

Creating Place  
in Early Modern European Architecture

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# Table of Contents

List of Illustrations	7
Abbreviations	21
Introduction: Embracing Specificity, Embracing Place <i>Elizabeth Merrill</i>	23
1. Architecture on Paper: The Development and Function of Architectural Drawings in the Renaissance <i>Wolfgang Lefèvre</i>	41
<b>Part I Marking Place</b>	
2. The Santacroce Houses along the Via in Publicolis in Rome: Law, Place and Residential Architecture in the Early Modern Period <i>Nele De Raedt</i>	73
3. Towards a New Architecture of Cosmic Experience <i>Noam Andrews</i>	99
4. Architecture for Music: Sonorous Spaces in Sacred Buildings in Renaissance and Baroque Rome <i>Federico Bellini</i>	121
<b>Part II Teaching Place</b>	
5. The Spedale di Santa Maria della Scala and the Construction of Siena <i>Elizabeth Merrill</i>	159
6. Places of Knowledge between Ulm and the Netherlands in the Seventeenth Century: The <i>Kunstammer</i> of Johannes Faulhaber <i>Paul Brakmann and Sebastian Fitzner</i>	191

7. Nicola Zabaglia's Scaffoldings for the Maintenance of Architectural Space in St. Peter's Basilica and throughout Europe in the Seventeenth to Nineteenth Centuries 235  
*Stefan M. Holzer and Nicoletta Marconi*

### Part III Excavating Place

8. Building on 'Hollow Land': Skill and Expertise in Foundation-Laying Practices in the Low Countries in the Fifteenth to the Seventeenth Centuries 267  
*Merlijn Hurx*
9. The 'Conquest' and Construction of an Urban Place: The *Insula dei Gesuiti* in Venice in the Early Modern Period 303  
*Ludovica Galeazzo*
10. Exploring the *Book of Fortresses* 335  
*Edward Triplett*
- Index 369

## 4. Architecture for Music: Sonorous Spaces in Sacred Buildings in Renaissance and Baroque Rome

*Federico Bellini*

### Abstract

Architectural spaces are usually considered only in their visual and three-dimensional character. However, the proper experience of space is multisensory. Sonority is undoubtedly the non-visual characteristic that most affects architecture, influencing its three-dimensional shape, and the size and distribution of its individual parts. Early modern sacred architecture is a case in point. Focusing on Rome and the development of architecture in relation to musical practices, this article demonstrates how architectural forms evolved through a process that ranged from provisional installations to the design of entirely new churches and oratories. In the Baroque period, these religious structures were conceived as synaesthetic spaces of sonority and architecture, in which vision, hearing and liturgical acts merged in an expressive unity.

**Keywords:** Catholic Church, Borromini, oratorio, Bernini, acoustics

### Sound and Architectural Space

Remains of the nineteenth-century aesthetic theory of ‘pure visibility’ (*Reine Sichtbarkeit*) survive in the contemporary study of architectural history, even if not explicitly evoked. Still today, scholars commonly assume that throughout history, buildings and cities were largely formed for visual aims. In turn, much of their study is based on purely visual analysis, to which ideological interpretations, based on anachronistic values, are often superimposed. As we know, an architectural or urban place is determined by extra-formal characteristics, such as the cosmic *speculum*

highlighted by Andrews in his article, or the sanctions inflicted on violators of the rules of *civitas* described in De Raedt's text.

Yet, early modern architecture – as most architecture today – was built not only to be *seen*, but to be *used*, in accordance with contemporary needs. The buildings' users had a much deeper experience of architectural space than the aestheticism of our historiography would allow. To borrow from the Latin, they were not just *spectatores* (viewers) but *utentes* (users), involved in their physical, built environment on an emotional, intellectual, and often also moral level. After all, even if only from the perceptual point of view, the use of a space is a multisensory experience that goes well beyond vision. It follows that architectural space cannot be solely measured in terms of the geometry of its constituent volumes. Rather, it is characterized by expressive values that go beyond the isotropy of pure geometry, and which in some cases deform space and even contradict it. In short, in the context of architecture, it is more appropriate to speak not of neutral spaces, but of individual and unique places.

This article uses the ecclesiastical architecture of Renaissance and Baroque Rome to examine such a multidimensional understanding of space, giving particular attention to the acoustic focus integral in the buildings' design. In this period, buildings, and even cities, were ordered according to a hierarchy of their representative and symbolic values. The areas dedicated to the most prestigious functions were those that culminated in a system of paths, structures that underlined the symbolic and formal pre-eminence of individual places. The most important places and constructions were those demarcated with a series of overlapping expedients, delineated by size, illumination, ornamental richness, colour and materials. But in many cases, spatial delineation also included sound, an intangible feature that is not easily measured, and which still today is largely overlooked in architectural history.

In certain building types – theatres, auditoria and assembly halls – the primary importance of acoustics is self-evident and requires no explanation. But in the early modern period, acoustics played an equally important role in the spatial construction of a number of other architectural forms, albeit in a manner that is less immediately recognizable. Such is the case with religious buildings, in which the sound assumed different forms that ranged from the spoken word to singing and instrumental music.<sup>1</sup> In the period between 1450 and 1800, sound played a subtle role in conditioning the three-dimensionality and the formal hierarchy of religious spaces, as well as their conceptual representation. This is immediately recognizable in the first Protestant buildings, in both the Evangelical and Reformed traditions. The sanctity of a Protestant church was determined not by the materiality of the building or its ritual forms, but by the pronouncement of the Word, that

<sup>1</sup> Among the few contributions on the topic, see Howard, 'Architecture and Music in Fifteenth-Century Italy'; Howard and Moretti, *Sound and Space in Renaissance Venice*.

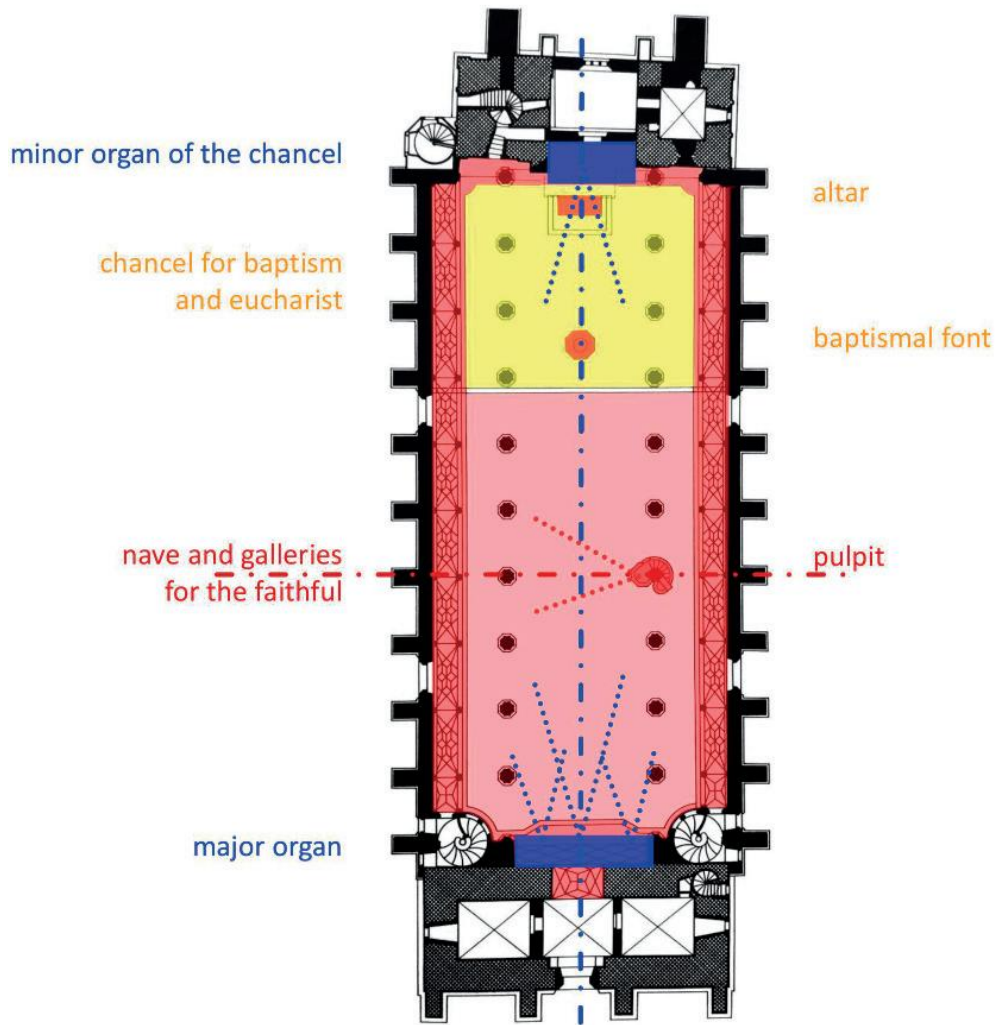


Fig. 4.1 Marktkirche, Halle, following the Lutheran renovations of 1542

a) Plan: (in red) the transverse Querkirche focused on the pulpit of the prayer; (in blue) the longitudinal axis aligned with the chancel area; (in yellow) the longitudinal axis dedicated to Eucharist and Baptism.

© Federico Bellini

is, an acoustic act.<sup>2</sup> The need for all the faithful to understand the readings and sermons lead to important interventions, whereby the churches were adopted from Catholicism. In the first decades of the Reform, the choirs in the naves were removed, the altars were placed in view of everyone; fixed seats were installed

<sup>2</sup> Wex, *Ordnung und Unfriede*; Spicer, *Lutheran Churches in Early Modern Europe*; Harasimowicz, *Protestantischer Kirchenbau der Frühen Neuzeit in Europa*; see also Bellini, 'Riforma protestante e riforma dell'architettura religiosa', with wide reference to the bibliography, which cannot be summarized here.





Fig. 4.1 Marktkirche, Halle, following the Lutheran renovations of 1542  
 b) Nave: looking toward the altar. © Photo: Wikipedia

in the naves and balconies were built around the walls to increase the seating capacity; finally, the axes were rotated 90 degrees to concentrate the visual and auditory focus on the pulpits; pre-Reformation basilicas, which were explicitly longitudinal, were thereby transformed into transverse *Querkirchen*. St. Pierre Cathedral in Geneva (1535) for the Reformed Church, and Marktkirche in Halle (1542), for the Evangelical Church, are perhaps the most emblematic examples of these initial works (Figure 4.1(a-b)).<sup>3</sup>

But while the acoustic quality of Protestant churches is often contrasted with the visual aspect of Catholic churches, such differentiation is a drastic simplification, as acoustics and vision are present in both Protestant and Catholic religious

3 Bellini, 'Riforma protestante e riforma dell'architettura religiosa', 84-89.



buildings, albeit in different ways.<sup>4</sup> In the early modern period, the synaesthetic role of sound in Catholic architecture assumed its own forms due to the different concept of sanctity attributed to the rites and objects of worship (starting with the building itself). The Catholic ceremony is fundamentally multisensory, and involves participants, both clerical and the faithful, with a range of perceptual stimuli that help to explain the architecture of sacred buildings. In the period in question, the church was used for processional rituals, that is, as a framework for choreographed movement. The clergy and faithful moved through it in pervasive, sumptuous processions that struck the sight, sound and even smell, to then return to their assigned place in the hierarchies of religious and social order.<sup>5</sup> Even touch was involved, by virtue of the intrinsic sanctity recognized by Catholics in the materiality of places and sacred objects. Clerics and the faithful ‘used’ the religious space, touching fabrics, images, statues, relics, old walls, and columns, which they believed to contain miraculous and curative humours. With these multisensory qualities, musical sound played an important and sometimes dominant role, often modifying the three-dimensional perception of the religious space itself. Beginning in the second half of the sixteenth century, recognition of the importance of music, and sound, in the spatial experience of the church increasingly played a driving force in architectural design. Architects became not only cognizant of spatial acoustics, but began to design places that augmented and enriched this sensory component.<sup>6</sup>

## Sacred Music and Religious Spaces

Schematically, music influenced the architectural forms of early modern church architecture on three levels. The first is at the level of the senses. Sound influences the three-dimensional perception of space. It is a well-known fact that the reflection time of a sound helps us measure the depth of a space. Music also influenced architecture at the ornamental level. In the early modern period, musical sound was used as a

4 On the role of vision in the first Lutheran churches, see Körner, *The Reformation of the Image*.

5 The celebrated printings of the *Verae imagines Ecclesiae* compare Protestant religious spaces (ordered, static, and acoustic) and Catholic spaces (chaotic, dynamic, visual): Körner, *The Reformation of the Image*, 44, fig. 10. On the procession ceremony of St. Peter's, see Rostirolla, ‘Musiche e apparati nella basilica vaticana per le feste dei Santi Pietro e Paolo’. On olfactory solicitation, see Morelli, ‘La vista dell'apparato superbo’, 299.

