

# **Aural Architectures of the Divine Sacred Spaces, Sound and Rites in Transcultural Perspectives**

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## **ABSTRACTS**

### **Elena Abbado (Vienna): Oratorio vs Oratorio. Considerazioni sull'evoluzione del rapporto tra spazio architettonico e genere musicale nella Firenze tra Sei e Settecento**

Fin dalla sua origine romana, l'oratorio si è distinto per essere tra i generi musicali più caratterizzati dal rapporto d'interconnessione con il proprio spazio esecutivo, venendo finanche identificato con lo stesso nome dell'ambiente originario per il quale era nato: l'oratorio inteso appunto come edificio architettonico, ma anche come spazio astratto di appartenenza sociale, condivisione, insegnamento religioso e intrattenimento spirituale. Il presente intervento, prendendo come caso studio la città di Firenze - uno dei più importanti centri di produzione dell'oratorio in Italia - intende mostrare la varietà ed evoluzione dei luoghi architettonici relativi alle esecuzioni oratoriali dalla sua accertata comparsa nel 1632, fino al 1775, anno del completamento della costruzione del nuovo oratorio filippino nella capitale toscana.

Fin dalle prime notizie della comparsa dell'oratorio musicale in città, appare di primaria importanza alla sua diffusione il rapporto con il luogo esecutivo, notando come il nuovo genere venisse eseguito in edifici già preesistenti, ma allo stesso tempo mostrando però fin da subito che quegli stessi spazi venivano modificati per essere adattati alle nuove esigenze spettacolari, grazie soprattutto all'aggiunta di cantorie o palchi per i cantanti e i musicisti, e palchi e schemi codificati di assetto per le varie tipologie di pubblico.

Verrà inoltre analizzato il modello culturale filippino a confronto con la prassi musicale delle varie e antiche confraternite locali attive nella produzione di oratori e che vedevano in atto diverse modalità di interazione tra il genere oratoriale e lo spazio architettonico. In particolare, verrà analizzato il peculiare caso del Complesso oratoriale di Firenze, denominato “San Firenze”, la cui costruzione durò ben 133 anni (1642-1775), vedendo avvicinarsi nel corso di quasi un secolo e mezzo vari progetti architettonici diversi per stile e esigenze esecutive a partire dal primo eseguito su richiesta dei Padri filippini da Pietro da Cortona (1596-1669), sino a quello definitivo dell'architetto fiorentino Zanobi Del Rosso (1724-1798).

Del Rosso, secondo i dettami del tempo e su richiesta del Granduca Pietro Leopoldo d'Asburgo-Lorena - ma contro la più ampia parte della cittadinanza che considerava l'opera architettonica ormai obsoleta - sviluppò il nuovo “teatro” sacro considerando le nuove esigenze musicali e in particolare l'ampiezza della compagine strumentale, ma anche la

massiccia partecipazione del pubblico, entrambi aspetti profondamente mutati tra XVII e XVIII secolo.

### **Anna Adashinskaya (Moscow): Singing for the Dead in Medieval Serbia. From Lateral Chapels to Additional Monastic Buildings**

The present paper discusses the functions of subsidiary chapels and minor monastic churches within the main Serbian monasteries (between the 12th and 14th centuries) with regard to their commemorative functions. By analyzing their iconographic programs, sonic structures, and isolation from the *katholika*, I assume that they were specifically built to host a small part of the brotherhood performing commemorative services simultaneously with the main ecclesiastic rites taking place in the monastic *katholika*. Moreover, their small size and developed system of clay-pot resonators could increase the volume of singing produced by a small group of monks. Thus, I propose to regard the subsidiary chapels and minor monastic churches as two stages of the same phenomenon – commemorative spaces built to be used by small groups of singing monks.

The Serbian churches of the Raška School (12th to 13th century) are distinguished by small lateral chapels appended to their narthexes. Their dedications to the patron saints of the ruling Nemanjići dynasty, iconographic programs, and the presence of small liturgical niches on the East hint to the connection of these spaces with commemoration rituals (a feature noticed by scholars such as Gordana Babić, Slobodan Ćurčić, etc.).

Based on the information provided by the Serbian monastic *Typika* for Studenica and Hilandar foundations, one may realize the immediate ritual use of these spaces. The Serbian foundations as well as their Byzantine counterparts faced a need to assign additional rooms for “singing” funeral and commemorative services. Due to the growing number of deceased brothers and church sponsors, often the commemorative rituals overlapped with the daily evening services, this situation causing the monks to choose which rituals had to be performed.

The *typika* suggest that a part of monks should “go and sing for the dead”, whereas the rest would continue to perform the daily rites. Consequently, the small chapels of the Raška School originated as a response to the need of additional spaces for singing the funeral canons. As a result, these small rooms were well isolated from the main space of the narthex and due to their semi-circular vaults and clay-pot resonators, they formed micro-acoustic structures.

With the greater development of the funeral rites and the growing number of commemoration services in the 14th century, one may notice a tendency to assign greater spaces for these purposes. Thus, in the Patriarchate of Peć, the Hodegetria Church (1324-1327) appears hosting the burial compartment with the tomb of Archbishop Danilo II. Similarly, the church dedicated to the holy ancestors Joachim and Anna (1314) was commissioned by King Milutin for the Monastery of Studenica. Judging by their dedications, iconographic programs, and specific acoustic structures (small-size buildings with non-obstructed spaces, relatively low domes, usage of resonators), these edifices were ideally suited for the performance of funerary singing by a small portion of the monastic brotherhood.

### **Stephanie Azzarello (Cambridge): Angels Above, Monks Below. The Use of Images, Sound, and Rites in Venetian Sacred Spaces**

The performance of rituals within sacred spaces has imparted spiritual meaning to human societies since time immemorial. In the Western Christian tradition, music, in conjunction with the liturgy, has been the vehicle by which the faithful have engaged with the Divine. As an Art Historian, I am especially concerned with the role of imagery in this nexus of spiritual engagement, particularly within the context of the physical space in which these Christian rites are performed.

