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“Framing God’s House: The timber-framing practices of the Carolina Lowcountry’s Anglican Parish Churches and Chapels of Ease”

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FRAMING GOD’S HOUSE IN THE LOWCOUNTRY

Sitting majestically on the banks of the Wando River, Pompion Hill Chapel represents the height of Georgian Anglican architecture in the Lowcountry. The Flemish bond chapel dating from the middle of the 18th-century is capped by a jerkin-head roof clad in original welsh slate tiles.

Within the roof Lowcountry buildings supported the awkward roof life using a complex and massive King Post Truss system with a series of raised tie beams accommodate the chapels ever-cracking coved ceiling.

Discussions of the grace of Pompion Hill Chapel and other Lowcountry Anglican churches are well rehearsed by architectural historians. The monuments of the Anglican faith have been explored in the already-seminal study *The Beauty of Holiness* by Louis Nelson. Here Louis eloquently relays the residues and practices of early modern *material religion*—the fusion of the corporeal and sacred in the pursuit of life everlasting. But beyond the meaning and uses of these spaces, my small and humble contribution to this discussion concerns the means through which these edifices of faith and hope were achieved—the timber systems through which God’s house was framed.

This paper briefly examines the manifold framing systems used in the rural parishes of the Lowcountry during the 18th and early 19th centuries. In doing so it begins to build a discussion of the wider choices Lowcountry builders made during this period in other building forms. To do this I will use eight surviving chapels and churches built from the 1750s to the 1830s. Together they demonstrate the trajectory of *public* building practices as seen through eight Anglican churches and chapels in the parishes. The rural focus of the paper is once again an attempt to round out previous discussions of sacred architectural in the Lowcountry which have centered on the city churches of Charleston—St. Michael’s, St. Philips, the Cathedral of St. Luke and St. Paul have been closely examined by practitioners, and yet the the building choices and construction of the rural parishes, Lowcountry towns, and chapels of ease have been largely overlooked by scholars. Today I begin to bring them into the conversation with the City Churches of Charleston in order to bring about a better, more holistic understanding of Anglican construction from the middle of the 18th century through the first half of the 19th century.

FRAMING AS ANSWERS TO QUESTIONS

Framing systems are answers to building problems. Socio-manifestations that material cultural specialists can probe building choices to locate and construct meaning in the built environment. Within these meanings questions of scale abound. Important among these is how does one link individual choices in construction, such as the planning of king post members, and the choice scarf joint of a wall plate, with wider construction practices. More broadly, can we, as David Shields asked, “find region in material culture?”.

The answer is yes and no. Yes in the sense there are definable broad patterns of distinctive material culture processes that are recognizable at the local level. For example, the

Charleston single house was one urban regional expression that appeared as a solution at the confluence of ecological, climatological, socio-cultural, and economic forces. At the same time the answer to this question is also no. Ideas, practices, and experiences are ported in time and space. The earliest congregants to the Carolina colony came from points abroad, for example Barbados, Bermuda, and London among other locales. Their experiences-- the learned practices in those locales--were transported to the space which is now called the Lowcountry, they simmered in the Carolina heat and were deployed and employed in contextual ways, as products of circumstance.

In both the cases of yes and no, socio-cultural practices were answers to questions. In the simplest of forms, Carolina colonists had to ask, how do we *build* a building here in this hot, swampy, and mosquito-infested region? Call it adaptation, creolization, or practice-based emergence, distinctive forms based on local, regional, and global forces shaped the advent of the Lowcountry's vernacular building culture. Within this set of practices, the designs and methods of framing systems were means to an end, the vehicles through which architectural spaces were structured and covered. They were the answers to some of the building questions. The evolution of the Lowcountry's timber-framing tradition is thus an index of the region's broader socio-cultural rhythms. By examining the changing vernacular framing practices present throughout the region, we will come to a better understanding of the negotiation between endeavored social spaces and practical building solutions.

The built environment, including framing systems, is a product of place--the unique constellation of circumstances, knowledge, and environmental conditions that give rise to architectural forms.

The Lowcountry is a product of particular circumstances which pushed early settlers to ‘adapt’ and ‘innovate’ their architectural ideas, translating notions of framing to the socio-cultural and environmental context of the region.