6 A group of Italian scholars was formed around this topic. In March 2018, the group presented the PRIN project ‘Architecture for Music: Sonorous Space and Furnishings in Sacred Buildings of the Renaissance and Baroque’, Universities of Camerino, L'Aquila, Venice-Ca' Foscari, Florence, of which I was the principal investigator. The research was expanded with the international seminar ‘Architecture for Music: Sonorous Space and Furnishings in Sacred Buildings of the Renaissance and Baroque’, organized by Federico Bellini and Martina Frank, Venice, Ca' Foscari, 27 November 2018.

complement of architectural space, qualifying it with a type of decorative acoustic apparatus that allowed the architecture express significance in a multisensory experience. Musical sound adds value to the space into which it is performed, and because of its temporality, it is comparable to an ephemeral apparatus, in which sound replaces colour and shape. Finally, music directed architectural design at a symbolic level. In some cases, architecture and music were integrated to shape a space – a place-specific construction – that was completely synaesthetic. In such instances, architecture was conceived in order to furnish a permanent ambience for the immaterial musical component. Architecture and music were thus in communication with one another, despite belonging to different media, and shared symbolic content.

The development of sacred music practices in the early modern period was likewise influenced by the regulations placed on the liturgy and spaces of worship during the Reformation – in northern Europe – and the Counter-Reformation – in Italy. In the context of the Catholic Church, Tridentine principles were decisive in prompting the shift of music towards the congregation. For example, medieval *tramezzi*, or rood screens that divided the clergy from the congregation, were largely demolished, especially in Florence, thereby relegating priests to retro-choirs, but also leaving organ cases half within the nave.<sup>7</sup> At the same time, from the middle of the seventeenth century ecclesiastical authorities were bound to constrain the unregulated expansion of musical spaces in churches.

In examining the evolution of music and religious architecture in the early modern period, it is imperative to understand that the church – in both the Roman Catholic and Protestant traditions – was not only a place of worship. It was also a social space, representing, by its forms, the dominant power of an institution (religious as well as lay), and reflecting the social ranks and the cultural identity of a community. Due to the diffusion of the sung mass accompanied by instruments, churches and oratories were the most frequented spaces in which people could listen to great music (and without cost).<sup>8</sup> This is not say, however, that the impact of sacred music transformed religious buildings into auditoria. In both the Catholic and Protestant churches, the impact of religious buildings remained conditioned primarily by the ritual, that is, the social modes in which worship was practiced. Music was one of the most appreciated and striking elements that contributed to defining the social practices of worship, but it was not the only defining element. The spaces dedicated to performing and listening to music remained subordinate to the general concept of religious buildings.<sup>9</sup> So, in the early modern period, sacred

7 Morelli, 'Sull'organo et in choro', 215-218; on *tramezzi*, see also Hall, 'The *Tramezzo* in the Italian Renaissance, Revisited'.

8 Smither, *A History of the Oratorio*, 160-161.

9 After all, even the architecture of lyrical theatres is not a direct translation of dramatic and acoustic need. The first underlying need was the topographical distribution of social classes, from which the

music and sacred architecture were not themselves independent of one another. They were both subject to the rules of liturgy, or, more accurately, to the rules of the ceremonial practices of liturgy, which could vary from church to church. The performance of religious music, and the architectural space in which this occurred, was thus a production of specific places. This question can be clarified in examining examples related to both Protestant and Catholic architecture.

The first churches conceived explicitly for the new Reformed religion were built in the Netherlands in the early 1600s.<sup>10</sup> In contrast to Huguenot and Swiss temples, the new Dutch *kerken* were monumental buildings realized to express the moral and economic strength of an entire community. In their design, they freely adopted systems and motifs that derived from Italian Catholic architecture, despite the overt religious differences. But the Dutch churches were by no means merely derivative. In their plan and forms, they created spatial structures in which sound played a decisive role.

The Dutch *kerken*, like all Calvinist churches, were not limited to solely religious functions. The church was deemed a sacred place only during worship services.<sup>11</sup> At other times, it was a lay space, an ample setting that could host public ceremonies, even sumptuous ones, accompanied by rich orchestral music. The spatial order of the church interior was adjusted according to use, as was the musical programme. During religious functions, the Dutch churches were used as transverse *Querkirchen* or cross-churches, in which the transept is considerably longer than the nave. Within this arrangement, the faithful would face the pulpit, from which the Word, recited by the presbyter, flowed. The only music allowed was homophones, sung by the faithful without any instrumental accompaniment. By contrast, during public ceremonies, the axis of the interior space was rotated to be situated longitudinally, making use of the magnificent organs whose sound spread throughout the nave. The Reformed Westerkerk in Amsterdam, designed by Hendrick de Keyser (1620-1631), and the Nieuwe Kerk by Peter Noorwits in The Hague (1649-1656), are prime examples of architectural spaces whose axial layout varied as a function of the users' experience, both visual and acoustic (Figure 4.2(a-b)).<sup>12</sup> The axial orientation and adjustment of space, in keeping with a musical programme, was even more pronounced in Lutheran churches, due to the centrality of music in the Evangelical rite.<sup>13</sup>

system of boxes (whether Italian or French is of little importance) is the clearest result. Pinelli, *I teatri*.

<sup>10</sup> Snaet, 'For the Greater Glory of God'; Ottenheym, 'The Attractive Flavour of the Past', 105-114; Bellini, 'Riforma protestante e riforma dell'architettura religiosa', 92-93.

<sup>11</sup> Spicer, *Calvinist Churches in Early Modern Europe*; on religious premises, see Raymond, *L'architecture religieuse des protestants*, and Isaiasz, 'Early Modern Lutheran Churches'.

<sup>12</sup> Bellini, 'Riforma protestante e riforma dell'architettura religiosa', 92-93.

<sup>13</sup> For a more extended discussion of this, see Range, 'The Material Presence of Music in Church'.

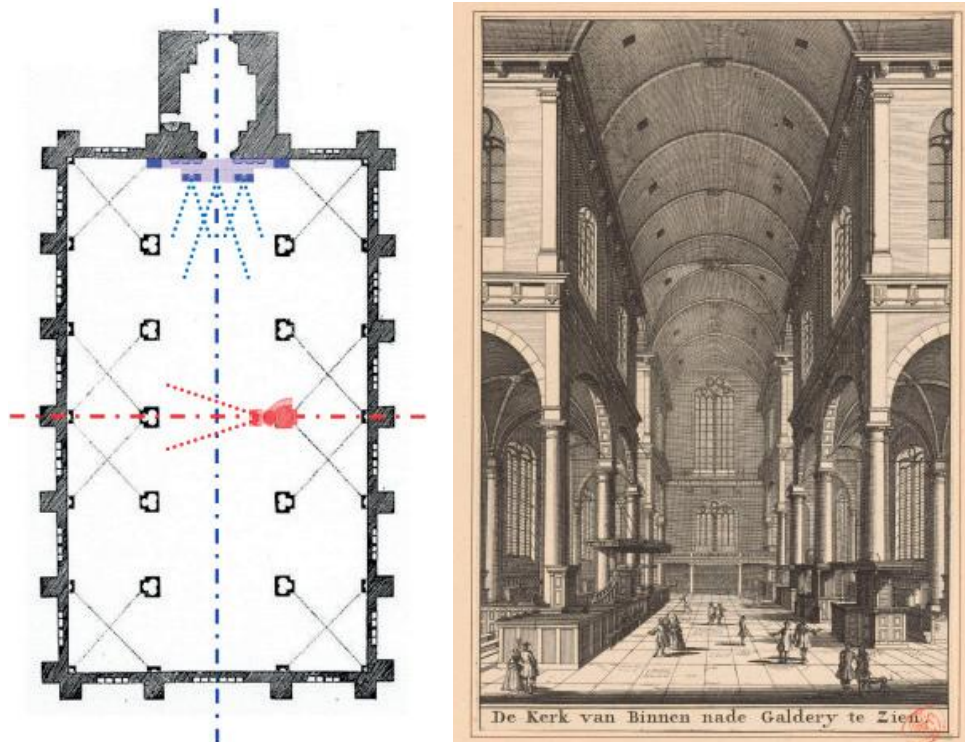


Fig. 4.2 Westerkerk, Amsterdam, designed by Hendrick Cornelisz de Keyser the Elder, 1620-1631  
 a) Sound plan: (in red) the axis of spoken Word; (in blue) the axis of the music and sung. © Federico Bellini  
 b) Daniel Stoopendaal, interior of the Westerkerk, looking towards the gallery. Engraving, c. 1700.  
 Rijksmuseum, Object Nr. RP-P-AO-23-47B

An analogous development of acoustic-driven architecture can be seen in Catholic churches, realized in the same period. The adjustments made to St. John Lateran – the cathedral of the Bishop of Rome, the pope – in the late 1600s provide one example. The church's right transept, pointing towards the city, constituted the favoured access to the basilica for the great pontifical processions, and for this reason its façade was rebuilt in monumental form by Popes Pius IV and Sixtus V in the second half of the sixteenth century.<sup>14</sup> The realignment of the church was furthered by Clement VIII, who between 1597 and 1600 radically renovated the interior, entrusting the work to Giacomo Della Porta, who transformed the transept into an independent space, freeing it from the formal submission to the powerful longitudinal layout of Constantine's basilica. Pietro Paolo Olivieri erected a monumental altar on the southern end of the transept to house the Holy Sacrament.<sup>15</sup> To counter this, on the northern wall of the church's entrance,

<sup>14</sup> Coffin, *Pirro Ligorio*, 50-52; Freiberg, *The Lateran in 1600*, 10-36.

<sup>15</sup> Freiberg, *The Lateran in 1600*, 21-22.



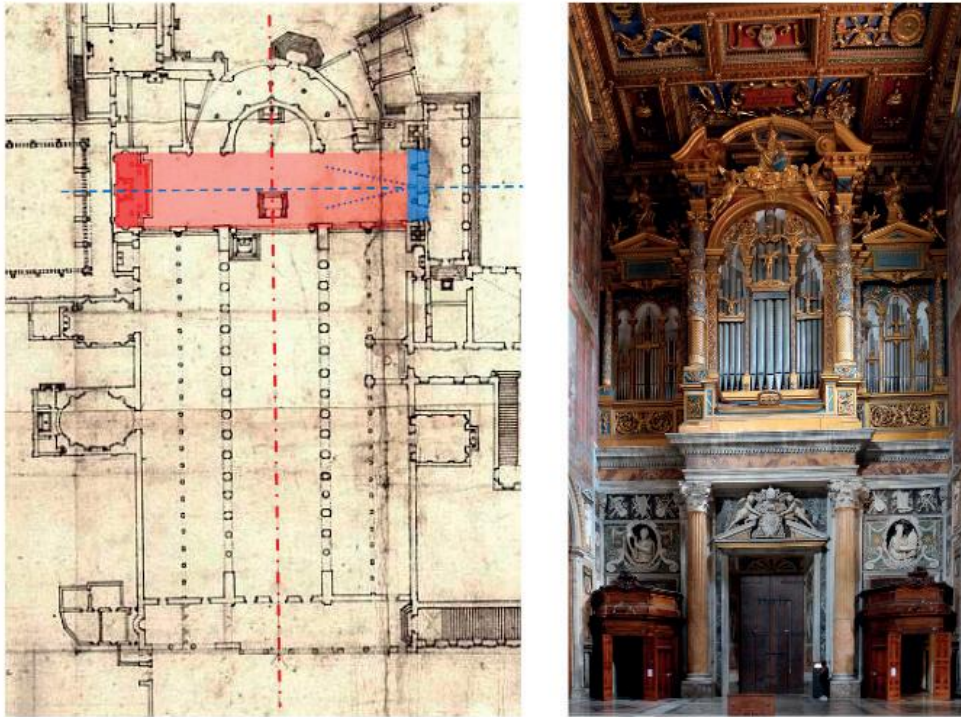


Fig. 4.3 St. John Lateran, Rome

a) Plan by Francesco Borromini, c. 1646: (in red), altar; (in blue), sound axis of the organ gallery. From Albertina Graphische Sammlung, Az. Rom 373a. © Federico Bellini

b) Organ gallery. © Photo: Federico Bellini

Giovanni Battista Montano erected a giant organ loft, the largest and first of its kind in Rome.<sup>16</sup> The redesign of St. John Lateran was completed in 1599-1600, when a team of masters directed by Cavalier d'Arpino painted the series of holy frescoes, following a programme designed by Cardinal Cesare Baronio.<sup>17</sup>

The changes made to St. John Lateran were by no means purely visual in their impact. During the celebration at the altar of the Blessed Sacrament, choral music performed at the organ radiated to the transept and defined the space by means of acoustics. The music also related to the new decorative scheme and the narrative depicted in the frescoes, creating in essence a single synaesthetic system. The parallelepiped of the transept thereby became perceptually (and functionally) independent, which was unknown in other greater basilicas, meriting the denomination 'Clementine Nave' (Figure 4.3(a-b)).

<sup>16</sup> Battistelli et al., *Organi e cantorie nelle chiese di Roma*, 46-49.

<sup>17</sup> Freiberg, *The Lateran in 1600*, 37-158, 288-310.