In my doctoral dissertation, I reconstructed a series of now dismembered choir books made,

during the early fifteenth century, for the Camaldolese monastery of San Mattia in Venice. These large-scale manuscripts contained images, music notation, and Latin text necessary for the celebration of the mass and the Divine Office. In addition to the images of the manuscripts, San Mattia was also heavily decorated with altarpieces, tapestries and wall frescos. These visual elements, combined with the music of the liturgy and the physical gestures required to enact the mass, created a multisensory spiritual experience for the monks. Many of the images in the choir books contain depictions of sacred spaces. Sometimes this reflected the particular feast being celebrated but in other instances it did not. Why was it so important to the monks to see images of sacred spaces while being in a sacred space during the celebration of religious rites?

In this paper, I will suggest that it is because the images of sacred spaces functioned as an aid to the monks in facilitating an 'inner' sacred space: a place in their mind to achieve a deeper union with the Divine. This interiority is the foil for the exteriority of the real sacred space in which the monks are physically present. The music and the enactment of the ritual, in this space, act as the (very) necessary sonic and gestural stimulation required by the monks to create this inner sanctum.

My paper will centre on two case studies: the aforementioned monastery of San Mattia and the Basilica of San Marco, which provided a liturgical model for San Mattia. In addition to illuminated images, I will also examine the altarpieces, frescos and mosaics found in these religious institutions so as to explore the degree to which these visual elements were (or were not) designed to interact with the architectural, sonic, and liturgical components of the sacred spaces. Furthermore, I will look at the textual sources for the liturgical rites practiced at San Mattia and San Marco, which include missals, breviaries and ordinances, which provide the prescriptive backbone for these rites. As such, I will approach this line of enquiry through the interdisciplinary framework of art history, musicology, architectural theory, and liturgical studies.

### **Patrick Becker-Naydenov (Vienna): From Eastern Plainchant to Qur'ān Recitation? Practical, Aesthetical, and Architectural Implications for Converting Churches into Mosques and Constructing Islamic Sacral Sites in 16th-Century Urban and Rural Ottoman Southeastern Europe**

After the Fall of Constantinople and continuous expansion throughout the remainder of the 15th and 16th centuries, the former Byzantine capital and newly conquered Southeastern European lands provided the Ottoman rulers with ample opportunities for the conversion of former Christian religious sites as well as the construction of new sacral architecture in urban and rural areas alike. Until now, researchers have mainly focused on prestigious projects undertaken either in the new capital or other cultural and political centres that directly emulated the style of the Hagia Sophia. However, construction and conversion in the more rural yet heavily contested borderlands remain a somewhat untapped phenomenon, especially when read against the background of 16th-century Ottoman resettling campaigns and regional social politics.

Following Ergin's work on Mosque soundscapes (2008), this contribution investigates 14 *awqāf* (spiritual endowments according to Islamic law) for newly erected mosques and converted churches in Constantinople. Furthermore, building on Antov's study of the Gerlovo and Deliorman regions near the empire's Danubian Balkan frontier (2017) allows comparing the prestigious urban projects—with their often incredibly well-documented cantillation practices and related factors—to the humbler efforts in the countryside, where the Ottoman *mülk* land tenure system helped shaping milieus favourable for conversions to Islam. Thus, constructing new sacral Islamic architecture and converting existing religious buildings became meeting points for various discourses and different religious, architectural, and administrative knowledge. Within the multi-ethnic and -religious contexts of the newly acquired regions in Southeastern Europe, mosques formed the visible and audible sites of Ottoman rule: Through their interior architecture, intentional acoustic design, regulated Qur'ān recitation, and outer appearance, they went beyond the mere symbolism of power,

for which researchers shortsightedly have often taken them following the contemporary Hanafi school notions of notable figures like Ebussuud Efendi (1490–1574). Instead, as documentary evidence from both the empire and Western spectators, at least since the Council of Vienna (1311/12) shows, the regulation of sound and noise went hand in hand with the imaginary geographies of late Medieval and Renaissance Europe.

Finally, Ottoman donors wielded power to include recitation schools in mosque complexes, to regulate the cantillation's intensity through the number of singers employed, its frequency through the duty rota, and even its style through the choice of recitation traditions, as well as they could prescribe certain Surahs with a particular meaning to their own liking and religious understanding. In connection with measurements made by acousticians (e.g., Fausti, Pompoli & Prodi 2003), it is possible to examine what the practitioners themselves aimed for in Qur'ān recitation and how the notion of a desirably 'soul-caressing' cantillation (cf. Ergin 2019: 105) became a self-fulfilling prophecy, once the conversion of former Byzantine Orthodox churches resulted in less reverberant Islamic sacral buildings (Woszczyk 2018).

### **Jonathan Berger (Stanford): Sound, Space and the Aesthetics of the Sublime**

In this talk I will present our efforts to create a cross-cultural interdisciplinary framework to study the interrelationship between architecture and music, with particular focus on sacred sites and sounds. We will present examples of our work in two churches in Rome, and introduce our current work on three stylistically distinct churches in Florence.

The delicate and shifting balancing between acoustical clarity and intentional sonic blur reflects both varying religious priorities and evolving aesthetic ideals of particular cultures and subcultures. Performance practices affecting the transmission and reception of the music change in tandem with architectural modifications. Comparing the architectural acoustics of specific edifices to music specifically composed to be performed in these buildings, provides evidence of this interrelationship.

We demonstrate an outstanding and unique instance of the interrelationship of space and sound by presenting the acoustical and architectural qualities of the Chiesa di Sant'Aniceto, an early 17th century church in Rome, and *Varia Musica Sacra*, a collection of music composed for Sant'Aniceto. Analysis of the music and the acoustical qualities of Sant'Aniceto raise important questions regarding style and practices of sacred music in the early seventeenth century, and, more broadly, the (perhaps mutual) influence of architecture on music.