OUT OF MANY, ONE CHURCH

For roughly the first twenty-six years of settlement, Carolina was a “religiously tolerant” colony founded and administered by the Lord’s Proprietors. By 1706, however, the fervor for Anglican religious primacy finally came to fruition. The Carolina Church Act of 1706 made the Anglican faith the official religion of the colony. While others continued to worship freely (save Catholics), the 1706 Church Act legitimized the fusion of Church and State within the colony and set about a flurry of church construction throughout the regions as the act established the parish system.

Several waves of parishes were established throughout the eighteenth century, and came to fill the landscape of the Lowcountry. While this quickly took place directly after the Church Act with parish churches established along the coastline, the current complement of Anglican churches all date from the middle of the eighteenth century. A host of hurricanes, fires, and other divine and human-related cataclysms (such as those briefly described above in the southern Lowcountry), have all but erased the earliest Lowcountry architectural forms. Instead, it seems that by mid-century the colony—as a direct result of its prosperity from rice cultivation—began major architectural rebuilding in Charleston proper as well as in its plantation environs. Civic and religious structures, such as the parish churches and chapels of ease, were aspirational monuments to the permanency and primacy of the Crown and the Anglican religion. Brick,

endemic to the English colonies and stone to the Greater Caribbean symbolized wealth and permanency in the uncertain New World. The investment in brick edifices in the Chesapeake and the Carolinas was a signal and index of the maturation of the colony. As early as 1665 in Virginia at Arthur Allen's estate (Bacon's Castle) and 1742 at Drayton Hall in the Lowcountry, brick was a marker of wealth and status in the extremes of the western Atlantic. For the middle of the eighteenth century in the Lowcountry, brick was the material of choice for holy builders. But the articulation of those brick edifices represents a diversity of forms and figures.

UPON BRICK FOUNDATIONS

Much like the city churches of Charleston, Lowcountry congregants encouraged builders to import fashionable metropolitan ecclesiastical designs into the rural parishes. Like their city counterparts the rural churches embraced the emerging notions of the Anglican faith during the formative years after the restoration. Auditory plans championed by church designers such as Wren emphasized the role of the Word. At the same time the re-emergence of Laudianism re-elevated quite literally the place of the chancel and altar both in London and in the colonies.

The focus on fashionable metropolitan fittings for churches extended to the parishes with the commissioning of liturgical accoutrement directly from pattern books such as the pulpit at Pompon Hill Chapel which takes after plate 72 in Batty Langley.

While the interiors of churches were fitted with the latest and greatest roof systems which covered and protected those sacred spaces also drew direct influence from metropolitan notions of framing systems—namely trusses.

Inigo Jones was the bridge between emerging modern forms of construction and design and the British Isles. Drawing inspiration from existing Palladian construction throughout Italy, Jones successfully imported the truss system to London and Britain. While earlier robust construction relied on heavy, massive tie beams or hammer beam systems which were limited by the size and length of wood members, king and queen post truss systems allowed for more slight tie beams, and even multiple scarfed segments of wood to comprise the tie section in order to span wider spaces. The Banqueting Hall (1619) in London and the Queen's House in Greenwich were the earliest known execution of these designs (simple King Post construction) in London, yet little of these systems still survive. Truss systems were quickly adopted by later other prominent builders such as Wren who deployed truss systems to cover new London churches as a part of his post-fire rebuilding campaign including churches at St. Mildred, Bread Street, St. Mary's at Hill, St. Mary at Abchurch, St. Mary at Aldenbury, and St. Margarets at Pattens.

The success of the truss system in London markets and public building in London was due to the fact that larger wider spans could now be gapped because the tie beams, supported by central king or flanking queen posts, could resist the outward thrust of the principal rafters.