A second, even more impressive case of acoustic-driven architecture is found in the Oratorio dei Filippini by Francesco Borromini (1637-1640), to which this chapter will later return (Figures 4.13-4.15).<sup>18</sup> Six days per week, the Oratorio was used to pray and listen to sermons read by an Oratorian father seated on a sort of raised cathedra (*sedia*).<sup>19</sup> Borromini designed a rectangular plan and placed the *sedia* in the middle of the long axis, so that during the days of prayer (the so-called *oratorio piccolo*, or the ‘small oratory’), the Oratorio functioned entirely as a transverse *Querkerche*, in which the spoken word dominated. In the evenings on winter holy days (from All Saints’ Day to Easter), the Oratorio hosted entirely different spiritual exercises (the so-called *oratorio festivo*, or ‘holy days oratory’), which attracted hundreds of believers. The spectacular choral and orchestral works performed on such occasions were described by the English traveller Francis Mortoft in 1659:

It beginning to be night, wee went to the Chiesa Nova, where there is most incomparable Musicke every Sunday and holy day at Night, with Organs and 4 Voyces, and wee heard such sweete Musicke, tha a man could not thinke his paines be il spent, if he should come two thousand mile, if he were sure to be recompensed with nothing else, but to heare such most melodious voyces.<sup>20</sup>

Some years prior, Borromini had installed for these festive rites a three-level musical loft that occupied the entire altar end, and on the other end, a loggia of honour designated for cardinals and princes. The Oratorio thus became a longitudinal space between the two loggias, conceived to support the projection and audition of the sung Word. The Oratorio dei Filippini, the emblematic work of the Counter-Reformation *Ecclesia Triumphans*, therefore had a plan that – by historical paradox – recalled many spaces in Protestant churches, starting with the Schlosskapelle in Torgau founded by Luther himself. In both cases, the final form of the church was driven by the common problem of managing the acoustics of the recited and sung Word in spaces that were routinely adjusted according to different function.<sup>21</sup>

Both cases are also instructive in that they demonstrate how sacred music conditioned the space of religious architecture in ways that depend on the particular local conditions. While early modern acoustic-driven architectural design followed general rules, each construct was fundamentally place-specific, adapting to a

18 Bellini, ‘La forma della musica’.

19 On the chair replaced the pulpit, which was prohibited by Saint Filippo Neri, see Bellini, ‘La forma della musica’.

20 Smither, *A History of the Oratorio*, 162-163.

21 Bellini, ‘La forma della musica’; Bellini, ‘Riforma protestante e riforma dell’architettura religiosa’, 97-101.

given site and location, promoting the specific ideas the clergy, and adhering to the specific needs of the congregation.

### **Architecture for Sacred Music: Roman Churches**

Roman religious architecture adapted to the development of musical practices in terms of the typology of plans and the definition of individual elements, such as singing galleries and monumental organ cases. In these formal developments, it might be said that the entire architectural space evolved as well. The following discussion summarizes the evolutionary relationship between music and Renaissance and Baroque ecclesiastical architecture in Rome, focusing first on the design of churches and then on the design of oratories. In relation to the development of musical practices, the transformation of early modern religious architecture will be studied through processes that ranged from provisional installation of balconies and lofts, to the construction *ex novo* of sonorous churches and oratories. Within these synaesthetic spaces, vision, hearing and liturgical acts merge in an expressive unity.

In recent decades, Arnaldo Morelli has tried to recognize a historic trend which could explain the evolutionary relationship between sacred music and architecture in early modern Rome. According to Morelli, the influence of music on architecture was linked to the changing role of music in liturgical ceremonials. It was a cultural phenomenon. Whereas previously music had been a practice pertinent to priests, by the middle of the sixteenth century sacred music became a practice whose principal beneficiaries were the assembled faithful, who were always more attracted to attend church and the oratories depending on the quality of the music executed. Within this course of development, sacred music practices also became more theatrical and alluring. From the Gregorian plainchant and polyphony *a cappella*, sacred music evolved to incorporate polychoral forms, and later in the seventeenth and eighteenth centuries, to include narrative duets of the oratories, as well as pieces that combined voice and instrument, and in which the expressive range of organs was fundamental.<sup>22</sup>

This evolution of sacred music began at the end of the fifteenth century, and may be related to the development of the visual arts, including architecture, in this period. Religious chapters, orders and confraternities were encouraged to invest more and more resources – both economic and intellectual – in order to make their buildings better adapted for music, and therefore capable to attract the greatest possible number of people. As a general consequence, the singing galleries and the organ cases moved away from the areas reserved for the clergy to the nave, where

22 Morelli, 'Musica nobile e copiosa di voci et istromenti', 302-319; Morelli, 'La vista dell'apparato superbo'.



they were closer to the faithful.<sup>23</sup> Yet, there were exceptions to this shift. In certain instances, the great organs remained near the presbytery or choir, although they still had to serve the aisle of the lay congregation. This is the case in the papal basilicas of St. Peter's, Santa Maria Maggiore and Santa Croce in Gerusalemme. The fact that new organs were not constructed in the naves or counter-façades of these churches may be related to the papal censure of large furnishings, including elaborate organ cases.

In the middle of the sixteenth century, the polyphony was the most common form of sacred music performed in Roman churches.<sup>24</sup> More complex than Gregorian monody, the contrapuntal polyphony typically accompanied solemn masses as well as more particular ceremonies, such as Vespers. During the ordinary Liturgy of the Hours (*Ufficio delle Ore*, or in Latin, *Officium Divinum*), the clergy still used to sing the Gregorian chant, or the even simpler psalmody chant.

As a general rule, the choir of the Roman polyphony adhered to a unique arrangement. Singers stood in a *cantoria* (singer loft) that also hosted a major *organo stativo* (fixed organ). On occasion, the *cantorie* were doubled, one on each side of the choir, with the addition of a smaller *organo positivo* (moveable organ) to the second *cantoria*.<sup>25</sup> These musical lofts were always located in the chancel of the clergy, which in the great medieval basilicas occupied the nave before the high altar, and was separated by a rood screen from the area of the lay congregation.<sup>26</sup> In order to allow the faithful direct vision of the high altars, the Council of Trent's decrees required the demolition of the medieval rood screens, and the movement of the clergy chancels from the naves down to the galleries, sometime back to the high altars in the *retrocori* (retro choirs). This happened throughout Italy, Rome included, but the best-documented case is that of the great basilicas of the Mendicant Orders in Florence.<sup>27</sup> Their renovation, ordered by Duke Cosimo I in 1565-1566, shortly after the issuing of the Tridentine decrees, was meticulously carried out by Giorgio Vasari, who tore down the rood screens and chancels, and moved the clergy into the major galleries. Still, the fact that the great organ galleries were left on the side walls, facing the faithful in the middle of the nave, is highly significant. By this time, sacred music was no longer pertinent to priests alone, but had become a practice conceived (and performed) to attract the broader public of the lay congregation.

The introduction of polychoral music in the early seventeenth century, a style that would be particularly developed in Rome, represented the next stage in the

23 Morelli, 'Sull'organo et in choro'.

24 Morelli, 'Musica nobile e copiosa di voci et istromenti', 302-314.

25 In the seventeenth century the most common type in Rome of *organo positivo* was the so-called *organo ad ala* ('wing organ'): Morelli, 'Musica nobile e copiosa di voci et istromenti', 309.

26 Hall, 'The Tramezzo in the Italian Renaissance, Revisited'.

27 Hall, *Renovation and Counter-Reformation*; Conforti, *Vasari architetto*, 209-223.

development of music and the creation of sonorous spaces. The polychoral style is a type of polyphony in which the singing choir was split in subunits: every minor choir is formed by the four principal voices (*basso, tenore, alto, soprano*), which were supported by an instrumental *basso continuo*, that normally is a positive organ.<sup>28</sup> Unlike the Venetian *coro spezzato*, or ‘broken choir’, in the Roman *polichoralità* every individual choir was autonomous as regards the counterpoint harmony, although at times the choirs sang the same lines together. But the very logic of the polychoral style was not only sonorous, it was also spatial. Indeed, the minor choirs were frequently raised above the congregation in provisional lofts (*poggioli*), which were set upon timber frames and placed among the pilasters along the nave. This arrangement facilitated the distribution of sound throughout the volume of the church, exalting the three dimensional perception of both sound and space.

On the occasion of solemn liturgical celebrations, the great Roman churches competed with one another to provide the faithful the most spectacular musical ceremony, multiplying the numbers of choirs over the lofts. Reports, accounts and surviving folios of sheet music record masses performed with eight, ten and even twelve choirs.<sup>29</sup> In Santa Maria sopra Minerva, for example, a ten-choir mass was usually performed on the feast day of St. Dominic (Figure 4.4), as referred to in 1639 by André Maugars, a French musician who left a key source of the musical ceremonies celebrated in Rome.<sup>30</sup> At about the same times that Pietro della Valle recalled ‘*quel gran musicone*’ (‘that big music performance’) in St. Peter’s, it was reported that, because of the vastness of its interior space, masses of ten, twelve and up to sixteen choirs were usually performed in the Vatican basilica. A source reports that sometimes a couple of *cori di ripieno* (or *d’eco*), formed only by *cornetti* or other woodwind instruments, was even set ‘*sopra la cupola*’ (‘upon the dome’, that is, presumably, on the lower entablature of the drum).<sup>31</sup> Unfortunately, no visual record has survived of the polychoral lofts, with the exception of an engraving by Barrière representing the *entrata* into Rome in 1665 of Cardinal Gondi-Retz at San Luigi dei Francesi (Figure 4.5). The image is enough to assess the effect of the polychoral music in religious spaces: exploiting the nave’s arches as a reflecting ceiling, the lofts constituted a visual and acoustic *apparato* of the church.

Still, the temporary apparatuses of lofts for the polychoral music were not ‘architecture’ in the proper sense. As adapted to the space of the churches, they are best understood as ephemeral furnishings – visual and acoustic. The addition

28 Morelli, ‘Musica nobile e copiosa di voci et istromenti’, 302-310.

29 Ibid., 311-312; Morelli, ‘La vista dell’apparato superbo’, 294-299.

30 The *Response faite a un curieux sur le sentiment de la musique d’Italie*, published in Lionnet, ‘André Maugars’.

31 Morelli, ‘La vista dell’apparato superbo’, 298; Rostirolla, ‘Musiche e apparati nella basilica vaticana per le feste dei Santi Pietro e Paolo’, 421 n. 10.

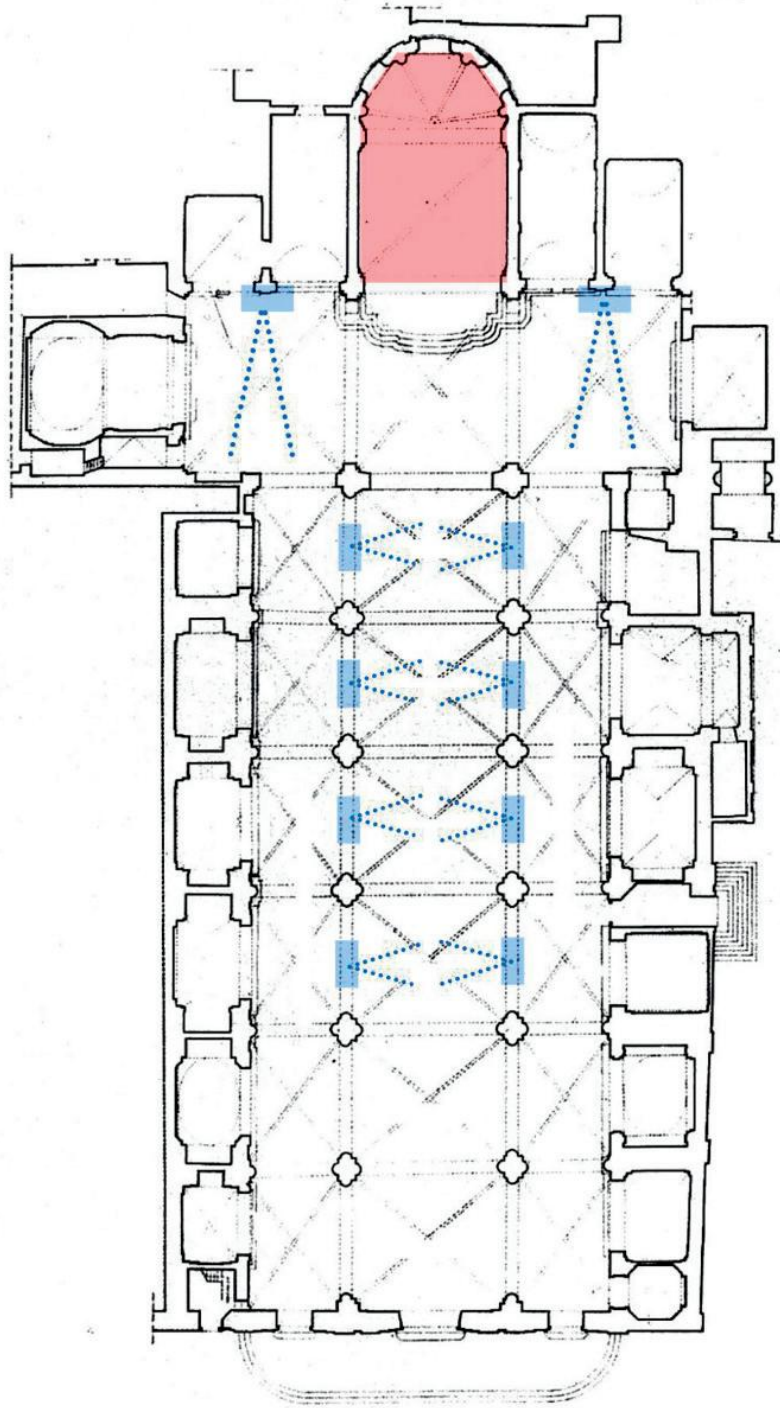


Fig. 4.4 Santa Maria sopra Minerva, Rome. Sound plan for the feast day of St. Dominic of 1639: (in red) the Dominican chancel; (in blue) the poggioli and the organ lofts. © Federico Bellini





Fig. 4.5 Dominique Barrière, San Luigi de' Francesi, Rome, with decoration for the saint's feast day, 1665. At right: the poggioli (singer lofts) prepared for the polychoral mass. The Metropolitan Museum of Art, Accession Number: 51.501.2924. The Elisha Whittelsey Collection, The Elisha Whittelsey Fund, 1951

of choir and organ lofts was most common during the golden period of polychoral music (from the end of the sixteenth century, to the third quarter of the seventeenth century), and succeeded not only in bringing the production of music closer to the congregation, but also in improving the acoustic performance by placing the choirs at greater height under the vaults. The addition of the lofts, however, is difficult to follow through plans and sections, as such architectural features are usually invisible in traditional ground plans, which represent the area just above the floor and do not detail spatial alterations at higher elevations. Moreover, singing galleries and organs – even the most monumental – are often not represented in the sections, as they are considered irrelevant to architectural space.