### **Maddalena Bonechi (Florence): Musiche negli spazi architettonici di Santa Felicita a Firenze nel primo Seicento**

Relativamente al primo venticinquennio del Seicento, i Diari della corte tenuti da Cesare Tinghi, aiutante di camera di Ferdinando II de' Medici, descrivono complesse esecuzioni di musica sacra a tre o quattro cori che si svolgevano durante la Settimana Santa (in particolare nel giorno del mercoledì Santo) nella chiesa di San Nicola a Pisa, ove la famiglia granducale era solita recarsi in ritiro nei giorni precedenti la Pasqua: esecuzioni che videro come protagonisti Giulio Caccini insieme alla moglie e alle figlie Francesca e Settimia, e ancora, tra gli altri, Jacopo Peri, Vittoria Archilei e Maria Botti. La chiesa di San Nicola si caratterizza per la presenza di due passaggi coperti sostenuti da archi che collegano rispettivamente il Palazzo delle Vedove (così chiamato perché vi risiedevano alcune vedove di casa Medici) alla Torre De Cantone, e quest'ultima alla suddetta chiesa. Come apprendiamo dalla lettura dei Diari, i cori si posizionavano dividendosi tra la chiesa e il corridoio, sfruttando dunque la verticalità dell'architettura: in alto, lungo il corridoio, si disponevano e cantavano le donne, mentre i "musicisti di Sua Altezza" (cantanti, ma anche strumentisti) trovavano posto in chiesa, su alcuni palchi allestiti per l'occasione e decorati – stante il periodo quaresimale – con una copertura viola. Di analoghe disposizioni delle voci e degli strumenti i Diari del Tinghi parlano – sempre per il periodo quaresimale – in riferimento

alla chiesa fiorentina di Santa Felicità. Anche in questo caso l'architettura del corridoio vasariano che passa sopra il loggiato della facciata e che si affaccia direttamente all'interno della chiesa consentiva ai componenti della famiglia granducale di assistere alle funzioni senza scendere al livello della comunità dei fedeli che lì si raccoglieva. La parte bassa della chiesa (presumibilmente quella all'interno del presbiterio) veniva utilizzata come sede dei cantori e dei musicisti, mentre la parte del corridoio che conduceva al 'coretto dei sovrani' riservato agli esponenti della famiglia Medici (luogo architettonico, quest'ultimo, che si colloca sopra le cappelle d'ingresso della chiesa, esattamente di fronte all'altare) ospitava le virtuose.

A partire dagli studi ancora parziali compiuti sia in ambito architettonico sia in ambito archivistico, il presente intervento mira a ricostruire quali fossero le caratteristiche architettoniche e acustiche della parrocchia granducale, la precisa disposizione di cantanti e strumentisti, le ragioni di tali scelte, il repertorio effettivamente eseguito e le ripercussioni in termini performativi e acustici.

### **Camilla Cavicchi (Tours): The Inner Ear. Watching Painted Music in the Castle of Montreuil-Bellay**

This paper analyzes the function of musical notation in figurative representations of Renaissance palaces, starting with a case study from the fifteenth century: the frescoes of the castle of Montreuil-Bellay (France). Recently attributed to Collin Delf, these frescoes represent a piece of music famous during the 1450s, the chanson-motet *Ave regina caelorum* by the English composer Walter Frye. This piece was also represented in two paintings attributed to the Master of Embroidered Foliage. The study of the diffusion of this piece, from the musical sources to the frescoes and paintings, will shed new light on the commission, the artists involved, and the iconic power of the music in the oratorio of the castle. More precisely, the paper will analyze the mechanisms of the reception of notated music in figurative art and its cognitive impact on the viewer, which recalls a sonic dimension. If it is true that music develops and manifests itself in the diachronic dimension of the hearing, music also knows an autonomous life in visual arts. In certain contexts, the musical notation of a piece known and recognized by a specific social group reveals the original meaning of the representation.

### **Umberto Cerini (Florence): Cantori, chierici, organi e strumenti. La dialettica della musica liturgica negli spazi di Santa Maria del Fiore a cavallo tra Sei e Settecento**

Durante il governo del Granduca Cosimo III, a cavallo tra Sei e Settecento, la Cattedrale di Santa Maria del Fiore di Firenze accoglie innumerevoli liturgie: oltre a quelle delle festività dell'anno liturgico assumono particolare importanza i riti legati alla devozione di alcuni santi e all'esposizione delle relative reliquie e le cerimonie in occasione di ricorrenze dal carattere politico-dinastico. Nelle diverse celebrazioni la musica sacra è realizzata con molteplici soluzioni. Il coro dei chierici della Cattedrale, che custodiva con dedizione e competenza la pratica del canto fermo, era affiancato da diverse realtà che entravano in gioco a seconda della solennità e dell'importanza dell'occasione. Dal semplice ausilio del suono degli organi si passava alla presenza di cantori solisti e dei musicisti della Cappella, alla quale, in particolari occasioni, si aggiungevano "musicisti e sonatori" provenienti dagli organici della corte medicea. Queste diverse entità musicali si collocavano negli spazi della Cattedrale deputati ad accogliere cantori e strumentisti, a partire dai pergami del coro e dalle due cantorie degli organi (ampliate e non più limitate alle cantorie quattrocentesche) fino ad arrivare al "primo terrazzino nelle facciate dei pilastri, che reggono la [...] meravigliosa cupola". Alla ricchezza degli organici corrispondeva una gran varietà del repertorio: le pratiche del canto fermo e dell'alternatim con l'organo convivevano con l'uso di polifonia policorale sia in stile severo che in stile concertato. In quest'ultimo caso ai cantori si affiancavano importanti gruppi strumentali, costituiti da trombe, tromboni e cornetti nella seconda metà del Seicento, per poi

divenire sempre più incentranti sugli strumenti ad arco.

