

2014

Fantini and Frescobaldi in Rome, Circa 1634: A Study of Context and Practice

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FANTINI AND FRESCOBALDI IN ROME, CIRCA 1634:
A STUDY OF CONTEXT AND PRACTICE

A Monograph

Submitted to the Graduate Faculty of the
Louisiana State University
and Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Music Arts

in

The College of Music and Dramatic Arts

by

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May 2015

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ACKNOWLEDGEMENTS

I would like to send my sincerest gratitude to Dr. Brian Shaw who, through his mentorship and guidance, has helped me to return to the musical arts. This particular study is part of the realization of a dream; a dream with a goal to return to a life in music; and especially in early music. Without Dr. Shaw's guidance, many forms of assistance, and connections to the broader musical world, this study would not have been possible. His unfailing commitment to my betterment has lead to a life full of new relationships and new musical opportunities. I have become a much richer and happier person through my relationship with him.

I also owe a deep debt of gratitude to Dr. Joseph Skillen and Dr. William Grimes. As mentors and DMA committee members, their assistance in the completion of this project cannot be overstated. Both have acted as mentors and instructors to me in many, many guises. Even more importantly, both have spent considerable time "at the table" with me... giving advice on life (child rearing!), happiness, and the arts. Those contributions have proven just as meaningful as the countless hours of musical instruction.

I send my deepest love and gratitude to my family. My lovely wife, Alicia, has supported my studies unfailingly. I wish there was a way to state how important her love and support have been to me during this time. She and my three children (Simon, Tabitha, and Ian) have had to make many sacrifices for this endeavor to be possible. Similarly, my father and in-laws have always been there for us whenever called upon.

Lastly, I'd like to reminisce briefly about my late mother, Carol Lewis. While not always successful, I try to make sure that her tenderheartedness still travels with me wherever I go. I hope that the legacy of her gentleness will be forever embedded within my music-making.

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ABSTRACT

This study clarifies historical evidence as applied to Italian baroque performance practices and repertoire for trumpet and pipe organ, circa 1630. It focuses upon a specific concert; the first historical record of a trumpet and pipe organ duo performing whereby the trumpeter takes a soloistic role. The details surrounding the performance, one involving trumpeter Girolamo Fantini and organist Girolamo Frescobaldi, make wonderful fodder for a more detailed musical look into 17th century Italy. Perhaps most importantly, the process outlined here can be modified and used in the study of music from virtually any genre from any musical period. Ultimately, it is my hope that the details surrounding this historic concert can be leveraged in the service of forming a more consistent intention as applied to the study and live performance of ancient music.

In the larger trumpet community, Baroque music of nearly any nationality has often been performed with loose guidelines regarding various facets of performance: articulation, phrasing, dynamics, and so forth. A discography at the conclusion of the paper illuminates how opinions differ regarding the performance of the particular repertoire in this study. My investigation takes into account organology, acoustics, historical information gleaned from the Vatican Library, and architectural factors based upon site visits in Rome.

This document is composed of five (5) major sections: 1) the roles and typologies of trumpets in Italy in the early 17th century; 2) the typologies of pipe organs in Italy in the early 17th century with special emphasis given to the unique approach to tonal design in the Baroque Italian organ; 3) historical details uncovered through research in the USA and Rome which paint a clearer picture of where the famed concert might have taken place, and at whose behest; 4)

acoustical and architectural details of the historic spaces potentially utilized in Fantini's and Frescobaldi's fabled concert; and 5) insights into further directions for research including the integration of sampling, sequencing, recording technologies, and digital acoustic simulation into the study of ancient – and potentially all – music.

INTRODUCTION

The following study has a single overarching principle: to provide a platform for the formulation of a well buttressed performance intention. I will not attempt to take a stance on a “best” performance practice, nor establish one I consider most valid. Instead, I will deal primarily with the intellectual and physical processes required to join a constellation of ideas and practices together in order to form a coherent approach to the performance of a specific musical repertoire. Specifically, this paper takes the fabled "first concert for trumpet and organ" as its subject. This concert took place in Rome, Italy, probably in the summer of 1634, and involved the organist Girolamo Frescobaldi and the trumpeter Girolamo Fantini. The mysteries surrounding this particular event provide a wonderful platform through which the processes defined in this study might be illuminated, but the investigative process used throughout this study also has applications within a myriad of other subjects. Due to the complexity of circumstances surrounding this particular concert, this paper might occasionally seem to focus alternately on history, reception, performance practice, musical technique, or digital tools. In the end, I will always seek to provide a place whereby external information might support a performers internal intention. Within this subject, a series of sub-topics will be investigated:

1. Organology and Historical References as applied to trumpets in Baroque Italy, circa 1630
2. Organology as applied to pipe organs in Baroque Italy, circa 1630
3. Details surrounding the fabled Fantini/Frescobaldi concert of 1634
4. Architectural and Acoustic details surrounding the Fantini/Frescobaldi concert and how those might inform performing decisions
5. Useful digital technologies and how they will inform further research

In an attempt to deal with the cloudy circumstances surrounding this particular "first concert", this paper will deal specifically with not only conventional wisdom as it applies to Italian music from the early 17th century, but also concerns related to broader historical matters, 17th century Roman liturgical/secular influences on this music, specific architectural concerns, acoustics, organology, and modern digital innovations that allow for acoustic stimulation of ancient performing conditions. At the conclusion, it should become clear that the formulation and enactment of a performer's intentions can indeed be approached in a manner that engages both the intellect and the passions in such a way that both are used fully in the production of a meaningful and engaging performance of this ancient (or any!) music.

How This Study Came to Be

This topic arrived circuitously. In 2010, I returned to graduate school to begin the study of the modern trumpet as well as the vented baroque and ventless natural trumpets. As a first-year doctoral student, I set a goal to present a DMA solo recital on the Baroque trumpet accompanied by portative pipe organ and voice. I quickly realized that finding a venue with a small continuo pipe organ and a transposing keyboard (needed to achieve the accepted Baroque pitch level of A=415Hz) was going to be problematic. Searching revealed that a local church owned such an instrument: the only one in the city of Baton Rouge, Louisiana. Unfortunately, this instrument was under tight restrictions and, even though small and portable, could not be moved from the small and acoustically unflattering room in which it was housed. Although the recital was successfully held in June, 2011, this process left me ill at ease. I left the performance with the sense that there needed to be some investigation into other alternatives to this single little continuo organ if local solo performances as a Baroque trumpeter were going to continue.