The interaction between music and architecture thus must be examined in the context of the buildings themselves, as is shown by the striking example of the papal ‘twin chapels’ of Santa Maria Maggiore. Although the two chapels share the same Greek-cross plan, the perception of their spaces was quite different. Only the Sistine Chapel, built in 1587-1588 by Domenico Fontana, is perceived as a central space, having its devotional focus (the Crypt of Nativity) in the centre. The Pauline Chapel, by contrast, was used as a longitudinal space focused on the miraculous icon of the *Virgo Salus Populi Romani* (Virgin Protectress [i.e. Salvation] of the Roman People) framed by the lavish marble *aedicula*. As constructed, the Sistine Chapel in Santa Maria Maggiore included no device for music, as this was still considered non-essential. Just a few years later, in 1606-1616, Flaminio Ponzio endowed the Pauline Chapel with four singing galleries, supporting the specific ceremonials performed at the *Salus Populi Romani* altar.<sup>32</sup>

The first decades of the seventeenth century marked a turning point in the introduction of fixed musical lofts in Roman ecclesiastical architecture. The construction in 1610-1614 of the new canons’ choir in St. Peter’s was followed in 1624-1626 by the insertion of arches into the side walls by Carlo Maderno, which hosted organs and lofts that were instead absent in the former choir of Sixtus IV.<sup>33</sup> The most peculiar and remarkable case was the church of Gesù. In 1569-1582 Jacopo Barozzi da Vignola and Giacomo Della Porta built, just above the side chapels, a sort of *matroneum*, or gallery, connected with the Jesuit House (Figure 4.6(a-b)).<sup>34</sup>

32 On the Sistine Chapel, see Bellini, ‘L’organismo cupolato della cappella Sistina in Santa Maria Maggiore’; on the Pauline, see Schwager, ‘Die architektonische Erneuerung von S. Maria Maggiore’, 248-285; see also Della Libera, ‘Introduction’, vii-ix.

33 The major organ was still that of Pope Alexander VI. Maderno set it beneath the arch of the right side, in common with the adjacent Clementine Chapel. A similar solution was adopted some years later at the organ of the Gregorian Chapel, see Lunelli, *L’arte organaria del Rinascimento in Roma*, 85-91; Battistelli et al., *Organi e cantorie nelle chiese di Roma*, 50-53.

34 Schwager and Schlimme, ‘La chiesa del Gesù di Roma’.

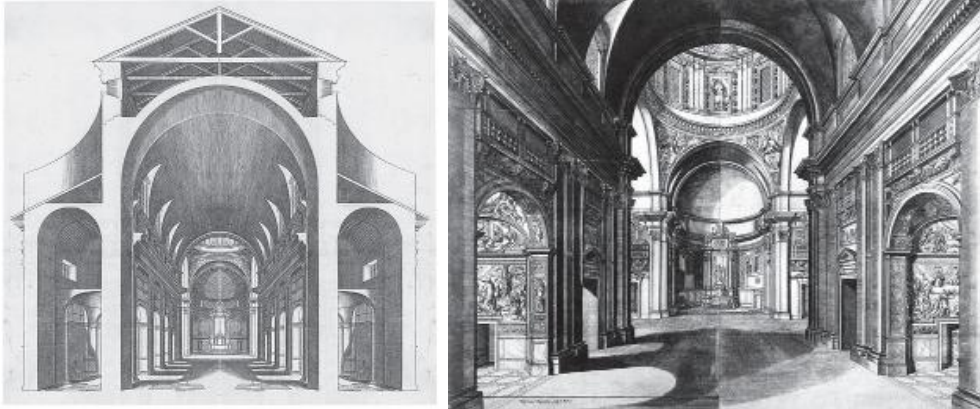


Fig. 4.6 Valérien Regnard, section drawings of SS. Nome di Gesù, Praecipua Urbis Romanae Templa, Rome, 1650. From private collection

- a) Interior perspective, showing the matronaea for the Jesuit fathers
- b) Transformation of the matronaea into lofts for the polychoral music

This gallery was intended to be used by the fathers, who could have attended the mass from the loggias over the nave. The insertion of such a gallery was a common solution in a church of a regular order, and was also used at San Fedele in Milan, another Jesuit temple built by Pellegrino Tibaldi in the same period. Some decades later, in 1615-1616, the Roman Jesuits transformed the gallery of the Gesù into polychoral choir lofts, simply by adding marble balustrades and new gilded timber screen, the so-called *gelosie*. As given in an *avviso* (information report), the new lofts were opened on 7 August 1616 with the performance of an eight-choir mass written by Giovanni Francesco Anerio, master of the Pontifical Chapel: the eight *cantorie* were distributed among nave and transepts.<sup>35</sup> In 1633-1634, the organ cases and galleries of the transepts were reconstructed, so that the ‘sound body’ of the Gesù rose to fourteen musical lofts, all of which were permanent architectural features.<sup>36</sup> With this alteration, every edge of the church could be directly reached by the sound of a choir. (It is also likely that each single choir loft could be used separately during private masses that were celebrated in the side chapel in front of it).

From the middle of the seventeenth century onward, singing galleries were always integrated into the architectural design of new churches, enhancing the stereophonic effect of the space. In SS. Luca e Martina (begun in 1635) there are four lofts (Figure 4.7). Sant’Agnese in Agone (begun in 1652), which follows a similar plan, has eight singer lofts, to which a great organ’s balcony was subsequently added

<sup>35</sup> Morelli, ‘Musica nobile e copiosa di voci et istromenti’, 306-307.

<sup>36</sup> Battistelli et al., *Organi e cantorie nelle chiese di Roma*, 80-81.



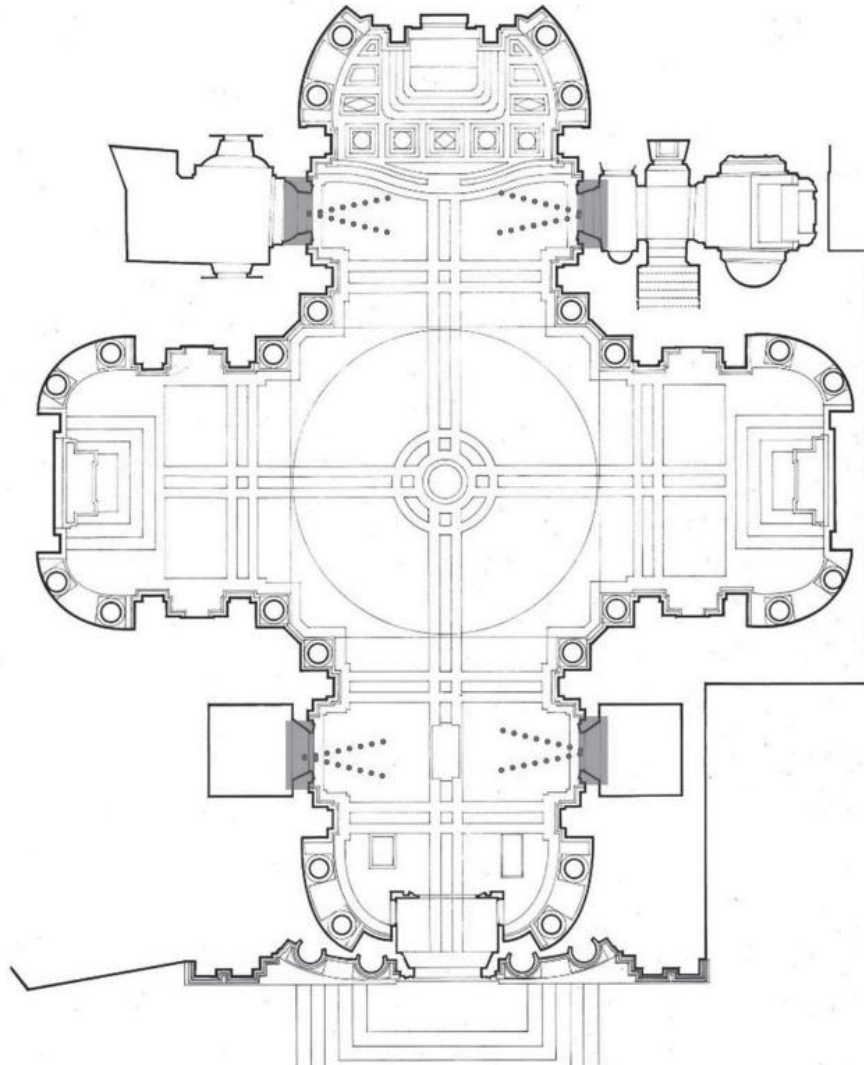


Fig. 4.7 Santi Luca e Martina, Rome, 1635-1672. Sound plan with singer lofts. © Federico Bellini.

(Figure 4.8).<sup>37</sup> Some years later, in 1662-1667, Carlo Rainaldi and Giovanni Antonio de' Rossi installed thirteen singer lofts into the architectural body of Santa Maria in Campitelli, which are distinguished by their size and position. The four major lofts, together with the great organ gallery in the counter-façade, acoustically dominated the space of the nave. The eight smaller lofts were evenly divided between the false transept and the domed shrine. This made it possible to celebrate separately

37 On Santi Luca e Martina, see Noehles, 'La chiesa dei Santi Luca e Martina'; on Sant'Agnese in Agone, see Bellini, *Le cupole di Borromini*, 205-215, 233-241.



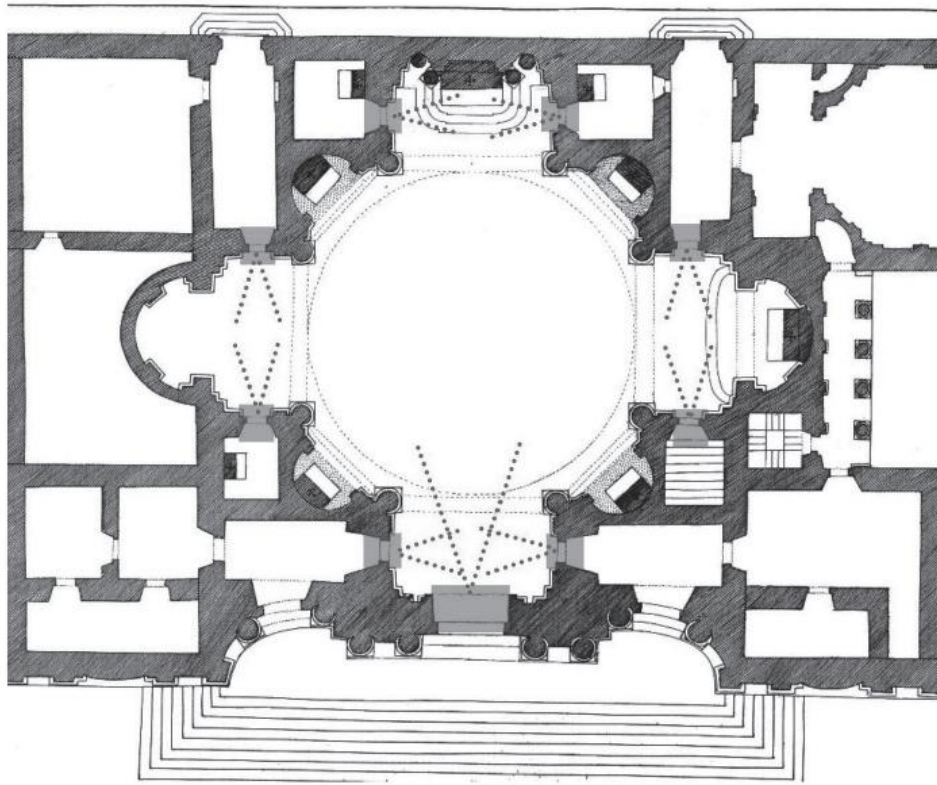


Fig. 4.8 Sant'Agnese in Agone, Rome, c. 1652. Sound plan with singer lofts. © Federico Bellini

musical rites in every part of the church (nave, chapels, transept, shrine), using only the adjacent cantories and without engaging the others (Figures 4.9 and 4.10). The same principle was followed by Francesco Fontana in the reconstruction of the SS. Apostoli (1702-1717). Here, the fifteen cantories no longer served for the production polychoral music, as this had been replaced by the practice of the *concerto*. But they made it possible to chant masses separately within each of the private side chapels. Public masses, of course, were chanted at the Franciscan's chancel, which was equipped with four lofts and two great organs.