Il presente intervento, affiancando la ricerca su documenti inediti agli studi già presenti sulla pratica musicale in Santa Maria del Fiore, vuole indagare le modalità con cui si concretizzava il dialogo tra le diverse entità musicali (gruppi di cantori, strumentisti, organi, chierici, ecc...) distribuite negli spazi della Cattedrale, dialogo che andava a realizzare complessi apparati musicali che si innestavano in una ritualità altrettanto articolata. Sarà anche l'occasione di far luce su alcuni aspetti relativi alla compresenza e all'interconnessione tra repertori nei diversi stili, come anche su funzioni peculiari che svolgevano le diverse compagini di cantori. La presentazione mostrerà come la dialettica tra le diverse entità fosse strettamente connessa alla collocazione delle compagini di musicisti e cantori: confrontando infatti alcune partiture con memorie che descrivono nel dettaglio gli apparati musicali di solenni celebrazioni sarà possibile fare ipotesi quantomeno plausibili su come si realizzassero il dialogo tra strumenti e voci, tra coro principale, ripieni e voci sole: sarà in definitiva evidente come questi dialoghi musicali ricreassero, nello spazio, i contrappunti, i contrasti e i diversi piani sonori presenti sul pentagramma.

### **Renzo Chiovelli (Rome), Enrica Petrucci (Camerino), Vania Rocchi (Florence): Lo studio delle 'Trombe d'Eustachio' nella cripta del Santo Sepolcro di Acquapendente come contributo al paesaggio sonoro della Via Francigena**

Alcuni storici dell'architettura, soprattutto tedeschi, si stanno occupando dello studio di particolari aperture esistenti nelle volte delle cripte delle chiese medievali, la cui originaria funzione appare ancora oggi poco comprensibile. Oltre che in Germania, queste aperture sono piuttosto diffuse anche nelle cripte delle chiese romaniche italiane. Circa l'originaria funzione di tali fori, da cui partono dei canali che attraversano le murature delle volte, sono state formulate varie ipotesi, si pensa ad esempio che possano essere stati creati come collegamenti visivi e uditivi tra le cripte e le chiese superiori, oppure direttamente con l'esterno dell'edificio. Ma la funzione rivestita da queste singolari aperture risulta ancora poco studiata. Ci si domanda, infatti, se queste aperture fossero invece dei lucernai; oppure degli agioscopi (finestrelle che collegavano le celle da cui gli anacoreti medievali ascoltavano le liturgie o ricevevano la Sacra Comunione; mentre un'altra finestrella della cella era aperta verso la strada permettendo agli anacoreti di ricevere cibo dai benefattori); o delle fenestellae confessionis (aperture praticate per permettere ai fedeli di avvicinarsi sensitivamente ai sacri sepolcri senza venirne a contatto diretto). Una risposta a tali interrogativi, può essere conseguita mediante l'analisi di una serie di canali che attraversano le volte della cripta della basilica del Santo Sepolcro di Acquapendente, nell'alto Lazio. La cripta ad oratorium di questa abbazia d'origine benedettina, dedicata al Santo Sepolcro e consacrata nel 1149, che conserva al suo interno la copia più antica esistente dell'originario sacello gerosolimitano (X secolo), presenta quattro fori rettangolari nelle sue volte a crociera. Da tali fori partono dei condotti che attraversano le murature delle volte ma che, purtroppo, ad un certo punto del loro percorso sono stati murati in seguito ai restauri effettuati nella chiesa dopo i danni bellici della seconda Guerra Mondiale. Le aperture di Acquapendente risulta che fossero popolarmente chiamate "Trombe di Eustachio", con riferimento ai condotti delle tube uditive che collegano l'orecchio medio alla faringe. Col presente studio si fa nuova luce sulle funzioni di questo tipo di condotti presenti nelle volte delle cripte, mettendoli in relazione con le funzioni fisiologiche delle tube uditive. Per questo sono state effettuate delle apposite prove sonore e misurazioni acustiche in prossimità dei fori delle volte, con la redazione di grafici delle diverse analisi delle riprese effettuate, con le risposte in frequenza e l'RT60 (tempo di riverberazione sulle diverse frequenze). Da studi recenti, sembrerebbe che la fruizione della cripta fosse originariamente riservata ai soli monaci dell'abbazia, gli unici che potessero giungere a contatto con le preziose reliquie gerosolimitane del sangue di Cristo che essa conservava. Pertanto i canali delle "trombe di Eustachio" sarebbero dovuti servire principalmente a diffondere i canti e, in genere, l'ascolto dei riti liturgici che in questo particolare spazio sacro venivano celebrati dai monaci. Ascolto che, in seguito allo studio della collocazione e direzione dei canali auditivi presenti nelle volte della cripta, sembrerebbe

dovesse essere diffuso all'estero della chiesa e particolarmente lungo il paesaggio sonoro della strada Francigena, che costeggiava l'edificio, percorsa nel Medioevo da miriadi di pellegrini diretti al soglio di San Pietro.

### **Galliano Ciliberti (Monopoli): Reims: Spazi sacri, suoni e riti nelle incoronazioni dei re di Francia. San Luigi IX (1226) e Carlo X (1825)**

I conventi francescani e domenicani di Reims, la grande cattedrale e le stesse vie della città che comunicano con queste istituzioni religiose costituiscono quel pilastro visivo e sonoro dell'immaginario politico della monarchia francese: i luoghi dell'incoronazione dei re. La musica che permea queste cerimonie regie è scandita da gesti, preghiere, musiche inserite nel rito. Una liturgia complessa, ricca di simboli che prescrive in modo puntuale il luogo, il momento e la tipologia dei canti da utilizzare: la musica, ad esempio, è monodica durante la consacrazione del re e prima della sua intronizzazione nonché polifonica avanti e durante la messa in cattedrale. Qui i cantori e i musicisti sono collocati in spazi precisi, apposti per consentire di essere uditi tra le volte della grande chiesa quando il minuzioso cerimoniale lo prescrive. Tali processi stratificatisi nel tempo creano tradizioni liturgiche dove si intersecano simboli gestuali e sonori, riti performativi all'interno di architetture appositamente concepite. Essi vengono espletati in un'ottica di *longue durée* con la medesima funzione sia per l'incoronazione di san Luigi IX (29 novembre 1226) che per quella di Carlo X (28 maggio 1825). Cambiano ovviamente i mezzi espressivi: canti fermi, mottetti celebrativi, tropi polifonici per san Luigi IX, musiche funzionali e altrettanto simboliche composte da Jean-François Lesueur e Luigi Cherubini per Carlo X. In ambedue i casi abbiamo i resoconti scritti delle cerimonie che vedono come comune denominatore la collocazione dei musicisti all'interno di spazi liturgici appositamente concepiti per questi eventi. Il contributo analizzerà questi aspetti secondo una lettura interdisciplinare e non angustamente événementielle.