That realization was the beginning of my investigation into sample-based technologies as applied to pipe organs and harpsichords. I soon learned that quickly-evolving advances in microprocessor technologies had spawned a cottage industry of software designers, engineers, and organ lovers to code software that leveraged current computer processor power and RAM memory in the service of immediate recall of recordings (samples) of actual pipes from real instruments. Groups of samples were combined into complete virtual instruments called "sample sets". The software, *Hauptwerk*(TM), had been developed to the point that people were producing sample sets of complete organs that were sonically compelling and realistic, including some historically important organs from around the world. I quickly installed the basic version of the software, procured a few sample sets of small pipe organs, and purchased an organ manual keyboard (which could be connected to a computer laptop via USB) and began thinking about how I might go about setting up a sample based digital organ.

The initial performances experiences with the digital organ met with mixed success. Attempts to utilize the instrument in a way that sonically matched my performing intentions exposed a few difficulties. Some sample sets of organs were often recorded at some distance from the organ and included the room ambiance from the space where the organ resided (wet recording). This ambiance (reverb), when combined with the ambiance of an actual live performance space produced a sound that was unclear and unrealistic. When using an instrument recorded from a close perspective, such that no room ambiance was included in the pipe samples (dry), the sound was often too dry and lifeless to be enjoyable in rooms where the ambiance was not flattering. Ultimately, a few performances with a dry sample set in a flatteringly wet physical acoustic showed that the system could make for a very compelling continuo instrument. The

choice and positioning of loudspeakers was also another problem, but I had a digital continuo organ that could be reliably used in particular situations.

As this study went on, I began to see a more interesting and compelling use for the toolbox of digital tools available (including sample sets, reverbs, recording equipment, and acoustic simulation) in the holistic study of performance conditions and the effects on the performance practices of music, specifically early music. The concurrent study of Girolamo Fantini's 1638 treatise, as a Baroque trumpeter, showed that there were a host of unanswered questions regarding the performance practice of his music as well as details regarding location, organology, and the acoustic's effect upon performance. I made the mental connections and began the present study whereby I make a case for the inclusion of a holistic suite of traditional and non-traditional research tools in order to formulate an idea of how that particular performance might sound: and to then apply that investigative process in continuing study of performance practice. Over the past 18 months, I developed a workflow by which the following topics surrounding the Fantini/Frescobaldi concert might be addressed. This paper deals primarily with portions of research traditionally considered “analog” as a means to lay a historical groundwork with the idea that the digital subjects being covered primarily at a later date.

THE ITALIAN TRUMPET WITHIN GREATER EUROPE IN THE EARLY 17th CENTURY

Fantini's and Frescobaldi's concert signaled a newer style of trumpet performance differentiating itself from a set of Italian traditions that had traveled northward across Europe as early as the late 15th century.¹ Establishing a tradition from which that new style would arise proves beneficial in clarifying details surrounding the concert, in terms of both organology and musical intention. Leading up to 1634, there are some significant clues as to how Italian trumpeters functioned in society and performance, as well as how that role made its way across greater Europe. Eventually, both Girolamo Fantini and Cesare Bendinelli would pen significant works on Italian trumpeting in the form of Bendinelli's treatise *Tutta l'arte della trombetta* (1614) and Fantini's *Modo per Imparare a Sonare di Tromba* (1638). Although both of these are watershed works for historians and trumpeters, Fantini and Bendinelli's treatises are often incorrectly described as displaying a new style of performance arising from Italy.² Only in the case of Fantini is this partly true. Both treatises are more accurately viewed, in the majority of their content, as works that look backward and describe an older tradition.³ It is only in the inclusion of Fantini's sonatas for keyboard and trumpet that we see something discernibly new in either treatise. It is in their chronicling of the older style, in corroboration with some 16th century correspondence and literature that we can begin to gather details that clarify how the concert in 1634 actually came to be.

There are significant clues in both the musical literature and in historical documents showing that Italian trumpeters had a clearly defined performance practice well before Fantini

¹ Downey, Peter, "A Renaissance Correspondence Concerning Trumpet Music." *Early Music* 9.3 (1981):

² Ibid., 329.

³ Ibid., 329.

and Bendinelli. Only Fantini's sonatas for trumpet and organ (in his 1638 treatise) present a sign of newer soloistic musical considerations for the trumpet. Peter Downey published a brief article in 1981 uncovering a significant set of correspondences between King Christian III of Denmark and the Elector Augustus of Saxony in 1557. Well before the time of Fantini, the "Italian" style traveled well into northern Europe and established itself in both form and function. In the 16th century correspondence noted below, it is apparent that the corpus of ensemble sonatas and military signals had been in place for some time. Translated by Downey, the letters from King Christian III of Denmark read (emphasis added by author):

“Moreover, dear nephew and friend, as we know (and do not doubt) that Y(our) H(ighness) is always R(oyally) and favourably inclined towards us and our well-being, we wish to bring some trifling matters to your attention. Although we have already burdened YH with so many things, we would like, and paternally request, YH to help us once more; besides, we would like YH to fulfill our trifling requirements.

We hope that YH would have paternal and R concern that some of our best trumpeters, who could play on all sorts of instruments, have left our service. Therefore, although we still have a few (who are good trumpeters and instrumentalists), *we nevertheless require some good replacement as we wish them to practice the Italian style.* Knowing that YH's trumpeters play the Italian style better than others, we would really and truly like to have some of these, as many as you can spare.

Furthermore, we hope that YH would paternally and R like to help us by permitting us, through your trumpeters, to *obtain the Italian blowing-at-table and cavalry signals, just as YH's trumpeters play them, written down in musical notation with a descriptive commentary, so that ours may be able to establish the same style properly.*

We also need a timpanist: could YH, through your trumpeters, send us an apprenticed youth who can play timpani, and, moreover, a trumpeter, who is also an apprenticed youth, and who can play the Italian style and also cornets, *schwerpfeiffs* and other instruments at court? We would also like YH to inform us of the fees and maintenance for good employ, for we are troubled with these trifling things. All of these things, as stated above, will be used at court so that YH will not complain that we have presumed to trouble YH so much.”⁴

⁴ Downey, Peter, "A Renaissance Correspondence Concerning Trumpet Music." *Early Music* 9.3 (1981): 326, Accessed 19 Aug. 2013, JSTOR.