In a few limited cases, musical sonority within the church assumed symbolic and even theological values.<sup>38</sup> The most striking example of the musical construct granting space such immaterial charge is, without doubt, the triple galleries of Sant'Ivo alla Sapienza. Sant'Ivo is the chapel of the *Studium Urbis*, the university of Rome, and was actually to be dedicated to the Holy Wisdom, the *Sapientia*, who

<sup>38</sup> One notable example is the Angelic balcony above the Santa Casa di Loreto (realized 1533-1534). On this, see Frommel, *L'architettura del santuario e del palazzo apostolico di Loreto*, 63.

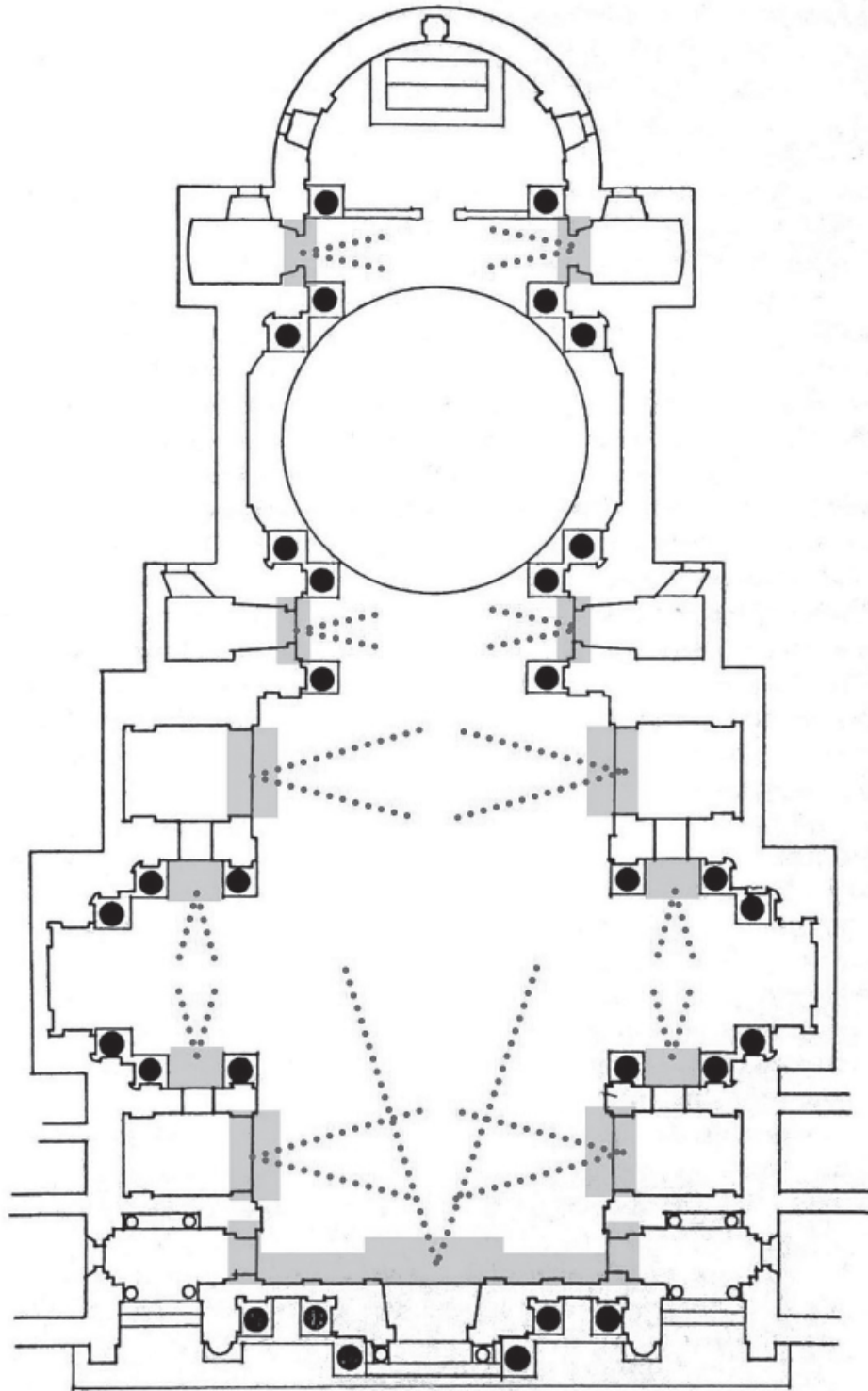


Fig. 4.9 Santa Maria in Campitelli, Rome, 1662-1667. Sound plans with singer lofts. © Federico Bellini

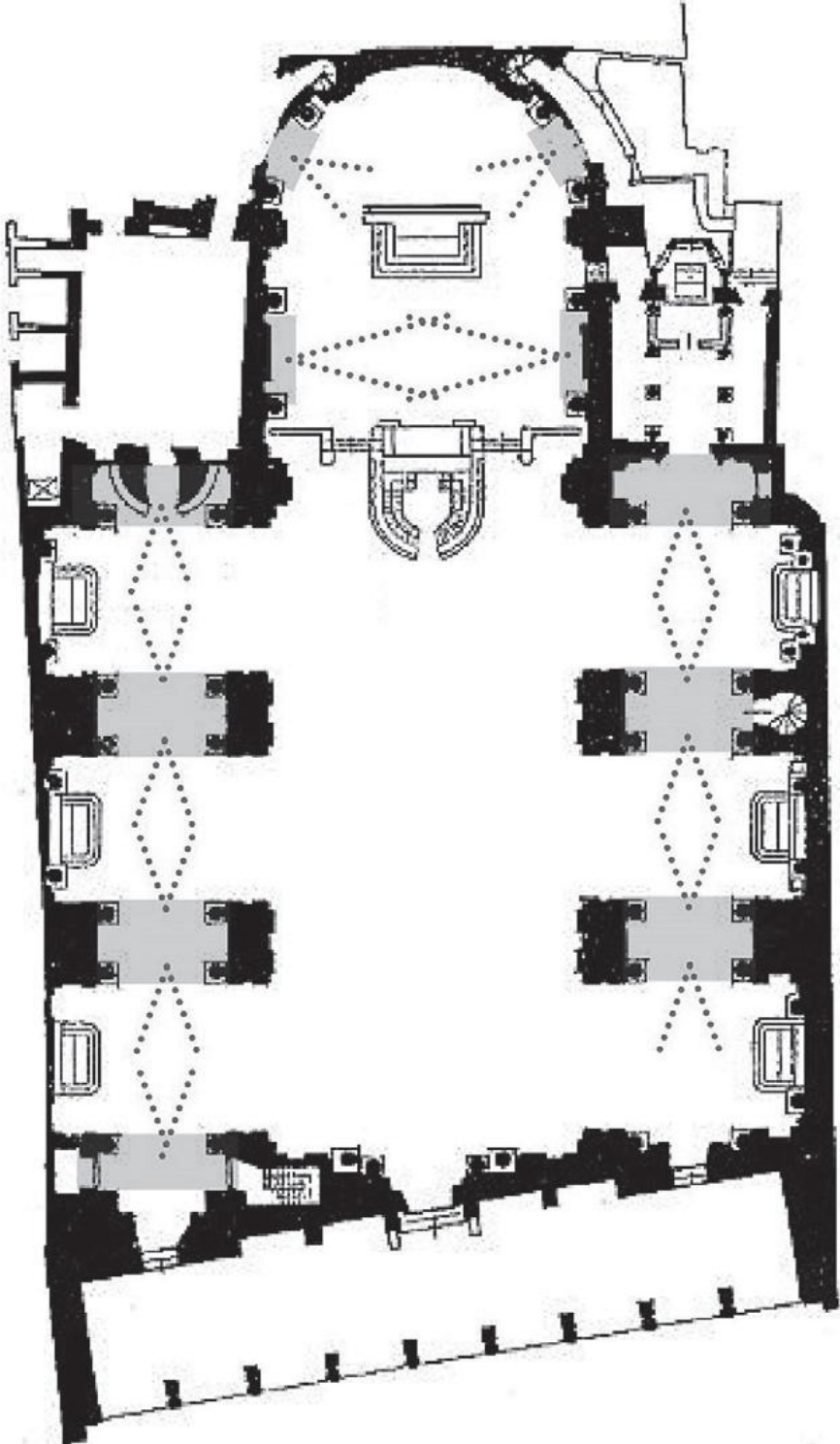


Fig. 4.10 SS. Apostoli, Rome, 1702-1717. Sound plan with singer lofts. © Federico Bellini

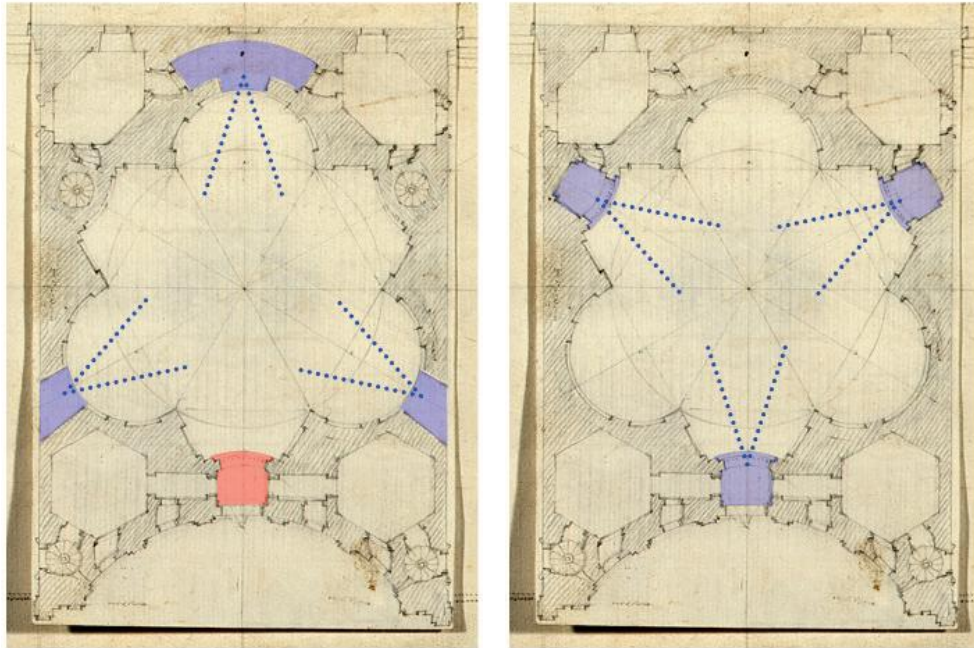


Fig. 4.11 Holy Wisdom chapel at the Studium Urbis (the so-called Sant'Ivo alla Sapienza), 1643-1659. Sound plans. From Albertina Graphische Sammlung, Az. Rom 500k. © Federico Bellini

a) Prior to the layout imposed by Borromini, 1643-1644, with the cantorie (in blue) and the cardinals' loggia (in red)

b) Final layout, 1658-1659, with the cantorie (in blue)

gave the name to the *Studium* itself.<sup>39</sup> In 1640-1642, the university commissioned Francesco Borromini to design the church in the location of an existing palazzo. The perimeters of site were thus limited, and Borromini conceived a place-specific plan that both accommodated the location and ingeniously referenced the dedication to Wisdom, an attribute of the Holy Trinity (according to the Scholastic theology). The plan is based on Trinitarian symbolism: an equilateral triangle generated by a circle, that is to say, the Three Persons emanated from the Unity of God. In the first phase of construction (1643-1644), Borromini arranged the space for the organ over the high altar, most likely intending that the two loggias on the side apses function as choir lofts.<sup>40</sup> Following this, in 1658-1660, Borromini changed the chapel's layout. He closed the former loggias and removed the two spiral staircases in the chapel's corners, recreating the triangle of choirs in a 60-degree rotated layout (Figure 4.11(a-b)).

39 Bellini, *Le cupole di Borromini*, 155-203; the trinitarian symbolism has been proposed in Bellini, 'Lo spazio dell'inesprimibile'.

40 On this point I agree with Smyth-Pinney and Smyth, 'Borromini and Benevoli', 22.



The peculiar plan of the Sapienza forced the site-specific composition of three-choir masses, a quite unusual solution in Roman polychoral music. On 30 May 1661, Sant'Ivo alla Sapienza was inaugurated with a famous three-choir mass written by Orazio Benevoli, at that time master of the Cappella Giulia.<sup>41</sup> Recently, some pieces of the Benevoli mass were performed in the church of Sapienza by a vocal choir (unfortunately without the *basso continuo* of the organs).<sup>42</sup> The most striking effect was not the impressive stereophony of the sound, but its uneven richness. Since the choirs play different musical lines, alternating with one another at different volumes, the listener feels immersed in a changing, unpredictable and fluid sound, which is emitted from three sources. The 'triangular' sonority of the Sapienza is perfectly integrated into its unique architectural form, and both sonority and architecture contribute to express the Trinitarian symbolism in an emotional synaesthetic experience.