In addition to providing the means for larger spaces, trusses were useful for early modern builders in several ways. Functionally Wren embraced them because truss systems created more easily usable attic space for buildings, still too the central supports of king and queen posts allowed builders to push the boundaries of flatter more fashionable roofs during the 18th century. For sacred architecture the truss system provided the solution to an aesthetic preference—soaring

vaulted and coved ceilings which would become the mainstays of 18th-century Anglican architecture. Because forces could be segmented and diverted throughout the truss system, now ceilings could project upwards above wall plates to create a heavenly scene within the confines of the nave. To do this, Wren and others employed a raised tie beam system to allow the cove to project above the wall plates. While a solution, this arrangement severely weakened the truss system by creating a massive loading point at the connection between the raised tie beam and the principal rafters. To compensate for this Palladio, Jones, and Wren recommended metal strapping at the point of tension. Despite the weakness of this system, raised tie beam trusses became a main stay in 18th and 19th century Britain.

MID-CENTURY MODERN

By the middle of the 18th century a massive rebuilding of Anglican churches took place. The first iteration of buildings, primarily timber-framing edifices, had come and gone. The investment in this brick architecture meant that still too new roof forms could cap these spaces.

Lowcountry rural builders almost exclusively imported the king post and king and queen post truss system into the region as a means of creating fashionable Anglican spaces. Much like in Britain and Virginia the location even outside of the capital dictated the arrangement and execution of these spaces. At the growing port of Georgetown, booming from the emerging rice production of the northern Lowcountry plantations. When the parish split in 1747 as the population grew in and around the town, a new *town church* was commissioned. The new structure featured a side-aisle arrangement with flanking columns which rise to the a vaulted ceiling. Unlike a slightly later iteration at St. Michael's the framers decided to use a raised tie

beam system which would support a central king post. Below the cover a set of queen posts which are supported by aisle columns in the nave. The system seems to be ported directly from Price's *The British Carpenter* right down to the dovetail tail joints. To add further rigidity to the system between the trusses, dropped ridge, or locally called 'owl boards', and metal strapping to the head of the King Post to keep the system in tension, supporting the gabled roof. The purlins are slight and continuous and do little to support the system, a hallmark of earlier iteration of purlins in the region.

While the complex king and queen post system supports the roof at Prince George Winyah, a triplet of buildings—St. James Santee, Pompion Hill Chapel, and St. Stephen's offer evidence of how the truss system was employed at smaller, more slight structures in the rural parishes. Each employs a different iteration of the king post truss system to suit the diverse arrangements of the structures. At St. James Santee, erected by 1768 features three small king posts to support the low-sloping hipped roof of the church. Oriented in a cross-aisle auditory plan the coved ceiling only slightly projects into the roof space which did not necessitate the extreme raising of the tie beams. The joinery relies on the prescribed mortise and tenon system with single pegging, a testament to the ease with which the truss system carries the load of the hipped roof. Adding further support to the system a pair of porticos were added to the north and south sides of the building just shortly after construction.

Santee represents the safest, and most conventional truss system surviving in the rural parishes. Some three years earlier the same framers who fabricated the king and queen post system at Prince George Winyah embarked on a similarly complex system at Pompion Hill Chapel.

Completed in 1763, as described in the opening of this talk, Pompion Hill features a jerkin head roof clad with slate tiles. Here framers employed a raised tie beam system to accommodate the soaring coved nave ceiling below. To strengthen the system, a series of shouldered struts, or what might be considered queen posts given their heft, to flank the central king posts. The system interestingly does not add further support to the connection between tie beam and principal rafters. This creates an extraordinary amount of force on a single mortise and tenon joint. This ironically was the point of failure for the system, exacerbated in part by the addition of the slate tiles which replaced earlier wood shingles.

The same framing crew were commissioned at St. Stephen's parish church some three years after the completion of Pompion. The vestry had contracted two previous builders had failed. In their third iteration of the truss system in Lowcountry sacred architecture, they employed a king post raised above an already elevated tie beam to adequately support the structure's gambrel roof.

This raised system provided maximum support to the roof apex while the raised tie beam added rigidity to the downward angle of the gambrel roof, a lower set of struts connected to truncated tie beams support the roof at the wall plate. The dispersed nature of the force allowed builders to employ a relatively light and yet widely dispersed system to support the changing angles of the roof systems.