Given the date of 1557, the geographic location of Saxony, and the specificity with which the correspondence refers to the Italian style of trumpet playing, it is not difficult to infer that a tradition of Italian trumpeting was well in place and had been able to travel abroad in greater Europe. One sees that the Italian style is already clearly notated in the Danish court trumpeter's books by Lübeck (1598) and Thomsen (contemporary with Lübeck). It seems plausible that Italian trumpeters utilized a tradition that had been transmitted both by aural and written means, and that the tradition had been in place for some time. The correspondence continues with this reply from Elector Augustus of Saxony (emphasis added by author):

“Moreover, in your letter brought to us by Claus Bott Y(our) R(oyal) H(ighness) paternally requested us to furnish you with an apprenticed youth, who is an Italian trumpeter and who can also play on other musical instruments at court, and also a timpanist. We are not only willing and pleased on that account, but, moreover, are particularly delighted when we can comply with YRH’s friendly requests.

However, in all friendliness we must inform YRH that recently all of our Italian trumpeters (and also the other Italian instrumentalists, apart from those who are not trumpeters) have returned to Italy, apparently because they did not get enough money for their monthly wage, despite the fact that we gave them, in addition to board and clothing, two hundred gulden per year service payment. Thus we have no Italian trumpeters at present, only Germans who have learned the Italian style. But, as none of these is instrumentalists, in order to maintain our instrumental music, we have written to Italy for others so that we may once more provide for the same; YRH may rest assured that we will be most diligent not to forget him.

Similarly, our timpanist died only half a year ago and we have had to use the [apprentice] he had trained. However, we are most willing to send YRH a boy who has been learning from him for some time, as soon as he has mastered [the art of] the [drum-]beating.

Furthermore, we are sending YRH the Italian signals for ‘Boots and Saddles’, ‘Mount Up’ and ‘To the Standard’, as well as a few signals, such as ‘Retire’ and ‘The Watch’; moreover, the sonata which our trumpeters use for blowing-at-table, which is set in music and is played in six parts, according to the Italian trumpeters’ method, which the trumpeters will easily understand. And as the sonatas for blowing-at-table are many and are often changed, we have sent YRH the most common and most used example... “⁵

⁵ Downey, Peter, "A Renaissance Correspondence Concerning Trumpet Music." *Early Music* 9.3 (1981): 326-328, Accessed 19 Aug. 2013, JSTOR.

The aforementioned text shows the breadth of musical types known to Italian trumpeters in the 16th century. It also points to the great probability of a corps of Italian trumpeters who were able to read music, play other instruments, and serve as more useful and nuanced musicians. In his examination of these original sources, Downey points out that there were essentially two traditions continuing forward from Italy beginning first with a series of military and municipal signals.⁶ These come from the earliest repertoire for the instrument, transmitted aurally from the 15th century onward.⁷ Secondly, one finds ensemble music in the form of ensemble “sonatas”. Elector Augustus of Saxony notes, specifically, that he is interested in the cavalry signals as well as the ability of his trumpeters to partake in “blowing-at-table”. These two continuing traditions will prove valuable later in this study establishing a link (in 1634) between Fantini and the Barberini, probably for these very services. Regarding the tradition of the Italian trumpet, Downey writes:

“[In the first category] These signals the Italians standardized and added to by introducing two new signals, which are distinguished in the sources (Thomsen and Bendinelli) by being one harmonic higher than the others; indeed, one of them is specified as “al' Italiana” by Bendinelli. In the second category we find the trumpeters' sonatas; this made up the ensemble music played by trumpeters at meal times, whence the term “blowing-at-table”. These pieces, as presented in the surviving sources, have only one part notated - the Principal part, from which the other players constructed their own parts, following a set of performing rules described by Bendinelli, and also by Michael Praetorius. Thus the 'six parts' mentioned by Elector Augustus comprise:

1. The Clarin, who played in the diatonic range c"-a"
2. The Principal, who played from the sole notated part on the natural harmonics c', e', g', c", sometimes rising to d" or even e"

⁶ Downey, Peter, "A Renaissance Correspondence Concerning Trumpet Music." *Early Music* 9.3 (1981): 328-329, Accessed 19 Aug. 2013, JSTOR.

⁷ Ibid.

3. The Alter Bass, who played one harmonic lower than the Principal as a rule
4. The Volgant, who played the note g
5. The Groß, who played the note c
6. The Fladdergröß, who played the fundamental, C; this became obsolete during the 17th century. To these could be added a pair of timpani, which were tuned to G and c.”⁸

One can now begin to place the Italian trumpeting tradition within a larger historical framework: a framework that shows how/when performance characteristics were established and received across Europe. Interestingly, the explicit call for Italian trumpeters in the correspondence also implies that trumpeters from Northern Europe in the late 16th Century were largely of lesser ability (or favor) than Italian counterparts. There are a few other events, more closely contemporary to Fantini, which also discuss the potential for Italian trumpeting within the broader European purview.

In his article about Giovanni Valentini’s “*Messa, Magnificat et Iubilate Deo a sette chori concertati con le trombe*” (1621)”, Steven Saunders goes to great lengths to explain how the Italian style of trumpet playing integrates within European art music. Valentini, here, is composing for the court of Ferdinand II in Austria. As head of a remarkably rich musical court, one that expanded in size and output even during the lengthy Thirty Years War, Valentini’s “*Messam, Magnificat, ...*” is indicative of the pervasive use of Italian trumpeting in combinations with sacred vocal music. I may also serve as the most compelling example of such music that

⁸ Downey, Peter, "A Renaissance Correspondence Concerning Trumpet Music." *Early Music* 9.3 (1981): 329, Accessed 19 Aug. 2013, JSTOR.

utilizes both the militaristic signal-laden tradition alongside the ensemble tradition most closely associated with “blowing-at-table”.⁹ While Praetorius, Schütz, and Monteverdi all had composed and conducted large-scale sacred works that combined trumpets and voices by this time, Valentini’s “*Messa, Magnificat et Iubilate Deo...*” explicitly combines multiple choirs (7) alongside the two Italian trumpeting traditions within the same work. Figure 1 shows the trumpet part associated with the sixth choir contains a single pitch; “C” in the bass clef.