### The Sonorous Architecture of the Oratories

More so than church architecture, the design of early modern Roman oratories underwent a marked evolution in keeping with contemporary advancements in music. Unlike a church, an oratory is a religious space conceived primarily for the prayer, not for communal mass.<sup>43</sup> Moreover, the oratories of the lay confraternities were expected to host ceremonies, which were always accompanied by music. In terms of architecture, oratory plans were quite simple: a rectangle, with the altar set in an arched recess, and encircled by the seats for the brothers (Figure 4.12(a-c)). But the simplicity of the plans also allowed for a significant degree of modification and innovation. From the second half of the sixteenth century in Rome, the individual design of a series of oratories reflected the ceremonial practices and musical preferences on the individual confraternities.

The oratory of the SS. Crocifisso was among the first to adapt its architecture to new musical preferences. With no fixed *cantorie* in 1562-1566, the confraternity was later compelled to add a great timber choir on the counter-façade. In 1571-1572, the oratory of the Gonfalone was instead arranged with two marble

41 Smyth-Pinney and Smyth, 'Borromini and Benevoli'; Della Libera, *La musica a Sant'Ivo alla Sapienza nel Seicento*.

42 The *Missa Ecce Sacerdos magnus* was executed by the Schola Romana. The ensemble was directed by Stefano Sabene, 17 March 2018. See online video: <https://www.accademiasanluca.eu/it>, accessed 26 November 2020.

43 Moroni, *Dizionario di erudizione storico-ecclesiastica da S. Pietro*, 41-43.

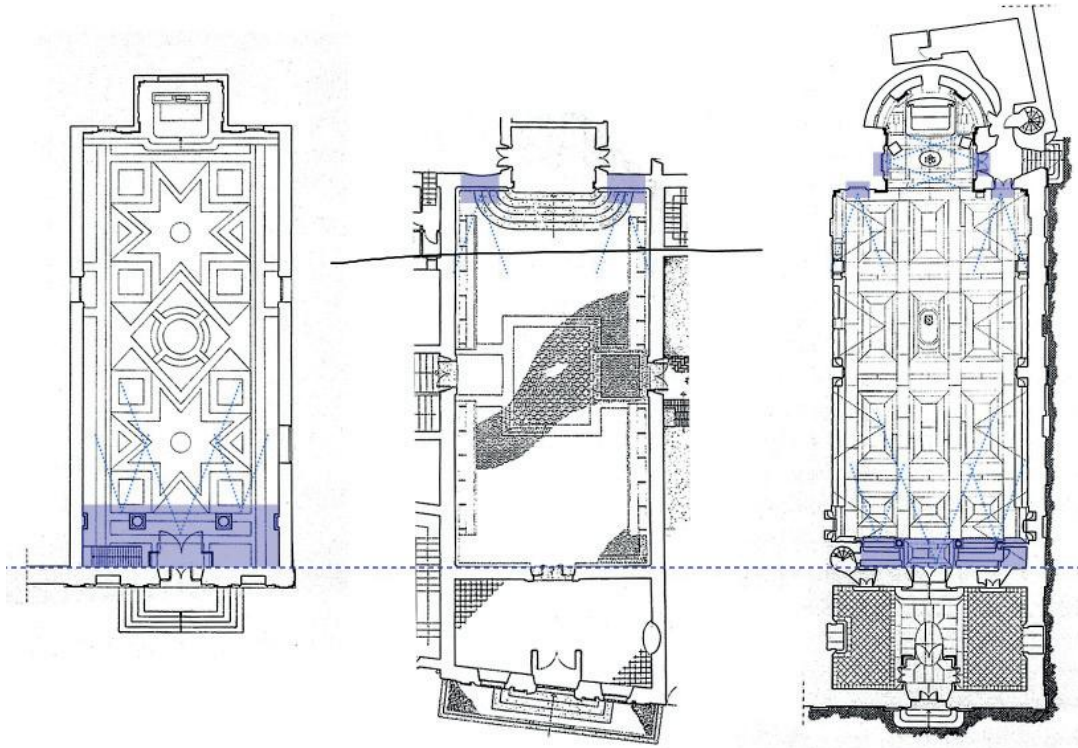


Fig. 4.12 Placement of singer lofts in Roman oratories. For the comparison, the transversal length of the churches has been made equal and the counter-façades aligned. © Federico Bellini

- a) SS. Crocifisso di San Marcello, 1562-1568
- b) Santa Lucia del Gonfalone, 1556-1571
- c) San Francesco Saverio del Caravita, 1632-1633, and c. 1670-1677

*cantorie*, placed on the sides of the small gallery and topped with pediments.<sup>44</sup> The oratories of SS. Marcello and Gonfalone both featured a wooden ceiling, beautifully decorated but acoustically absorbing. When building the Jesuit oratory of the Caravita in 1630-1633, Giovanni Antonio de' Rossi adopted the two-loft plan of the Gonfalone (later adding another pair of lofts in the apse), but used a masonry vault instead of a timber roof, following the no longer existing example of the oratory of the Trinità dei Pellegrini. At that time, de' Rossi and the Jesuits were fully aware that a vault is able to reflect and amplify the sound. This fact had been asserted a century prior by Francesco Zorzi in his report on San Francesco della Vigna in Venice (1537), and was also well-known in Rome.<sup>45</sup>

44 On Gonfalone, see Wisch and Newbiggin, *Acting on Faith*, 398-399; on SS. Crocifisso, see Henneberg, *L'oratorio dell'arciconfraternita del Santissimo Crocifisso di San Marcello*, 18-26.

45 As demonstrated by a comment of Emilio Cavaleri in 1602, see Morelli, 'Space for Music in Roman Residences', 312; on Zorzi's report, see Howard and Moretti, *Sound and Space in Renaissance Venice*, 100-102.

The oratory designed by Borromini in 1639-1640 for the House of Oratorians, the congregation founded by Filippo Neri, represents an even more exceptional case.<sup>46</sup> The so-called Oratorio dei Filippini provides clear testimony to some of the primary motives behind religious building design in this period. The motives that directed its unique design were neither formal, nor acoustic, nor even devotional; in the Oratorio, the key issue was the arrangement of space so that it could properly accommodate three ranks of the faithful, who would remain socially, and physically, separated from one another.<sup>47</sup> The design was further complicated by conditions and function specific to the House of the Oratorians. The Oratorio served different functions, depending on the season and even on the day of the week. Throughout the year, the Oratorio was used daily by the company of the *'fratelli esterni'* (literally 'outside brothers'), a kind of third order of oratorian laymen. The musical element of their ceremonies was limited: the brothers would sing two antiphons *a cappella* only at the end of their devotions. The most appealing religious service was instead celebrated every Sunday in the winter, from All Saints' Day to Easter. This included prayer, sermons, and litanies, and was concluded by the exciting performance of two musical *laudi concertate*, for voices and instruments. Indeed, the *laudi* performed in the Oratorio were not of the medieval kind. As in other parts of Italy, the musical *lauda* had developed in a modern form influenced by the *mottetto concertato*. Two professional soloists, supported by singers and instrumentalists, sang in Italian a sacred story, introducing a dramatic feature that soon would be adopted by the modern *oratorio* (in the musical sense of the term).<sup>48</sup> These elements of drama, similar to the nascent Florentine *dramma in musica*, made the oratorian *laudi* extremely popular. Their success was tremendous. The Oratorio dei Filippini attracted an enthusiastic audience drawn from all the parts of the city and incited the professional development of singers, who were chosen among the stars of Rome and paid by the richest families. In fact, at times the Oratorio generated too much enthusiasm. It was not unusual for the people in the Oratorio to come to blows in defending the honour of their favourite singers. The Oratorians themselves remained somewhat detached, baffled by the fervour their ceremonies induced.<sup>49</sup>

In the Oratorio, Borromini needed to provide lofts for singers and instrumentalists, as well as the seats reserved to the high-ranking people during the winter Sunday celebrations (Figure 4.13).<sup>50</sup> In 1637-1638 he reviewed the solution of Giovanni Antonio de' Rossi for the recently completed Caravita, and arranged two lofts for

46 Connors, *Borromini e l'Oratorio romano*; Connors, 'Introduzione', xi-xl; Morelli, *Il tempio armonico*.

47 Bellini, 'La forma della musica'.

48 Smither, *A History of the Oratorio*, 118-142; Morelli, *Il tempio armonico*, 63-81.

49 Morelli, *Il tempio armonico*, 29-30.

50 Bellini, 'La forma della musica'.



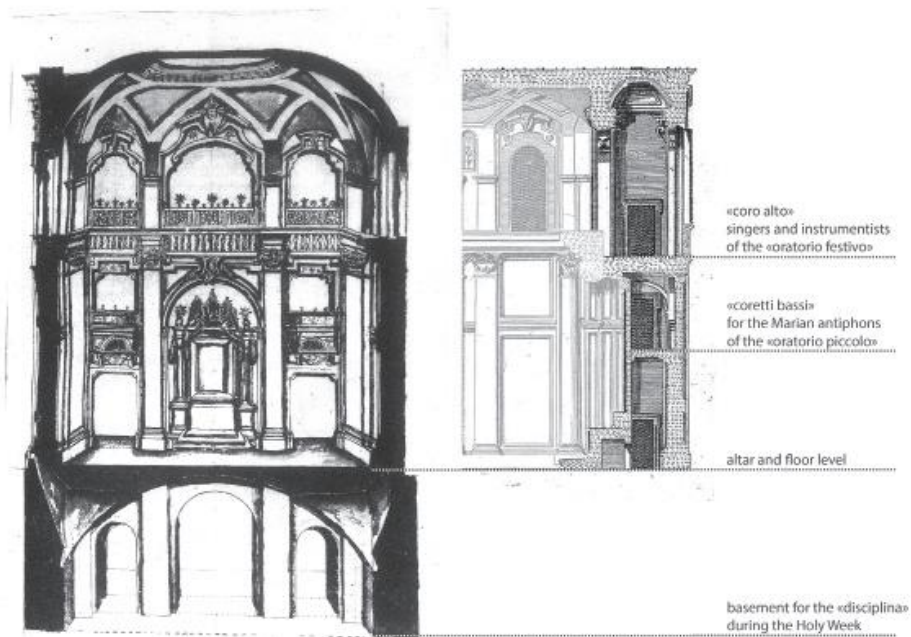


Fig. 4.14 Oratorio dei Filippini, Rome, 1637-1640. Section view of the singers' and organ lofts. From Borromini, *Opus architectonicum Equitis Francisci Borromini*, 1725, tav. XLII. © Federico Bellini

singers, one above the other, on the side of the altar. The loft on the higher level provided a great gallery for an organ and instruments, and was set just below the vault in order to reflect the sound (Figure 4.14). On the front side of the Oratorio, Borromini built a second loggia, falsely symmetrical. This was actually dedicated to cardinals, nobles and their followers, who could attend the ceremonies from this sort of *piano nobile*, which functioned akin to a stage of honour in a theatre. The paths of circulation to be followed within the Oratorio were also carefully separated: cardinals, *'fratelli esterni'* and common people entered the Oratorio through different entrances (Figure 4.15).

In its originality, the Oratorio dei Filippini could not be imitated. Just a year later Gianlorenzo Bernini, Borromini's bitter rival, adopted the idea of two lofts, one above the other, in the reconstruction of the apse of San Lorenzo in Damaso. But within this context, the device was less successful. In the subsequent design of oratories in Rome, the gallery for the organ and instruments was generally set on the counter-façade, while singers' lofts were distributed evenly along the adjacent walls. This arrangement led the way to the proper *auditoria* of the eighteenth century, such as the oratories of the Angelo Custode and the Annunziata in Borgo. Again, each was unique in its design, responding to the conditions of the site, the culture of the confraternity and the evolution of the role of music in religious ceremonies.