### **Janie Cole (Cape Town): Sacred Architecture, Jesuit Missionaries and Performance in the Christian Kingdom of Early Modern Ethiopia**

The Jesuit mission to the Christian kingdom of Ethiopia (1557-1632) was one of the earliest and most challenging projects by the Jesuit order in the early modern period, requiring the mobilization of immense logistical, financial and human resources on a global scale and eventually leading to one of the most ancient and remote Christian churches being brought (albeit temporarily) under the authority of Rome. New ambitious architectural projects were undertaken as symbols of religious renewal and supremacy, and music was also central to Jesuit conversion practices as attested by recent scholarship. However, the role of sound and Jesuit musical practices associated with these sacred spaces, and the wider influences of foreign designs, has received less attention. Drawing on 16th- and 17th-century travelers' accounts, the voluminous surviving Jesuit documentation and indigenous sources, this paper explores the soundscape of new Jesuit churches erected on the Ethiopian highlands and its interrelation with the musical art of conversion developed by Portuguese Jesuit missionaries. It centres on several important Jesuit architectural sites as case studies, namely Gorgora, Dänqäz (the royal capital), Qwälläla and Gännätä Iyäsus (in imitation of the order's mother church in Rome), to examine the structure and decorations of these buildings in relation to the soundscape of Jesuit Catholic service, multisensorial ceremonies with indigenous Ethiopian components at the intersections of sacred space, sound and rite. First, opening a new avenue for Jesuit architectural history by considering Jesuit church acoustics and Renaissance theories on musical acoustics, it reconstructs the soundscapes of these buildings that included Jesuit services, liturgical practices, polyphony, prayers, recitations, chants, psalms and masses. Were Jesuit architectures intentionally designed to create specific spiritual soundscapes? How were Jesuit performances perceived by the Ethiopian royal court and local community? Second, it considers foreign influences as architects, master masons and artists came from India and Europe to produce these highly

original sacred spaces. While the workforce was local, the architectural design inspiration was unmistakably from Catholic Europe, as well as Mughal and Portuguese India. These transcultural architectural choices and use of Indian masonry and building techniques in Ethiopia were mirrored in sound, as European music was combined with indigenous African sounds played by Indian slave musicians. Jesuit musical conversion practices were, too, based on a well-established Jesuit model from Portuguese Goa which employed music as both evangelical and pedagogical tools, and blended indigenous and foreign elements. These contacts offer tantalizing views on the complex interrelations between sacred space, sound and rite, and how these impacted Jesuit religious practices and the spread of Jesuit liturgical musical traditions in Ethiopia. The study of sacred sound puts a focus on an embodied experience which can more fully explain the physical appearances of these Ethiopian monuments by combining visual and sonic considerations. It points to an AfroEuropean-Indian story of mobility and cultural migrations, which offers significant broader insights into the workings of an intertwined early modern Indian Ocean World and the role of architecture and embodied aurality in constructing identity and religious proselytism in the Christian Horn of Africa.

### **Jutta Günther (Göttingen), Florian Leitmeir (Würzburg): Mysterious Noises, Mysterious Space. The Soundscape of the Frieze of the Villa dei Misteri in Pompeii**

One of the most enigmatical images in Roman Wall Painting is the fascinating great frieze of the Villa dei Misteri in Pompeii. Situated in a rather small and separate part of the villa, especially the intense flame-red background colour and its rich painted scenery makes it one of the most spectacular finds of wall paintings for Roman times. Beautifully depicted, the arrangement obviously refers to a Dionysian context; one may see preparations for a wedding as well as mythological scenes combined with musicians. The musicians and their instruments dominate one part of the scene, however, there seem to be further actions depicted referring to music and/or sound like whipping or crying and shouting (ὄλολαγή). Within archaeological research, the great frieze has never been examined from a musical perspective.

Taking into account these various sounds depicted, we like to present an interpretation for the soundscape of the Dionysic mysteries in Roman times. We will discuss how the space itself was used in relation to its painting: Did the cult happen to take place in that exact room? How accessible was it for a visitor of the villa? Were there openings to let light in, or was it of importance to deepen the reception of music and rite by darkening the space? And furthermore, were the depictions influencing the cult actions as they seem to intend a procession with different stations?

In addition to our thoughts on the archaeological and iconographical evidence of the Villa dei Misteri, we would like to combine these results with the literary and/or epigraphical evidence on Dionysic mysteries from Roman times. In doing so, we hope to enlighten the importance of music in this cult from a threefold perspective.

### **Gayathri Iyer (New Delhi): She Came, She Sang, She Danced. Interactions Between South Indian Temple Architecture and the Body of the Hereditary Performer as the Foundation of the Hindu Aural Divine**

While Hindu temple architecture has evolved from a single-celled sanctum sanctorum, to an expansive mini-village with multiple secret pathways, the space is always described in prescriptive texts as the “devālaya”, literally translating to “god’s house”. Hindu sacred architecture of the early medieval and medieval periods particularly reflects this sensibility with designated public and private spaces, “parking” for the designated mounts of the deity and most importantly, entertainment halls known as “Natya mandapa-s” or “Sangeetha Sabha-s”.