The image displays a page from a historical music manuscript. At the top, two staves are labeled 'Tromba' and 'Sextus Chorus.'. The Tromba staff begins with a large, ornate initial 'K' in a square frame, followed by a single note 'C' on a bass clef staff. The Sextus Chorus staff has a '34. Pause.' marking and a 'Yrie.' section. Below these, there are more staves for the Tromba and Sextus Chorus, with a 'Christe tacet.' marking. The music is written in a historical style with various clefs and note values.

FIGURE 1. Excerpt from the tromba partbook of Valentini's *Messa, Magnificat et Iubilate Deo*¹⁰

⁹ Steven Saunders, "The Hapsburg Court of Ferdinand II and the "Messa, Magnificat Et Iubilate Deo a Sette Chori Concertati Con Le Trombe" (1621) of Giovanni Valentini." *Journal of the American Musicological Society* 44.3 (1991): 387-388, Accessed 03 June 2014, JSTOR.

¹⁰ Ibid., 387.

¹² Ibid., 392.

1636.¹³ Through the work of Peter Downey, actually in rebuttal to research by Igino Conforzi, it is highly probably that Fantini was present and publicly recognized at that same coronation.¹⁴ The woodcut portrait in Figure 3, found in his treatise, shows details that corroborate this fact.



FIGURE 3. Woodcut portrait of Girolamo Fantini¹⁵

¹³ Steven Saunders, "The Hapsburg Court of Ferdinand II and the "Messa, Magnificat Et Iubilate Deo a Sette Chori Concertati Con Le Trombe" (1621) of Giovanni Valentini." *Journal of the American Musicological Society* 44.3 (1991): 388, Accessed 03 June 2014, JSTOR.

¹⁴ Peter Downey, "Fantini and Mersenne: Some Additions to Recent Controversies." *Historic Brass Society Journal* 6 (1994): 355-62, Accessed March 6, 2014.
http://www.historicbrass.org/Portals/0/Documents/Journal/1994/HBSJ_1994_JL01_017_Downey.pdf.

¹⁵ *The Open University*. Web. 26 Nov. 2014. <<http://www.open.ac.uk/Arts/minter/images/Fantini.jpg>>

Surely he and Valentini knew one another, and it is entirely possible that Fantini performed for and/or with Valentini. As an aside, Fantini's "Sonata detta del Gonzaga" also implies a reference to the wife of Ferdinand II, Eleonora Gonzaga, whom Ferdinand II married in 1622.¹⁶ All of this information continues to show that a pervasive and engrained Italian trumpeting tradition existed throughout the larger European mainland: a tradition in which performance practice was valued and consistent. These traditions, especially as they apply to the larger "why, where, and for whom" questions will help draw a connection later in this study between Fantini and the Roman clergy, and help make possible a less ambiguous description of that concert.

As this study is more broadly concerned with solidifying the historical conditions, performance precedents, and political connections under which Fantini and Frescobaldi performed their concert, there will be minimal discussion of the repertoire performed. The reasons for this are 1) there is no actual record as to which repertoire was included in the performance, 2) There are well-established and well-researched performance practices regarding the repertoire of both composers, much in their own hand (which does little to clarify information regarding this portion of my larger study), and 3) those details will play a more important part in the future research related this study as performance practice becomes intertwined with digital investigations.

The Physical Form of the 17th Century Italian Trumpet

With a clearer understanding of social and musical contexts of the Italian trumpet in 17th century Europe, I would like investigate of the actual form of the trumpets themselves. In

¹⁶ Hans Sturmberger, "Ferdinand II (Holy Roman Emperor)." Encyclopedia Britannica Online, Accessed October 22, 2014. <http://www.britannica.com/EBchecked/topic/204463/Ferdinand-II>.

modern times, an attempt to draw a sonic picture of the concert would surely attempt to utilize extant historic trumpets, or those copied/modeled from original sources as a best practice: including a very focused look, historically, at the use of materials as well as construction processes. These factors bear directly upon the playing characteristics of the instruments.

Unfortunately, other than two trumpets by Ubaldo Montini from the 16th century, only a few Italian instruments roughly contemporary with Fantini survive. An instrument by Lissandro Milanese from 1589 was the object of an interesting reconstruction project by Geert Jan van der Heide in 1996.¹⁷ The original instrument was discovered on the seabed, as part of a shipwreck, just off the island of Texel near northern Holland.¹⁸ The finely crafted instrument in Figure 4 shows construction that mirrors a form that will be representative of the popular late renaissance and early baroque trumpets from Nuremberg, the major center for brass manufacture in Europe in the approaching 1600s and beyond. Of notable difference is the gentler bell taper and much less prominent bosses (there are two small ones on this instrument) when compared to later instruments utilized by trumpeters in the service of composers such as Bach and Handel like the trumpet shown in Figure 5. Like later European trumpets, Lissandro's instrument is a twice-folded instrument composed of a leadpipe, two bows, a lower yard, a bell, and 4 garnishes.

¹⁷ Geert Jan Van Der Heide, "The Reconstruction of a 16th-Century Italian Trumpet." *Historic Brass Society Journal* 9 (1996): Accessed March 6, 2014.
http://www.historicbrass.org/Portals/0/Documents/Journal/1996/HBSJ_1996_JL01_003_Heide.pdf.

¹⁸ Ibid.