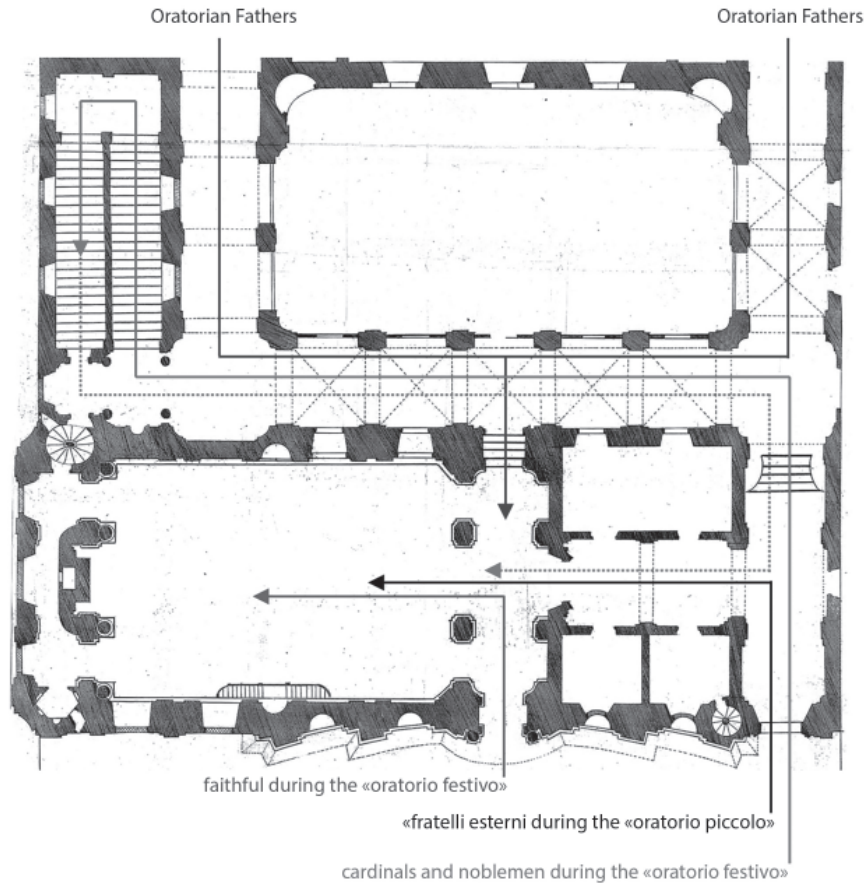


Fig. 4.15 Oratorio dei Filippini, Rome, 1637-1640. Diagram of the separate paths taken by the faithful, depending on spiritual practice and social standing. From Borromini, *Opus architectonicum Equitis Francisci Borromini*, 1725, tav. III. © Federico Bellini

## The Architecture of Singer Lofts and Organ Cases

Although polychoral music survived in Rome until the eighteenth century, in the last decades of the seventeenth century the *concerto* emerged as the more established practice of sacred music. Soloist voices were now accompanied by a unique choir, and supported by a small orchestra of instruments led by a major organ.<sup>51</sup> The *concerto* posed entirely new questions to patrons, architects and artists. No longer was the musical performance determined solely by the distribution of small choirs in the ecclesiastical space; it was now necessary to focus and harmonize the visual and symbolic quality in an individual, monumentalized galleries. The great organ lofts of

51 Morelli, 'Musica nobile e copiosa di voci et istromenti', 317-324.

the 1700s, in Rome as elsewhere, sensationalized acoustics: as plastic representations of sound, they concentrated synaesthetic expression on individual objects, which were formally defined. The design of site-specific organ cases comprise a type of architecture, and ecclesiastical architecture specifically, that has been substantially understudied in architectural history. As a way of conclusion, the following offers an overview of such extraordinary constructions, shedding light on a different aspect of music-driven design. In terms of their positioning, the organ cases not only shaped the spatial distribution of music, just as the elevated and purposely placed choir lofts also did. Moreover, as imposing physical constructions, the cases substantially conditioned the interior dimensions of church architecture. Each was inherently unique in its massive form and considerable expense, further delineating the singularity and place-specificity of individual churches.

Great organs had existed in Rome as early as the fifteenth century, and there had developed a rich tradition by which architects endeavoured to give them an architectural shape. The organ installed in St. Peter's (1496) is one notable, early example.<sup>52</sup> But the very first organ designed in Rome as proper '*Kleinarchitektur*' (or 'small architecture') was that of SS. Spirito, attributed to the *bottega* of Antonio da Sangallo il Giovane (1546-1547). The organ pipes in SS. Spirito are set into a triumphal three-spanned Serlian arch, providing a model that would be followed for over a hundred years, as in the aforementioned great organ case of San Giovanni in Laterano.<sup>53</sup> Apart from the physical body of the organ itself, the organ case of SS. Spirito stood upon two granite columns, which framed the side entrance of the church. The position of the organ also aligned with the chapel of Commendatore Alessandro Guidiccioni, patron of both the organ and the chapel. In this way, Guidiccioni was able to build into the longitudinal plan of SS. Spirito a spatial transverse axis, which was generated by the music played at the organ loft during the ceremonies celebrated within his own chapel (Fig. 4.16(a-b)).

It became common in the seventeenth century for paired organ cases to be built into transept walls of existing churches. Placed beside the chancel, these organ cases faced the nave and aisles, in order to serve both naves and chancels.<sup>54</sup> In the first decades, the architecture of the organ cases followed more or less the Serlian type implemented by the Sangallo workshop at SS. Spirito. The cases installed in Santa Maria sopra Minerva by Paolo Maruscelli (1628) are a prime example. But as ecclesiastical architecture and music became increasingly multifaceted, the design

52 Antinori, 'La cantoria con organo di Alessandro VI'; Rostirolla, *Musica e musicisti nella Basilica di San Pietro*, 31, 222.

53 The organ of Nicola da Cremona was kept in tune in May 1554, see Colonna, 'Il ciborio della corsia sistina', 83-87; Howe, 'Architecture for "Divine Hymns"'.  
54 On the following organ cases, see Battistelli et al., *Organi e cantorie nelle chiese di Roma*.

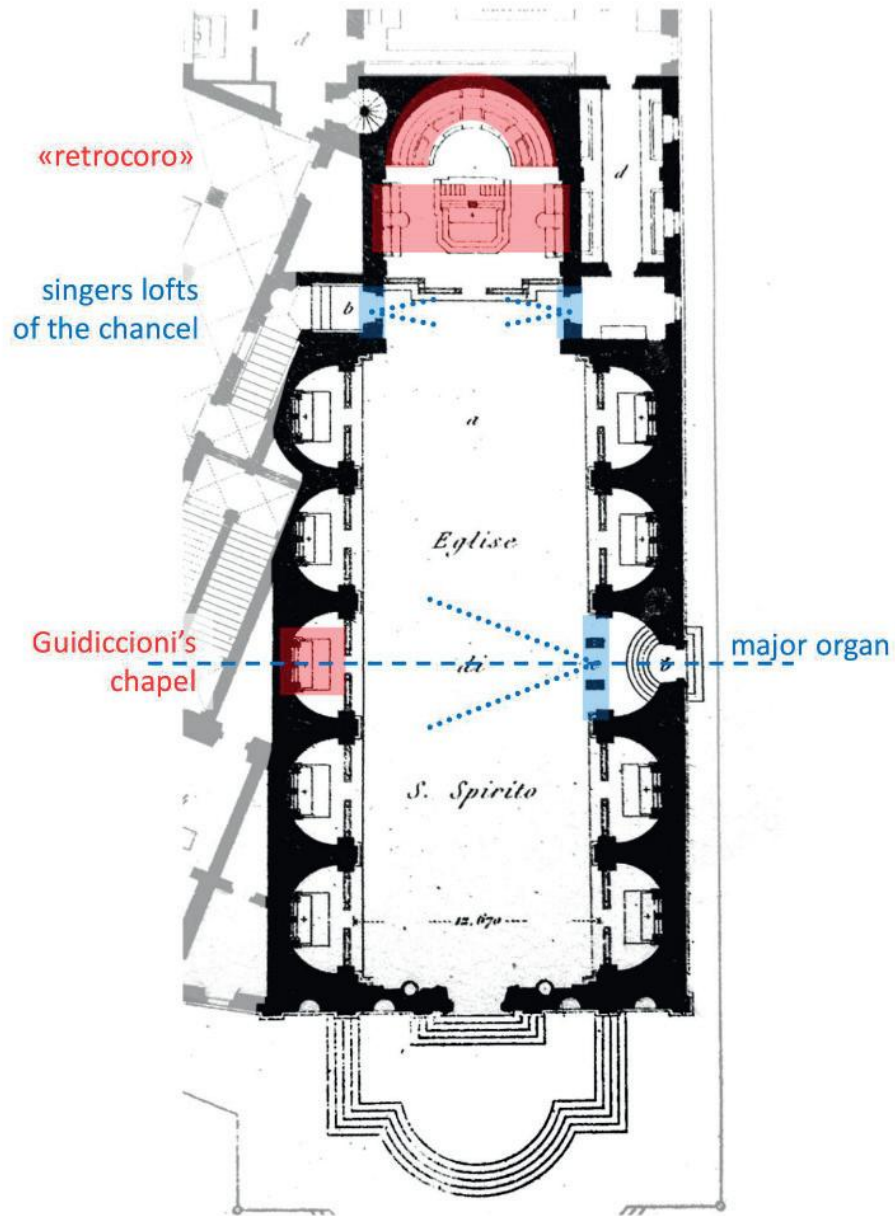


Fig. 4.16 SS. Spirito, Rome  
 a) Sound plan: (in red) the sacred areas of the chancel and Guidiccioni's chapel; (in blue) the singer lofts.  
 © Federico Bellini

of organ cases likewise became more of a plastic exercise in Baroque decoration. This movement is epitomized in the marvellous organ loft of Santa Maria del Popolo by Gianlorenzo Bernini (1655), or the spectacular great organs at Santa Maria in Vallicella by Camillo Rusconi (1698) (Figure 4.17(a-b)).





Fig. 4.16 SS. Spirito, Rome  
 b) Nave, looking towards the altar. © Photo: Federico Bellini

At the end of the seventeenth century, loggias for musicians were progressively enlarged in order to accommodate singers and instrumentalists, who were ever more numerous with the increasing practice of the *concerto*.<sup>55</sup> Following the example of the Lateran Nave Clementina, organ lofts were set against the internal façade in order to accommodate an entire orchestra. With the astonishing two-level loft at Santa

<sup>55</sup> Morelli, 'Musica nobile e copiosa di voci et istromenti', 312-319.



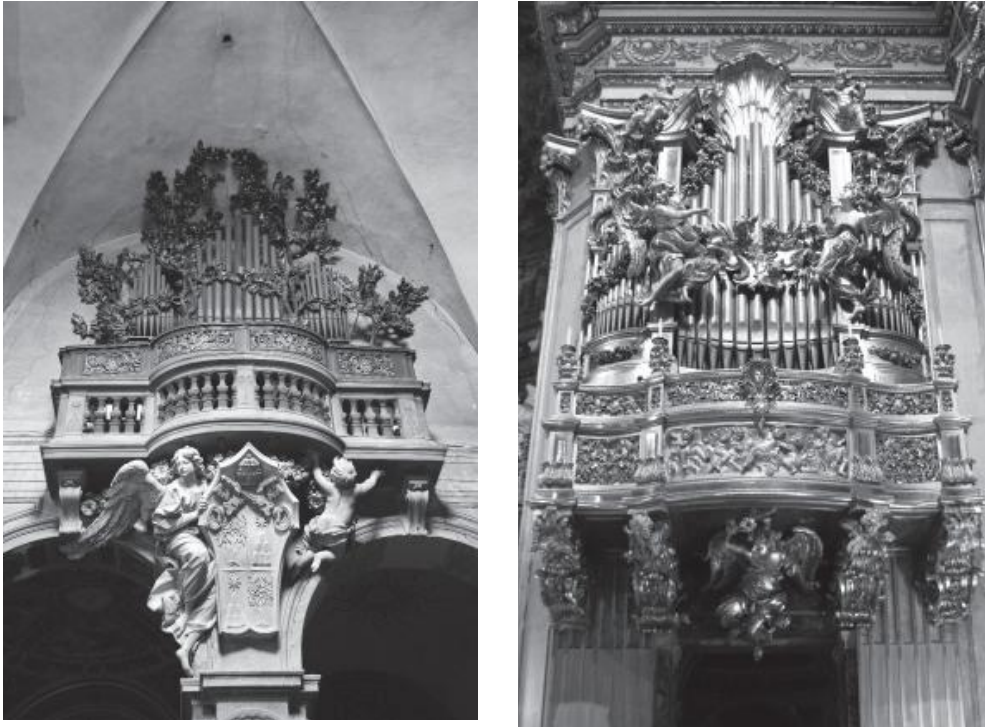


Fig. 4.17 Organ galleries

- a) Santa Maria del Popolo, Rome, designed by Bernini, 1655. © Photo: Wikimedia  
 b) Santa Maria in Vallicella, Rome, designed by Rusconi, 1698. © Photo: Wikimedia

Maria della Vittoria, attributed to Mattia de Rossi (1682), organ lofts on the internal façade became a design theme in themselves. There are many examples of churches with similar organ lofts in Rome, which still merit study, including Sant'Antonio dei Portoghesi, Santa Maria Maddalena, Sant'Eustacchio, and Santa Maria della Scala (Plate 4.18(a-b)). In the eighteenth century, the great organ galleries and cases functioned almost as shrines to religious music, increasingly drawing attention away from ciboria and altar baldachins. These constructions, were repeatedly censured for their decadence – by Popes Alexander VII, Innocent XII and Benedict XIV – although such decrees will be rarely implemented.<sup>56</sup>

The centrality of sacred music and religious architecture, and the link that had been established between the two arts, thus gradually declined in the eighteenth century. In the nineteenth and twentieth centuries, the main places dedicated to listening to music were no longer be churches and oratories, but theatres and auditoria, to which the creative attention of the architects refocused. By this time, even composers of sacred music were aware that their music would likely be

<sup>56</sup> Ibid., 316-317 (on Alexander VII and Innocent XII), 322-324 (on Benedict XIV).