TRUSTS ISSUES

In the case of each roof constructed by the same crew at Winyah, Pompion, and St. Stephen's the systems began to fail within fifty years after their completion. At Winyah, the added downward force of the queen posts over the aisles was too much for the hollow wood columns below, necessitating their support both in the 19th and now 21st century. At Pompion Hill as alluded to

above the stress at the tie beam needed to be reinforced in the 1980s by steel plates and bolts to ensure the roof's survival. And at St. Stephen's added 19th century struts and the replacement of the slate tiles with synthetic shingles in the 20th century saved the system from collapse. These issues demonstrate the still experimental nature of the truss system in the Lowcountry vernacular during the 18th and early 19th centuries.

INDUSTRIALIZATION

The use of carefully crafted truss systems wanes after the turn of the quarter nineteenth century.

While skilled artisans moved from parish to parish erected idiosyncratic trusses throughout the 18th century, by 1819 this skilled and craftsmanship seems to have fallen out of favor. This can be seen at the small church of St. Thomas/St. Denis. The existing building at the site dates to 1819 however in 1830 the interior, specifically the liturgical arrangement flipping the southern entrance and cross aisle to a longitudinal plan. The roof framing system however remained untouched. Inside one can glimpse the move toward the industrial preparation of timber-framing in the region. Unlike its predecessors, which featured elegantly executed king post truss systems, the builders chose to use a simple common rafter system with collars. All of the framing members were prepared by a mill saw. Beyond the industrial preparation of the members, by this time we can begin to see the move away from joinery at the connections in favor of butting and nailing—while connections at the ridge and at the collars are mortise and tenoned, the common rafters are not connected at the plates. The only specialized joinery in the system are a series of stacked through tenons pinned into place which act as outriggers connecting the the end common rafter pairs to the brick end walls. As the 19th century progressed Lowcountry buildings began to rely on industrial light framing as it became more economical and easily assembled without the skilled labor of craftsmen.

TRUSSES IN SERVICE

Truss systems for Lowcountry churches were a direct result of the emergence of eighteenth-century liturgical forms in both town and country. They served similar and yet divergent purposes in this context. Much of this was driven by metropolitan design and changing notions of liturgical space. These purposes were different based on forms. In larger multi-aisled spaces, the king and queen post systems allowed builders to span multiple aisles as is the case at Prince George Winyah in Georgetown and in a similar fashion, to St. Michael's in Charleston. It was in these seats of power that more traditional longitudinal plans continued to structure liturgical spaces, which dictated the use of gabled roofs. In the country, builders employed truss systems as solutions to more fashionable rural designs, the longitudinal plans allowed for more diverse forms, such as the jerkin-head at Pompion, the gambrel at St. Stephen's, and the low-sloping hipped roof at St. James Santee. It seems that replication of roof forms in the case of parish churches was not valued as much as unique forms and architectural profiles of the parish churches and chapels of ease. Perhaps we could think of these structures as unique signals for each parish, that defined their liturgical identities in the landscape. Or from a more mundane perspective, perhaps this diversity of forms was a product of the sorting out and experimentation process that Lowcountry buildings worked out in the middle of the eighteenth century. Because these buildings were not on display in the same way as the city churches of Charleston, builders could experiment with metropolitan design in the rural environs of the Lowcountry parishes.

This discussion is incomplete. There are several buildings within the region that have yet to be examined. Additionally, there are several roof systems that currently do not have roof access. St. Andrew's Parish Church and Strawberry Chapel being the most notable for this discussion. More systems need to be added to this discussion, most especially some of those churches that are located within the city proper as well as other rural churches in the region such as St. Philip's, St. John's/St. Luke's, St. James Goose Creek, and Pineville. At the same time, a closer look is deserved at some of the buildings that no longer retain their roof structures—Pon Pon Chapel, Prince William Parish Church (Old Sheldon), and St. Helena's Chapel of Ease also do not have surviving roofs. However, comparing the spans of these buildings with existing examples of similar spans constructed at similar times might provide insight into the possible roof systems employed at these sites.

This paper has highlighted the diversity of forms and solutions to building problems in the early modern Lowcountry. Now understood we can begin to interpret these systems and decisions within the wider frame of the British Atlantic to better place the swampy Carolina coast within the trajectory of British vernacular.