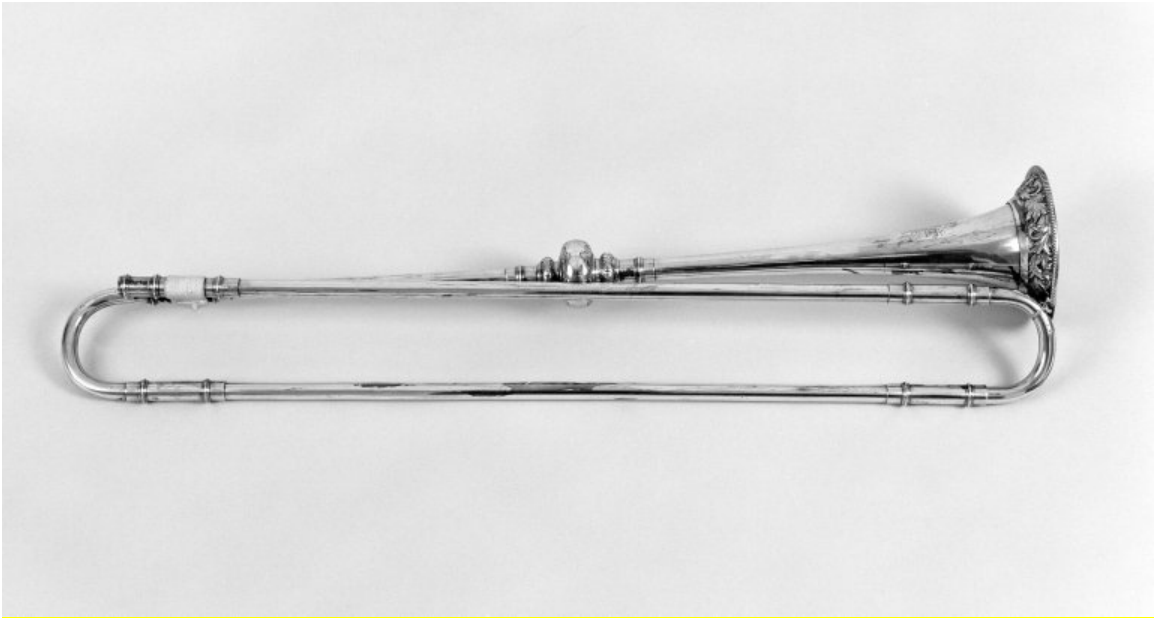


FIGURE 4. Natural trumpet by Hofmaster, circa 1760 (University of Edinburgh)¹⁹

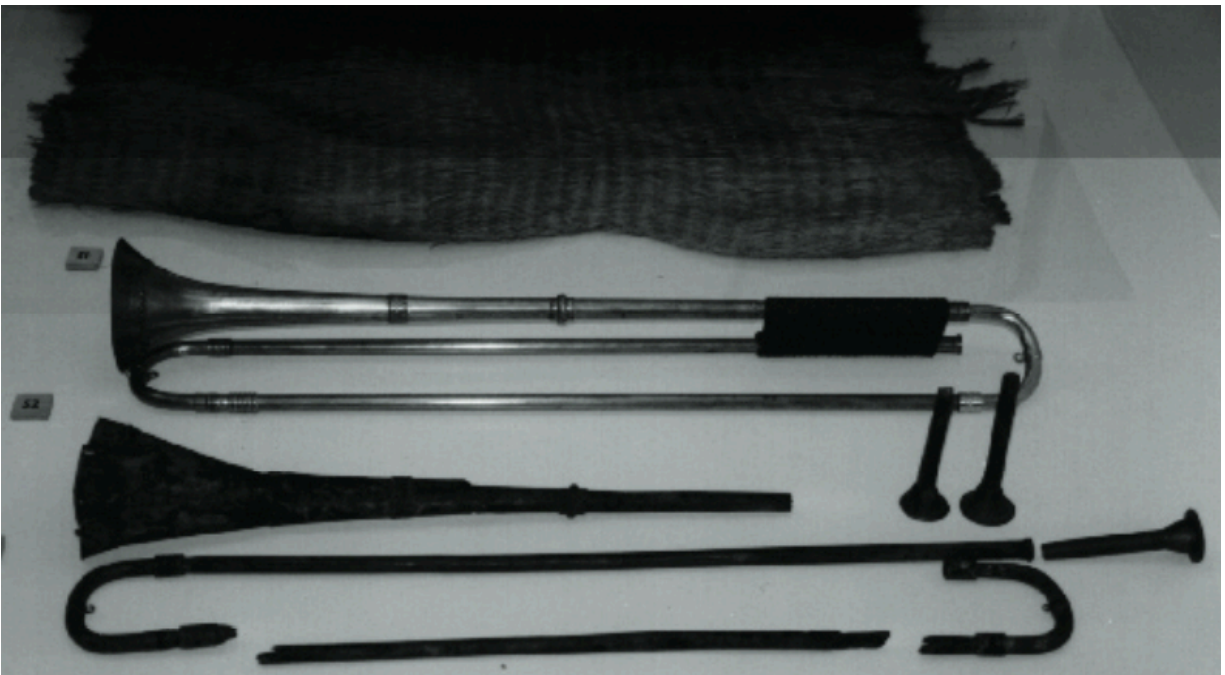


FIGURE 5. Natural trumpet by Lissandro, 1589²⁰

¹⁹ "Natural Trumpet. Nominal Pitch: E ♭ ." Musical Instruments Museums Edinburgh, Accessed September 10, 2014, <http://collections.ed.ac.uk/mimed/record/17823>.

The pitch of the Lissandro's trumpet is roughly at D (a=465hz), putting it a similar pitch level as cornetts and recorders in the collection of the Academia Filarmonica of Verona which were made during the same time period.²¹ These similarities help establish some credibility that Italian trumpets of the late renaissance and early baroque periods were of similar construction to those instruments found commonly across the rest of Europe.

Looking at a similar surviving German instrument by Hans Hainlein from 1632 as well as another extant instrument by Wolfgang Birckholtz from 1651, the construction similarities are quite similar: including the number of constituent parts of the instrument. The slower bell taper, common to trumpets of the early/mid 17th Century, is also similar. The most notable of the early Baroque trumpets to remain is probably the famous "Bendinelli" trumpet. Constructed in a twisted "pretzel" form, the trumpet was made by Anton Schnitzer (Nuremberg) for trumpeter/composer Cesare Bendinelli in 1585. Subsequently it was donated to the Verona Academy in the same year (1614) that he also donated his treatise "Tutta l'arte della Tromba." Although the instrument is of the highest constructed quality, including ornamental engraving and an elaborately bent pretzel shape, it still bares the hallmark slow bell taper of late Renaissance trumpets.²² It isn't until the brass making dynasties of those like the Hass and Ebe

²⁰ Geert Jan Van Der Heide, "The Reconstruction of a 16th-Century Italian Trumpet." *Historic Brass Society Journal* 9 (1996): 50, Accessed March 6, 2014.
http://www.historicbrass.org/Portals/0/Documents/Journal/1996/HBSJ_1996_JL01_003_Heide.pdf.