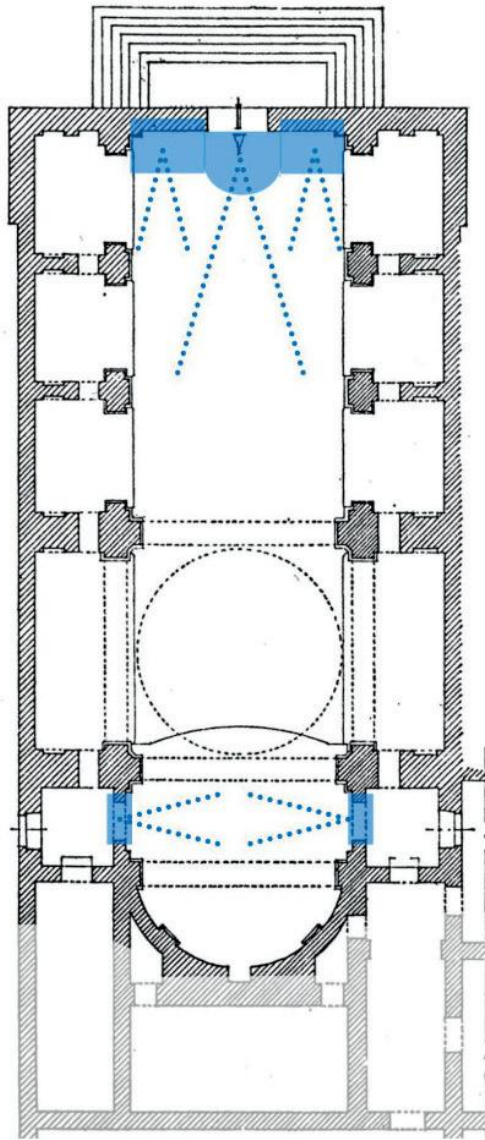


Fig. 4.18 Santa Maria della Vittoria, Rome  
 (a) Sound plan, with singer lofts (in blue). © Federico Bellini

performed in theatres, and not only in religious buildings. (Prime examples include the sacred productions by Anton Bruckner and Benjamin Britten, or Wagner's *Parsifal*, a work of sacred character written to be presented in an opera house.) But even if the sonorial-spatial experience of Renaissance and Baroque religious architecture has expired, through history, it is still possible to understand how sound can contribute to defining a multisensory space, attributing to it specific qualities that make it a place.



Fig. 4.18 Santa Maria della Vittoria, Rome  
 ((b) Counter-façade organ gallery, attributed to Mattia de Rossi, 1682. The upper balcony is an eighteenth-century addition for the concerto grosso. © Photo: Livio Andronico, Wikipedia

## Bibliography

- Antinori, Aloisio, 'La cantoria con organo di Alessandro VI e la "cappella del S. Pietro di Bronzo"', *Quaderni dell'Istituto di Storia dell'Architettura*, 25-30 (1995-1997), 129-136.
- Battistelli, Giovanni, Oscar Mischiati, Arnaldo Morelli and Claudio M. Strinati, *Organi e cantorie nelle chiese di Roma* (Rome: Istituto Poligrafico e Zecca dello Stato, 1994).
- Bellini, Federico, 'La forma della musica: l'Oratorio di Francesco Borromini alla Vallicella', paper presented at the conference 'Francesco Borromini 1599-1667', Rome, 11-13 December 2017.
- Bellini, Federico, *Le cupole di Borromini. La 'scientia' statica in età barocca* (Milan: Electa, 2004).
- Bellini, Federico, 'L'organismo cupolato della cappella Sistina in Santa Maria Maggiore', in Giovanna Curcio, Nicola Navone and Sergio Villari (eds), *Studi su Domenico Fontana* (Mendrisio-Cinisello Balsamo: Mendrisio Academy Press-Silvana Ed., 2011), 105-125.



- Bellini, Federico, 'Lo spazio dell'inesprimibile: la rappresentazione del Paraclete nella Cappella della Sapienza', paper presented at the conference 'Lo spazio della Roma barocca: il paesaggio ideale e l'illusionismo', Rome, 30 June-1 July 2015.
- Bellini, Federico, 'Riforma protestante e riforma dell'architettura religiosa', in Stefano Biancu (ed.), *Riforma e modernità. Prospettive e bilanci a 500 anni dalle Tesi di Lutero* (Rome: Studium, 2018), 79-101.
- Borromini, Francesco, *Opus architectonicum Equitis Francisci Borromini ex ejusdem exemplaribus petium [...] Romæ Sebastianus Gianninus edidit, ac excudit* (1725).
- Coffin, David R., *Pirro Ligorio: The Renaissance Artist, Architect, and Antiquarian* (University Park: Pennsylvania State University Press, 2004).
- Colonna, Flavia, 'Il ciborio della corsia sistina, l'organo e il ciborio della chiesa di Santo Spirito in Sassia', in Guido Beltramini and Adriano Ghisetti Giavarina (eds), *Studi in onore di Renato Cevese* (CISA Palladio: Vicenza, 2000), 83-91, 515-525.
- Conforti, Claudia, *Vasari architetto* (Milan: Electa, 1993).
- Connors, Joseph, *Borromini e l'Oratorio romano. Stile e società* (Turin: Einaudi 1989).
- Connors, Joseph, 'Introduzione', in Joseph Connors (ed.), Francesco Borromini, *Opus Architectonicum* (Milan: Polifilo 1998), xi-lxxxviii.
- Della Libera, Luca, 'Introduction', in *Alessandro Melani: Music for the Pauline Chapel of Santa Maria Maggiore* (New Haven: Yale A-R Editions, 2017), vii-xvi.
- Della Libera, Luca, 'La musica a Sant'Ivo alla Sapienza nel Seicento', in Federica Nardacci (ed.), *Musica tra storia e filologia. Studi in onore di Lino Bianchi* (Rome: Istituto Italiano per la Storia della musica, 2010), 135-152.
- Freiberg, Jack, *The Lateran in 1600: Christian Concord in Counter-Reformation Rome* (Cambridge: Cambridge University Press, 1995).
- Frommel, Christoph L., *L'architettura del santuario e del palazzo apostolico di Loreto da Paolo II a Paolo III* (Loreto: Tecnostampa, 2018).
- Hall, Marcia B., *Renovation and Counter-Reformation: Vasari and Duke Cosimo in Sta. Maria Novella and Sta. Croce, 1565-1577* (Oxford: Clarendon Press, 1979).
- Hall, Marcia B., 'The Tramezzo in the Italian Renaissance, Revisited', in Sharon E.J. Gerstel (ed.), *Thresholds of the Sacred: Architectural, Art Historical, Liturgical, and Theological Perspectives on Religious Screens, East and West* (Cambridge, MA: Harvard University Press, 2006), 214-232.
- Harasimowicz, Jan (ed.), *Protestantischer Kirchenbau der Frühen Neuzeit in Europa. Grundlagen und neue Forschungskonzepte* (Regensburg: Schnell-Schneider, 2015).
- Henneberg, Josephine von, *L'oratorio dell'arciconfraternita del Santissimo Crocifisso di San Marcello* (Rome: Bulzoni 1974).
- Howard, Deborah, 'Architecture and Music in Fifteenth-Century Italy', in Anna Maria Busse Berger and Jesse Rodin (eds), *The Cambridge History of Fifteenth-Century Music* (Cambridge: Cambridge University Press, 2015), 333-359.

- Howard, Deborah and Laura Moretti, *Sound and Space in Renaissance Venice: Architecture, Music, Acoustics* (New Haven: Yale University Press, 2009).
- Howe, Eunice D., 'Architecture for "Divine Hymns": The Organ of Antonio da Sangallo the Younger for the Church of Santo Spirito in Sassia', in Katherine A. McIver (ed.), *Art and Music in the Early Modern Period* (Burlington: Aldershot, 2003), 57-90.
- Isaiasz, Vera, 'Early Modern Lutheran Churches: Redefining the Boundaries of the Holy and the Profane', in Andrew Spicer (ed.), *Lutheran Churches in Early Modern Europe* (Farnham: Ashgate, 2012), 17-37.
- Körner, Joseph Leo, *The Reformation of the Image* (London: Reaktion Books, 2004).
- Lionnet, Jean, 'André Maugars: risposta data a un curioso sul sentimento della musica d'Italia', *Nuova rivista musicale italiana* 19 (1985), 681-707.
- Lunelli, Renato, *L'arte organaria del Rinascimento in Roma e gli organi di S. Pietro in Vaticano dalle origini a tutto il periodo frescobaldiano* (Florence: Olschki, 1958).
- Morelli, Arnaldo, *Il tempio armonico. musica nell'oratorio dei Filippini in Roma (1575-1705)*, *Analecta Musicologica* 27 (Laaber: Laaber Verlag, 1991).
- Morelli, Arnaldo, 'La vista dell'apparato superbo, l'udito della musica eccellente. Spazio ecclesiastico e dimensione sonora', in Marcello Fagiolo and Paolo Portoghesi (eds), *Roma barocca. Bernini, Borromini, Pietro da Cortona* (Milan: Electa, 2006), 294-301.
- Morelli, Arnaldo, "'Musica nobile e copiosa di voci et istromenti". Spazio architettonico, cantorie e palchi in relazione ai mutamenti di stile e prassi nella musica da chiesa fra Sei e Settecento', *Analecta musicologica* 33 (2004), 293-330.
- Morelli, Arnaldo, 'Space for Music in Roman Residences', in Deborah Howard and Laura Moretti (eds), *The Music Room in Early Modern France and Italy: Sound, Space, and Object* (Oxford: Oxford University Press, 2012), 309-320.
- Morelli, Arnaldo, "'Sull'organo et in choro": spazio architettonico e prassi musicale nelle chiese italiane durante il Rinascimento', in Jörg Stabenow (ed.), *Lo spazio e il culto: relazioni tra edificio ecclesiale e uso liturgico dal XV al XVI secolo* (Venice: Marsilio, 2006), 209-226.
- Moroni, Gaetano, *Dizionario di erudizione storico-ecclesiastica da S. Pietro sino ai nostri giorni* (Venice: Tipografia Emiliana, 1848).
- Noehles, Karl, 'La chiesa dei Santi Luca e Martina dal prebarocco al barocco maturo', in Marcello Fagiolo and Paolo Portoghesi (eds), *Roma barocca. Bernini, Borromini, Pietro da Cortona* (Milan: Electa, 2006), 214-255.
- Ottenheim, Konrad, 'The Attractive Flavour of the Past: Combining New Concepts for Ecclesiastical Buildings with References to Tradition in Seventeenth-Century Holland', in Jan Harasimowicz (ed.), *Protestantischer Kirchenbau der Frühen Neuzeit in Europa. Grundlagen und neue Forschungskonzepte* (Regensburg: Schnell-Schneider, 2015), 99-114.
- Pinelli, Antonio, *I teatri. Lo spazio dello spettacolo dal teatro umanistico al teatro dell'opera* (Florence: Sansoni, 1973).



- Range, Matthias, 'The Material Presence of Music in Church: The Hanseatic City of Lübeck', in Andrew Spicer (ed.), *Lutheran Churches in Early Modern Europe* (Farnham: Ashgate, 2012), 197-220.
- Reymond, Bernard, *L'architecture religieuse des protestants. Histoire, caractéristique, problèmes actuels* (Genève: Labor et Fides, 1996).
- Rostirolla, Giancarlo, *Musica e musicisti nella Basilica di San Pietro. Vol I: Dalle origini al 1804* (Vatican City: Ed. Capitolo Vaticano, 2014).
- Rostirolla, Giancarlo, 'Musiche e apparati nella basilica vaticana per le feste dei Santi Pietro e Paolo e della Dedicazione dalla fine del XVI al primo quarto del XVII secolo', *Analecta musicologica* 33 (2004), 417-474.
- Schwager, Klaus, 'Die architektonische Erneuerung von S. Maria Maggiore unter Paul V. Bauprogramm, Baugeschichte, Baugestalt und ihre Voraussetzungen', *Römisches Jahrbuch für Kunstgeschichte* 20 (1983), 241-312.
- Schwager, Klaus and Hermann Schlimme, 'La chiesa del Gesù di Roma', in Richard J. Tuttle, Bruno Adorni, Christoph L. Frommel and Christof Thoenes (eds), *Jacopo Barozzi da Vignola* (Milan: Electa, 2002), 277-299.
- Smither, Howard E., *A History of the Oratorio, Vol. I: The Oratorio in the Baroque Era: Italy, Vienna, Paris* (Chapel Hill: University of North Carolina Press, 1979).
- Smyth-Pinney, Julia and David Smyth, 'Borromini and Benevoli: Architectural and Musical Designs in a Seventeenth-Century Roman Church', *Center* 18 (2014), 19-32.
- Snaet, Joris, 'For the Greater Glory of God: Religious Architecture in the Low Countries 1560-1700', in Krista De Jonge and Konrad Ottenheim (eds), *Unity and Discontinuity: Architectural Relations between the Southern and Northern Low Countries 1530-1700* (Turnhout: Brepols, 2017), 251-298.
- Spicer, Andrew, *Calvinist Churches in Early Modern Europe* (Manchester: Manchester University Press, 2007).
- Spicer, Andrew (ed.), *Lutheran Churches in Early Modern Europe* (Farnham: Ashgate, 2012).
- Wex, Reinhold, *Ordnung und Unfriede. Raumprobleme des protestantischen Kirchenbaus im 17. und 18. Jahrhundert in Deutschland* (Marburg: Jonas, 1984).
- Wisch, Barbara and Nerida Newbiggin (eds), *Acting on Faith: The Confraternity of the Gonfalone in Renaissance Rome* (Philadelphia: Saint Joseph's University Press, 2013).

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