These spaces of performance are embellished with sculptures of musicians and dancers, built for the purpose of hosting live performances. Yet, ritual performances would often



happen directly in the view of the sanctum sanctorum. This creates a dichotomy of performance- that which is meant for divine eyes only, and that which is performed in the “house of god” for devotional consumption. These spaces dictate two distinct visuaspatial arrangements. The public performance hall, or the Sangeetha Sabha, is embellished with sculptures of dancers and musicians, often holding a range of instruments and implementing identifiable movement vocabularies mentioned in prescriptive theatre texts. The sanctum sanctorum, or garba griha, is usually a fraction of the size, relatively sparsely decorated, and only lit with the dim lamps used to illuminate the presiding deity. The Sangeetha sabha is breezy, and often lit by daylight, where the garba griha, reminiscent of the primordial womb, is dark and introspective. Do these circumstances affect the ritual sounds that are produced, and the devotee’s experience of them?

It is impossible to imagine sound in these sacred Hindu spaces without imagining the singer. Indian temples were thriving economic centres for the arts, and women were employed to ritually sing and dance for the deity after undergoing a “marriage ceremony” where she was dedicated to the temple. In the southern part of India, these women went by the name of “tevaradiyal” or “sani”, demarcating a specific caste and class location. The most interesting aspect of their music, however, was that it was sung while dancing. In this way, their music and dance was inseparable. A change in note from lower to higher pitch was often coordinated with the bending and stretching of the body, making the art forms of music and dance inextricably overlapping and connected.

It is in this context that we examine the repertoire of the singing and dancing woman. If she danced in the Natya Mandapa or the Sangeetha Sabha, the architecture around her was designed to frame her body, and the sculpture “danced and sang” along with her visceral performance. If she danced or sang directly to the divine, however, her body was instantly governed by more stringent rules of Hindu religious practice. She could not lift her legs beyond a certain height, or sing a certain kind of repertoire in the presence of the deity. One cannot help but wonder if the mechanics of the physical space governed those choices. This paper seeks to understand the conversations between ritual, space and body through translating conversations between flesh and stone in the early medieval and medieval South Indian temple space, with regard to the art of female hereditary performers.

### **Jana Kratochvílová (Brno): The Relationship of Sacral Architecture and Musical Practise in Royal Cities in Czech Lands, 1450–1700**

The problematics of the fundamental relationship between church architecture and the liturgy, including music production and its specifics, remains little reflected in the context of the Czech lands. Nevertheless, numerous archival, literary and iconographic sources provide insight into this issue as well as into church musical practice. One of the most direct connections between music and architecture is represented by construction of choir lofts. This paper will focus on this problematic in royal cities in the Czech lands, mostly in 15th and 16th century. This time range is crucial not only for music in regard to the development of polyphony, but also within architecture. Choir lofts met the requirements of the new renaissance style at the end of the 15th century at the latest. In the second half of the 16th century there was a tendency to build a large, ostentatious organ on western choir lofts. This was also a question of representation, at the same time it was related to the tendency to involve city musicians in liturgical celebrations. The construction of choir lofts in Czech lands is often associated with the work of confraternities of litterati. Confraternities of litterati were an important part of church music in the Czech lands before the Battle of White Mountain in 1620 and they often had the means to build their own choir lofts. This situation is well recorded, for example, in the dean's church in the royal city of Louny, where a separate choir loft was built for the confraternity. This paper will also pay attention to iconographic sources, which can provide valuable information about musical practise or choir lofts. One such iconographic depiction is preserved in hymn book from Hradec Králové from 1592–1604 and contains knowledge about the confraternities of litterati in Church of the Holy Spirit. The vast

majority of parish churches provided facilities for musicians so that they could use the space for spectacular stereophonic productions on festive occasions.

**Stefan Morent (Tübingen): Sacred Sound – Sacred Space: In Search of Lost Sound. Virtual Acoustic-Visual Reconstruction of Sacred Spaces of the Middle Ages**

The subproject "Sacred Space" within the research project "Sacred Sound - Musical Manifestations of the Sacred between Theory and Practice" at the University of Tübingen (in cooperation with RWTH Aachen and Karlsruhe University of Applied Sciences) investigates the interactions between sacred architecture and sacred sound or sacred music and which relationships between sacred spatial concepts and their socio-cultural construction and religious experience and the development of liturgical forms can be discerned.

The underlying thesis is that Gregorian chant was embedded in a complex network of relations between movement in the sacred space within the liturgy and the acoustic conditions of the space.

Special methodological and technical challenges arise when the corresponding sacred spaces no longer exist or exist only in part. In the context of the question of the connection between musical-liturgical tradition, notation, performance practice and sound and space in monastic reform movements of the Middle Ages, this applies to numerous church rooms that are central to the investigation.

New possibilities arise from the virtual reconstruction of the architecture as well as its acoustics. The Cistercian monastery church of Maulbronn serves as a pilot project: recordings with singers in the real church space will be compared to recordings in its virtually acoustic-visual reconstructed model.

The former monastery church Cluny II/III, the Gozbert church of the monastery St. Gallen and of St. Peter and Paul of the former monastery Hirsau, among others, which are no longer or only partially preserved, are to serve as further virtual sound spaces in the future. For them a sufficient number of architectural remains still exist in situ and/or have been preserved or secured by excavations, as well as descriptions and representations that allow a virtual reconstruction of the rooms in as much detail as possible, and relevant source corpora with regard to the liturgical music associated with them.

We will investigate whether and to what extent relationships can be established between room acoustics, liturgical and theological rules and ideas (laid down, for example, in *Consuetudines* or *Libri Ordinarii*) of (Western) monastic communities and their liturgical singing (handed down in corresponding sources). The paper presents the project and its goals as a work-in-progress.