²¹ Ibid., 51.

²² Rick Seraphinoff, modern maker of historic horns and trumpets, recently remarked to me that one of his constructed copies of the Bendinelli trumpet utilized a Hainlein (1632) trumpet as its basis. He has found that it

families take hold later in Nuremberg, intricately intertwined with musical needs of later baroque composers, that we see the sharper exponential bell taper come into widespread use.

In England a single 14th century instrument, the "Billingsgate" trumpet, exists in an unfolded form. Beyond that instrument, no British examples of instruments contemporary to Fantini are known presently to exist . Of note, however, is that later makers of English natural trumpets (Bull, Harris, et al.) adopt a form very similar to those from Nuremberg, but with evolutionary changes to the boss (ball shaped accessories on the bell), bell taper, and superficial rerouting of some tubing.

It is worthy of mention that Johannes Altenberg, along with a few other sources, speaks of another class of natural trumpets often associated with Italian trumpeting; coiled trumpets. While Altenberg saw coiled trumpets more akin to the horn family, Christoph Weigel notes that the class of wound trumpets that are almost always referred to as (in German) “trumpets” with an added qualifier such as “hunting” or “Italian”.²³ Unlike the common twice-folded form of most natural trumpets, the coiled trumpets were continuously wound into a shape most modern observers would likely associate with a horn. There has been a tremendous amount of attention

plays remarkably well... pointing to the fact that the basic trumpet underlying the extensively modifier (bent) shape is still that of a common origin. I have played the instrument and can attest to it's functionality and beauty of tone. While attending the 2014 International Trumpet-making Workshop in Bloomington, Indiana, in August 2014 I had many opportunities to speak with (and learn from) historic brass makers Rick Seraphinoff, Robert Barclay, and Michael Munkwitz. I also had the opportunity to play instruments made by all three makers. All of the instruments, including replicas of those by Bendinelli, Birkholtz, and Hainlein were made specifically using historic materials and working methods. Mr. Seraphinoff commented that one of his Bendinelli “Pretzel Trumpet” replicas was essentially an elaborately folded version of the 1632 Hainlein trumpet. I played that instrument and found it to be of superior playability and tone quality when compared to reproductions made by modern means.

²³ Anthony Baines, "Natural Trumpet." In *Brass Instruments: Their History and Development*. Mineola: Dover Publications, 2012.

regarding the use of coiled trumpets in the later baroque due to the depiction of Bach's trumpeter, Gottfried Reiche, in the famous 1727 portrait by Hausmann shown in Figure 6.



FIGURE 6. 1727 portrait of Gottfried Reiche with coiled trumpet²⁴

Again, Altenberg and Weigel both specifically refer to coiled trumpets as "Italian". This is a topic for further research. After playing several historically constructed coiled natural trumpets

²⁴ The Open University, Web, Accessed 21 Oct. 2014.
<<http://www.open.ac.uk/Arts/minter/images/reiche.jpg>>.

and observing how pitch is, in many senses, much easier to control, future thought might be given as to whether Fantini might have played occasionally on a coiled trumpet. Pay records indicate he owned and played the ubiquitous double-folded instruments, but playing on a coiled instrument might have furthered his ability to bend pitches as noted in an account of his performance by Pierre Michon Bourdelot, found in Mersenne's *Harmony Universelle*.

There is evidence in inventory records, however, to lend credence that Fantini generally played trumpets of the normal double-folded form. In April of 1631, records from Ferdinand II (Florence) indicate the delivery of an instrument that most surely is double folded due to its description, including the ability to hold a banner:

“A silver trumpet to play with its [~~crossed out: custodia (= case)~~] storda [crook] and a nodo [ball, boss, or pommel] in the middle [of the bell tube], hand wrought and gilded, with little [angels' or cupids'] heads, and set with imitation jewels [false stones], with five canelletti [tubes, undoubtedly the four ferrule sleeves at each joint plus the one at the mouthpiece or crook receiver] with engraved decoration, and gilded and tooled, and gilded at the bottom around the trombone[in this case referring to the flaring "bell" of the trumpet] with a brass mouthpiece which was taken without its mouthpiece [illeg., perhaps case, cover, or adaptor?].

No. [of items supplied according to this description =] 1

A double [-sided] trumpet banner (banderole) of red damask [a reversible figured fabric of linen, silk, or wool, and here, the instrument tromba doppia, as mentioned in Altenburg, and shown in Bonanni, albeit with such a banner, is not meant] garnished with a fringe of gold, and red silk, with two coats of arms of His Royal Highness in linen, and gold leaf [foil], with its cord and tassels of silk and gold.

No. [of items supplied] 1”²⁵

The preceding information alludes to a consistency of means in the design and manufacture of trumpets throughout Europe during the early Baroque. Such consistency makes

²⁵ Igino Conforzi, "Girolamo Fantini, "Monarch of the Trumpet": Recent Additions to His Biography." *Historic Brass Society Journal* 5 (1993): 162-163, Accessed May 14, 2014, http://www.historicbrass.org/Portals/0/Documents/Journal/1993/HBSJ_1993_JL01_010_Conforzi.pdf.

for a compelling argument that Fantini's performances were probably on an instrument that can, in modern times, be recreated in detailed facsimile.

