their own place. The Curing Room is dust free and contained. The Seasoning Area becomes a screen for the workroom’s operatic bathroom.
Several species of wood comprise a single instrument. The back is a hard wood such as maple, sycamore, or beech. The trees from the northern slopes of central European mountains have dense fibers but are light weight. The front is a soft wood, such as pine or spruce, that is flexible across its grain, side to side. The tailpiece, neck, and end button are typically ebony. The bridge is also a soft wood, flexible front to back. The purfling, an inlay bordering the front, is white wood and ebony, preventing any cracks from spreading from back to front.
golden section

The golden number is prevalent in the geometry of the instrument. The ratios repeat themselves throughout the body of the violin.
monsters

“The marriages between analogous architectures give birth to hybrids and those between diverse architectures generate ...monsters”
-Camillo Boitto
“In architecture, monsters are always located in the joint between architectural elements.”

- Marco Frascari
“Buildings are cultural texts that are generated by assembling fragments, excerpts, citations, passages, and quotations. Every building is then both assimilation and transformation of other building.”
-Marco Frascari
case study: cremona

The lifestyle of the Cremonese Violin masters allowed sufficient time to perfect the instrument design used today. Their clients, mostly wealthy and royalty, had ample funds and time to allow a slow-paced unhurried environment in which to hand craft their product. The great makers all lived within a close proximity to each other and the S. Domenico Monastery.
The monastic life and violinmaker’s life had similar qualities. Violinmaking was a way of life. The enduring dedication to the trade was usually passed down to the next generations. They sought constant refinement in the craft, existing with a brotherhood of contemporaries.
The original building is a remnant of 19th century city. Spatially, it was insufficient for the new program. In order to retain its scale and character, a conscious decision was made to completely separate the two buildings. The front building, Building 1 would begin the transition from busy street life to a quieter place for the violinmaker’s shop and residence, Building 2. The space between is the bridge.
The violin’s compressive and tensile parts meet at the bridge, which vibrates the strings allowing sound to resonate in the body of the instrument. The bridge of the building connects the two.

Bridge as machine? The south wall of Building 2 has a louvered screen that filters intense daylight. At night, it pivots to enclose a performance space/garden. The louvers now bounce sound back down to the audience. The old building cradles the bridge when it is lowered.

The character of the building is not machine-like, so the moving part was eliminated. A new roof was necessary for Building 1, so the projected pitch became a canopy between the two parts. The burden of weight was removed from Building 1 and was supported by columns, floating the roof above Building 1.
Bridge as parasol?
The steel flanges of the new “bridge” are pinned to the column, allowing for gradual movement. Tension cables hold the arms apart and tie the structure in front of Building 1. Adjusting the angle of the members created a new roof deck above Building 1. Louvers join the parasol together, screening the courtyard and Building 2 from southern light.
1 wine cellar
2 tunnel
3 mechanical room
4 electric tools
5 storage
The entrance on King Street is through the original main doorway. The brick party wall remains exposed, and there is a view into the courtyard through a sheet of frosted glass. A raised concrete basin punctures through the window, forcing the visitor to turn left into the parlour. There are no violins present, just a quiet room where the instrument can be heard. Building 2 can be seen through the courtyard containing the silence. Upon entry is a two-storey space preparing the way into the shop. The wooden floors curve away from the walls, becoming the brick wall’s base. The view into the carving room is past one of two massive concrete walls that carry the load of the floors opened for the light well. Beyond is the seasoning area. Wedges of sycamore and maple suspended on shelves disguise the toilet/opera room on the other side of the translucent wall.
The stairs belong to a light well that spills indirect light onto each floor. At the curing level, threaded wires threaded into the concrete walls to suspend violins freshly coated with amber varnishes. The entire room is contained and saw dust free. Beyond is the two-story seasoning room and office, flooded with plenty of North light. A door at the top of the stairs leads to Building 1 across a flying bridge cantilevered by a steel arm similar to the large canopy. Only after journeying through the building, is one permitted to see a violin in the viewing/hearing room.
The second and third levels are the violinmaker’s residence. Between the two concrete walls is the galley kitchen. Suspended shelves hold necessary housewares and filter the western sun at the big window. A private sleeping room and bathing room are at the north end of the house. The south end is open for eating and reading. The door leads to the roof deck of Building 1.
The violinmaker’s suite and a large socializing space make up the fourth floor. The closet hovers above the floor, attached to the concrete wall. A wet bar is hollowed out of the other wall. Books and important heirlooms replace bricks in the exterior/interior walls.
The roof has sedums growing over the south and north sides. Excess water drains north and enters the storm water system via internal drains at the corners of the walls. A roof deck faces west for views of the George Washington Masonic Temple and eastern Alexandria.
transverse section
south to north
transverse section
north to south
The three-story light well illuminates the carving surface. King-post tensioned beams span the varying floor lengths and connect to steel girders supporting the individual levels.

Queen-post tensioned beams span the entire length of the building. The beds and office desk hang from the structural channels of the exterior/interior walls. The only enclosed spaces are the toilet/opera and bathing rooms. The wooden ceilings curve down to meet the partition walls. The drying racks for the seasoning wood are suspended from the beams above.
The front exterior is sand blasted and all window openings remain but are framed in steel with a reveal around the rough brick. The street level windows are sealed with laminated wood panels. Slivers of cast glass cut through the wood. Above, double glazed windows filled with fiberglass emit a translucent glow.

Deep window boxes frame the upper floor balconies. The flying bridges are cantilevered.
Building 2 is structural steel with masonry infill. The contextual quality of brick is maintained, though used in a modern way. A cavity wall system lets the veneer and interior act independant of each other. Bricks are hollowed out to make shelves, closets, places for tools.
stair light well  

wall study-colored pencil  

seasoning room - bathroom/opera


Anna Maria Barbour

2004
**Masters of Architecture**
The Virginia Polytechnic Institute and State University

2002
**Bachelor of Science in Architectural Studies**
The Florida Agricultural and Mechanical University
*magna cum Laude*

2003
**AIA NOVA**
Alexandria, VA

2002
**Akin & Associates Architects**
Tallahassee, FL

2000-2,3
**SPW, AIA**
Alexandria, VA

1999
**DAG Architects**
Destin, FL