**Diana Perego (Milano), Michele Traversi Montani (Lecco): Spazio e suono nel santuario attico di Ikaria**

Il nostro intervento intende indagare spazio sacro, rito e suono specificatamente nel teatro attico di Ikaria del VI sec. a.C. Tale spazio presenta i tipici caratteri architettonici dell'età arcaica quali orchestra quadrangolare, koilon 'naturale', proedria rettilinea. Il teatro, come attestano le epigrafi rinvenute in situ, era fruito in occasione sia delle feste sia degli agoni teatrali in onore di Dioniso qui venerato in modo complementare ad Apollo. Lo dimostrano i templi dedicati alle due divinità ubicati a stretta vicinanza nel santuario. Questo spazio sacro era scenario di spettacoli multisensoriali che coinvolgevano la vista (opsis) e la musica (μελοποιία) e specificatamente lo strumento dionisiaco dell'aulós, anch'esso associato al culto complementare di Apollo (THEOGN., I, 757-764).

Il metodo caratterizzante la nostra relazione sarà il ritorno alle fonti. Proporranno alcune attestazioni significative relative a spazio, rito e suono. Dalle fonti archeologiche (reperti, epigrafi) a quelle iconografiche (pitture vascolari, rilievi attici) fino a quelle puramente letterarie (riferimenti drammatici, poetici) emergerà come il komos dionisiaco sia il punto di intersezione tra teatro e rito, spazio e suono.

Data la quantità delle fonti sarà necessaria una cernita critica. Nella prima parte del nostro intervento saranno mostrate fotografie inedite dello spazio teatrale, della statua arcaica di Dioniso rinvenuta in loco, e saranno proposte alcune epigrafi che documentano la festa (IGII21178) e gli agoni drammatici (IGI3254; IGII23095; IGII23099; SEG 22.117). Si considereranno brevemente anche alcuni rilievi attici che raffigurano il komos dionisiaco nel demo di Ikaria (es. La vista di Ikaria a casa di Ikarios, Napoli, Museo Archeologico Nazionale, n. inv. 6713). Si procederà poi con fonti letterarie relative all'aulós a partire dalla prima attestazione del suo utilizzo nel komos dionisiaco (HES., Scut, 278-283). Seguirà una disamina lessicale selezionata volta a fare emergere le caratteristiche dello strumento in ambito rituale e sacro (PIND., fr. 140b Sn-M.) e teatrale (AESCH., fr. 91 TrGF). Sulla base delle nostre competenze diverse ma complementari, di studiosa del teatro antico e di studioso di filologia greca e musicista, ci proponiamo di fare emergere la complessa interrelazione tra spazio sacro, suono e rito a partire dall'esempio significativo del theatron di Ikaria; un luogo così importante nella storia del teatro tanto da essere identificato a partire dall'età alessandrina come la patria di Tespi; il protos heuretès della tragedia.

### **Doris Prechel (Mainz), Guilia Torri (Florence): Stations of the Temple Cult – Set to Music in the Hittite Culture in Central Anatolia 2nd Millenium BC**

Among the thousands of cuneiform texts of religious provenance from the Hittite capital Hattuša (Boğazkale/Central Anatolia), there are numerous references to music in cult. It is thus possible to draw a picture of the use of acoustic signals to structure different ritual acts. While in iconographic representations the architectural context of musical scenes in temples or outdoors is implied rather than depicted, the texts show when and where music accompanied religious ceremonies, and hand down the names of the instruments and actions of the performers in the sacred space.

In particular, the large Hittite festival descriptions from the middle of the 2nd millennium BC represent a rich source. It was in and around the temples that musical performances took place. In addition music and song were part of magic rites, royal ceremonies and circus-like performances by men and animals in connection with these cult festivals.

In our contribution we would like to present a text material that has so far received little attention in the field of music research. It is true that we are far from a recognisable reality of musical performance: we have no information about notation, the tonal system, interval spacing, melodies and rhythms. Nevertheless the ceremonial descriptions are suitable for presenting the interrelation of sacred space, sound and rites in the Hittite Empire.

### **Eugeen Schreurs (Antwerp): 'Angelic hymns of praise'. Rood Lofts in Brabant, Flanders and Liège**

The rood loft (NI. doksaal; hoogzaal; Fr. Jubé; Lat. doxale, oxale) occupied a central place in Gothic churches between c. 1400 and 1600. Especially in collegiate churches they provided a separation between the (closed) priest's choir of the canons and chaplains and the nave, where lay men were admitted. This paper focusses on the construction and use of these often magnificent structures in churches in Flanders, Brabant and the northern part of Liège. Although the rood loft had several functions and symbolic meanings, it was also used for musical purposes. Iconography informs us that polyphonic music was also performed there, whether or not in alternation with the organ. Other instruments (trombones; cornets) were used as well, especially from the sixteenth century onwards. It was also the place where the polyphonic music was kept - in chests of drawers - by the 'maître de chant'. As the available historical information is rather limited and incomplete, and certain traditions and customs are particularly persistent, it is instructive to widen the sample both in time (i.e. in use until the end of the 18th century) and space (comparison with the situation in neighbouring regions, especially Wallonia and Northern France).

The churches included in the study have an extant 'jubé': Aarschot (Our Lady); Antwerp (Our Lady and St Jacobus); Brou (St Nicolas de Tolentino), in France but built in Brabant style; Bruges (St. Jacobus); Ghent (St. Bavo); Leuven (St. Petrus); Lier (St. Gummarus) and Tongeren (Our Lady). Although only this last church no longer has a central rood loft, but was included because the descriptions in the 15th-century 'liber ordinarius' of this church are quite unique and extensive and because similar ceremonials dating from the 17th and 18th centuries were preserved there. In this way, an evolution in customs could be established. In the period 2004-2014, artistic collaboration took place between ensembles such as Capilla Flamenca (conducted by Dirk Snellings) and Oltramontano conducted by Wim Becu in order to integrate historical insights into today's performing practice. Through concerts, recordings, rehearsals and experimental settings the following things, among others, were made apparent: the rood loft is an amazing place for polyphony, even in large Gothic churches. If sung 'correctly' (focusing on the projection of the sound, not on the sound volume), the polyphonic lines can be heard across the vaults all the way to the back of the church. Differentiation is created by singing in several directions, also towards the (northern) side wall of the choir. All this creates the illusion of an almost timeless, heavenly angelic music. This is emphasised by the distance/indirectness of the sound and the height of the rood screen, which is crowned with an impressive triumphal cross.