Given Robert Barclay's exhaustive research into the working methods of brass makers during the Renaissance and Baroque periods, as evidenced in his book *The Art of the Trumpet Maker*, we can with reasonable certainty also be fairly certain that modern reproductions (properly sourced!) will not be acoustically tainted by the consistency of modern mass-production methods. Specifically, the bell would require a slower taper, be constructed of a single sheet of brass or silver, have a single tabbed seam along the majority of its length, and possess a garland with a wire bead at the end of the bell for stability and decoration. Almost all soldering would require hard silver solder with a silver content of around 45% (rest brass). Later exponential bell tapers would often use brass solder for great malleability and strength, but an earlier trumpet with a gentler bell taper would be served well with hard silver solder. The tubes and bows would also be hammered and seamed from flat sheets of brass before being drawn on a drawbench or burnished to final dimension. Garnishes, which act as the interlocking joints and protection for the connection between tubes (yards) and bows, would be of similar construction or potentially cast and reamed. All brass used would, generally, possess a 20%-30% zinc content with the remaining 70%-80% being composed of copper (and trace amounts of lead and other byproducts of smelting ores). Given these details, historically accurate copies of many instruments bearing these characteristics of form, workmanship, and construction method are now readily available. Given the preceding paragraphs, I will reiterate the notion that if one seeks to attempt to recreate the performance conditions of the Fantini/Frescobaldi concert, one would be best served utilizing a trumpet built as closely to historic specifications as is possible

with special care being taken to ensure the instrument was built with historically accurate materials and working methods.²⁶

Mouthpieces

Mouthpieces for these historic trumpets pose another interesting dilemma; 1) few original specimens survive alongside extant historic copies of trumpets and 2) mouthpieces with an identifying maker's symbols are rare. In Geert Jan van der Heide's reconstruction of the Lissandro trumpet, he had three mouthpieces from which to copy that were also found, like the trumpet, on the seabed. There are no mentions of maker's marks in his research. Two seemed to have been cast and carved from the same mold, including one crudely cast in lead. Van der Heide proposes that the lead copy might have been cast onboard the doomed ship to replace one that had been lost. Eric Halfpenny's later survey of British mouthpieces from the Baroque period shows similar trends regarding the difficulty of establishing a maker for extant historic mouthpieces. The mouthpiece now called "Bull No. 2" has probably become one of the most widely copied Baroque mouthpieces available, and a series of models based on its basic design

²⁶ Anecdotally, as a working professional player of historic trumpets, I have played on number of trumpets based upon historical copies. I can say that, based upon my personal experience and echoed in other professional's corroborating experiences, instruments built carefully by historic means and utilizing historically informed materials do function more successfully as natural trumpets. This discussion does not take into account the use of vent holes, as I only speak only of natural trumpets in the context of the 1634 concert. I currently own and/or have access to, among many instruments, a "standard" vented Egger historic trumpet based on a precedent by Leonard Ehe III (Nuremberg, 1746). The bows and yards on this instrument are not hand seamed nor formed from flat sheet brass, but are machine drawn in order to make the instrument more quickly and affordably. The bell is, however, tabbed and seamed by hand. The standard model can be converted into a natural trumpet by substituting the vented yard with one containing no vent holes. A tapered leadpipe is utilized in an attempt to make the instrument more playable in the presence of vent holes. In comparison to a recent iteration of the same Ehe instrument that is completely built to historic methods, with an alloy that attempts to recreate the original as closely as possible, I can say that there is little doubt as to which instrument is more playable. The historic model is far superior. It possess a broader, richer, and more stable tone while also allowing one to more easily bend ("lip") the out-of tune 11th and 13th partials into tune. Along those lines, I have also personally built a copy of the 1632 Hainlein trumpet as part of the 2014 International Trumpet-making Workshop. That instrument, as a natural trumpet, also plays superior to the Egger standard model (those containing some machine-made tubes and bows) historic trumpets to which I have access. Many other professional players of historic trumpets to whom I have spoken overwhelmingly agree with these sentiments.

with input from Jean-Francois Madeuf have become very popular in modern times. These mouthpieces can most likely be attributed to William Bull due to stylistic characteristics as well as aspects of their workmanship, design, and provenance. There are, however, no makers marks on these pieces. Another interesting trend also emerges: the lack of a standard sizing protocol. In the end, the great number of variations in working methods, materials, and dimensions points us to a fact that still remains true today: mouthpiece selection for brass players is a personal matter and it is mostly impossible to attempt to tie a specific mouthpiece to the Fantini/Frescobaldi concert. These things said, given the peculiarities of playing the natural trumpet, there are some generalities that have begun to arise regarding mouthpiece selection given the rebirth of playing the ventless natural trumpet. Briefly stated they are (especially in comparison to a modern trumpet mouthpiece):

- 1) A large cup size seems to offer both the broadest tone and seems to aid in bending the out of tune partials.
- 2) A large throat ("grain") also seems to aid in offering both robust tone and pitch-bending ability .
- 3) A shorter mouthpiece shank also aids pitch-bending.
- 4) The larger cup and throat are in alignment, historically, with comments regarding a sweeter, gentler tone in the upper register, as well as controlling the *messe di voce* effect sought after by soloists of the time, especially in Italy.
- 5) A sharp inner edge at the transition from rim to cup aids in flexibility and also in sharpness of attack as well as trilling ability.

Considering historical accounts of Fantini's ability to play out-of-tune partials as well as his ability to bend in-tune partials in the lower register to pitches not included in the overtone series, one might use the above list as a point of departure in selecting a mouthpiece if attempting

to get as close as possible to the trumpeter's performing aesthetic seemingly embraced by Fantini and his contemporaries.²⁷

In summation, the physical characteristics of a trumpet potentially utilized by Fantini in the early 1600s seem to be fairly clear, given the details available to modern scholars. While mouthpiece selection remains a personal choice, there are clues to the types most fitting for this repertoire. Speaking to the form of the trumpet itself, it appears that the phenotypes most closely associated with the Bendinelli, Lissandro, and Hainlein trumpets show a consistency in physical form and construction methods to lend great credence to the idea that Fantini probably played on an instrument resembling a late-Renaissance/early-Baroque trumpet.

²⁷ Igino Conforzi, "Girolamo Fantini, "Monarch of the Trumpet: Recent Additions to His Biography," *Historic Brass Society Journal* 5 (1993): 164, Accessed May 14, 2014, http://www.historicbrass.org/Portals/0/Documents/Journal/1993/HBSJ_1993_JL01_010_Conforzi.pdf.