### **Nicholas Smolenski (London): Metaphorical Construction of St Paul's Cathedral in John Blow's *I was glad***

London was rife with activity on the morning of 2 December 1697: the opening service for the chancel at St Paul's Cathedral was scheduled for that afternoon. The service simultaneously commemorated the opening and consecration of the chancel within an otherwise structurally incomplete cathedral, acted as a memorial for the unprecedented destruction of the Great Fire of 1666, and celebrated the signing of the Ryswick Treaty that ended the Nine Years' War. This multipurposed service highlights a complex web of institutional pressures and overlapping social networks, that which represents a microcosm of the interlocking political and religious interests applied throughout Restoration London. The music that John Blow was commissioned to write for this specific service—two full anthems and the verse anthem *I was glad* for choir and orchestra—placed the cathedral and the Anglican consecration liturgy into a political context, celebrating the status of London as a European superpower as much as the cathedral and its newly completed chancel. Integral to this celebration was the metaphorical completion of St Paul's Cathedral through Blow's *I was glad*. The chancel had been sealed with large timber partitions on all sides for the consecration service, and while the interior was built and ornamented up until the week preceding the event, Blow would have been able to conceptualize the performance of his anthem and study the resulting acoustics of the timber-lined space. This spatial consideration within the context of Blow's anthem is crucial to understanding the music's ability to layer images of St Paul's in past, present, and future. The anthem was affected by a rhetoric of space achieved through metaphor. Its performance during the consecration service became the catalyst for attendees to perceive an architecturally complete cathedral within the unfinished walls, layering different measurements of time and space onto one another to create a perfected "holy tabernacle" from within the mind. The anthem's text oscillates between earthly buildings and spaces for prayer—palaces of Jerusalem—and the ethereal house of the Lord. The use of psalm texts reinforces a connection between the tabernacle and eternal life in a way that takes on unique meaning when sung within the incomplete St Paul's. The anthem superimposes the image of palace walls onto the unfinished structure: the figurative image onto the literal space. This transformation of space and time benefitted both Church and Crown at the end of the Restoration. Sounds and acoustics at St Paul's depended on the physical cathedral and its leaders to be most rhetorically effective, but they were also able to transcend those physical parameters through metaphorical representation. Church and Crown capitalized on this power in order to promote St Paul's as a project worth completing.

Once finished, that same power transferred back to those institutions through symbol and metaphor, thus demonstrating their mastery of harnessing sound produced within England's preeminent "Mother-Church" to stabilize their command over the nation.

### **Emanuela Vai (Oxford): Staging Sound, Shaping Space. The Confraternity of the Misericordia Maggiore in the Early Modern Venetian *Terraferma***

The Basilica of Santa Maria Maggiore in Bergamo, managed by the Confraternity of the Misericordia Maggiore, was at the height of its artistic splendour during the sixteenth century. Music played a leading role in the charitable institution's rituals and the innovative musical forces of the time found fertile ground in the Basilica's performances. The archival records of the Confraternity reveal an explicit interest in enhancing and enriching the repertoire of the chapel's music. Sources also reveal the institution's interest in the ways that the Basilica's architecture and the arrangement of its furnishings could alter and shape sound. This paper presents materials from my book project on sensorial performances at the Confraternity, and explores the relationship between music and architecture in the Basilica, bringing together a range of documentary and literary sources, such as ceremonial ledgers, correspondence, diaries, inventories and financial records. It focuses on the ways that the interior soundscape of the Basilica of Santa Maria Maggiore was mobilised as a medium for staging the prestige and political reach of the Confraternity.

### **Jean-Christophe Valière (Poitiers): The Approach of the Archaeoacoustic. The Case of Montivilliers Abbatial Church**

We often think that the religious chant, and particularly the plainchant, was best appreciated in a reverberant space. But what is the relationship between the modestly sized Carolingian churches and the Gothic cathedrals? From one to the other, the length of the reverberation increases considerably (typically from 1s to 7s) which strongly modifies the resulting sound of the chant.

Ceremonials provide many recommendations concerning how to sing, which clearly take into account the effects of reverberation. We also find, in monastic registers, recurrent complaints about the noise or the difficulty of singing. This is the case of the women's monastery of Montivilliers in Normandy for which, concomitantly to these recriminations throughout the 17th century, ambitious works were undertaken by the management of the Abbey to try to avoid these effects. It might therefore be possible to reverse the direction of causality and assume that the practice of singing has adapted more to the sound space than the other way around. In order to understand this specific condition, we will analyze written sources that evoke these difficulties, in relation to the writings of some famous scholars, such as Vitruvius and Alberti, or to those of lesser known practitioners. First, we will identify and analyze the main acoustic terms used in the writings to qualify reverberation by comparing them to other common terms of the "acoustic" vocabulary used to qualify sound spaces such as resonance, echo or consonance. Finally, we will see what strategies were attempted to respond to these identified difficulties.

### **Vasco Zara (Dijon/Tours): The Theory of Architecture. The Renaissance Principles and Their Applications**

Architectural treatises and the various commentaries on the Vitruvius's *De architectura* of the fourteenth and fifteenth centuries, assign a peculiar place to music: on the one hand because of its mathematical ratio, on the other concerning the acoustical features. On the base of the treatises by Leon Battista Alberti and by some other major authors such as Cesare Cesariano, Philibert De l'Orme, Sebastiano Serlio, Daniele Barbaro, and Palladio, this paper will provide a precise overview on the relevance of music in Renaissance architectures. I will also compare this matter with the four acoustical features defined by Vitruvius according to

the shape of the spaces (De architectura, V, 8), in order to evaluate the consistency of the musical issues, and the availability of the musical and architectural devices improving the acoustical properties during a musical performance.