ESTABLISHING AN HISTORICALLY ACCURATE MODEL OF THE EARLY 17TH CENTURY ITALIAN PIPE ORGAN

While establishing a clear precedent for the early 17th century trumpet is potentially difficult due to the lack of extant copies, the pipe organ faces a different set of difficulties. By its very nature as an instrument, the pipe organ might be seen as being advantaged towards greater longevity: generally of a large, stable, and sturdy form while also being housed in an interior, sheltered space. Of note is also that the instrument was generally at the service of the church or nobility and, as such, was often housed in buildings conceived of as being permanent: churches, cathedrals, or potentially a palace or villa. My training in architecture has shown me that a great many of these historic structures are constructed of heavy load-bearing masonry construction. This construction, alongside heavy timber construction, offers several advantages to the longevity of the pipe organ in Italy. Firstly, the structures themselves are sturdy and long-lived... obviously offering protection during adverse environmental or social events. Second, the thickness of the wall construction in these structures, even in the absence of space-conditioning, often lends itself to temperature moderation via greater thermal mass which, in turn, allows for much slower and gentler seasonal movement of wood fibers used in interior furnishings such as pipe organ casework, pipes, and mechanics. Given these factors one can still find many buildings in Italy that house pipe organs that were originally constructed in the 16th and 17th centuries.

Luckily for this study, as a general rule the Italian pipe organ changed very little stylistically between the 16th and 19th centuries. As an example, in the Basilica of San Petronio in Bologna, Italy there are two remarkably original organs from the Renaissance. One organ by Lorenzo da Prato dates from 1471 while the second organ, by Baldassare Malamini dates from 1596. Both are in fairly unaltered condition. Here in the United States, both Eastman School of

Music in Rochester, NY and the University of Notre Dame in South Bend, Indiana have acquired and fully restored extant Italian pipe organs from the Baroque period. The small Italian organ at Notre Dame, particularly suited to this present study and shown in Figure 7, is from 1680 (Naples) and presents an interesting look into small Italian organs of the 1600's. American organbuilder Mark Brombaugh offers some concise, descriptive commentary about this instrument:

“This Italian Positive organ was built around 1680 by an unknown builder in the region of Naples, Italy. After being in storage for decades, it was in need of major restoration work. Robert Wech of Orgelbau Wech, Buchloe, Germany, did the technical and cosmetic restoration before it was shipped to Martin Pasi’s shop in Roy, WA. The pipe and tonal restoration was recently completed at the Pasi shop.

The physical structure and tonal specification are typical for Italian organs of this vintage and size. The five stops are all of the principal family, and combine to create a classic Italian **ripieno**, or chorus. The 1 1/3’ and 1’ stops break back one octave in the highest octave like a mixture. The interior metal pipes are made of a high lead alloy, while the façade pipes are of high tin content. The lowest notes of the Principale 8’ are made of wood, with the lowest three pipes being stopped.

The organ has a slider windchest and a suspended key action with no bushings, giving a very direct and sensitive touch while functioning silently. The key compass is four octaves with a short octave in the bass. The wind is supplied by two multi-fold bellows in the base of the case. One bellows is a restored original while the second is a reproduction. The organ may be pumped by hand, but now also has a silent electric blower. The wind pressure is 50mm. The organ is tuned in 1/4-comma meantone and is pitched 1/2-step low at a²-415.

The sound of the organ is gentle and yet intense, articulate and suave. It is an ideal medium for the Italian organ literature of the 16-18th centuries, and is also proving to be a superb instrument for accompaniment. Though soft, it leads congregational singing well.”²⁸

²⁸ Mark Brombaugh, "Neapolitan Organ (1680)," Sacred Music at Notre Dame, Accessed September 9, 2014, <http://sacredmusic.nd.edu/facilities/organs/neapolitan-organ/>.



FIGURE 7. Neapolitan organ at the University of Notre Dame.²⁹

Its current specification (stoplist) is as follows:

- 8' Principale
- 4' Ottava
- 2' Decimaquinta
- 1 1/3' Decimanona
- 1' Vigesimaesecunda
- Suspended key action
- Keyboard compass: C,D,E,F,G,A-c", 45 notes
- Temperament: 1/4-comma meantone
- Two multi-fold wedge bellows
- Hand pumping
- Silent electric blower (added modern)
- Wind pressure: 50mm

²⁹ Mark Brombaugh, "Neapolitan Organ (1680)," Sacred Music at Notre Dame, Accessed September 9, 2014, <http://sacredmusic.nd.edu/facilities/organs/neapolitan-organ/>.

This specification reveals many things regarding the typical small Italian pipe organ. Unlike the early trumpet, pipe organs from varying historical and geographical traditions are generally characterized by the tonal schemes that dictate their construction, as well as by the organ builder's personal stylistic take on those schemes. Broadly, the Italian organ from the 16th-18th centuries was based upon the following physical and tonal characteristics, as seen in the small organ above:³⁰

- A single manual (keyboard), oftentimes with a short-compass bass octave
- The tonal basis of the stoplist was referred to as the *Ripieno*
- Stops were often divided into bass/treble in the manual
- Generally, it contained no independent pedal division
- The organs utilized a short-compass pedalboard, often only mechanically coupled to the manual above
- Few/no reed stops in smaller instruments
- Flue voices (sometimes at 2 2/3' or 4') along with a celeste-like treble stop (*piffaro*) were used as solo voices, and not part of the *Ripieno*
- Physically, the organ was contained in a singular case, of rectangular construction, with openings for pipes to speak; topped with rounded, often ornamented, Romanesque arches

The *Ripieno*, a chorus of principal (organ) toned pipes, might look like this in a small instrument:³¹

Principale 8'
Quintadecima 2'
Decimanona 1-1/3'
Vigesimaseconda 1'
Vigesimasesta 2/3'

The tonal scheme of a chamber organ, potentially like one used for the Fantini/Frescobaldi concert, would have followed this model very closely. If the instrument was a small portable

³⁰ Cook, James. "17th and 18th Century Italy." Organ History, Accessed July 18, 2014, <http://faculty.bsc.edu/jhcook/OrgHist/history/hist016.htm>.

³¹ Ibid.

instrument, it might have only had few foundational stops or possibly be based upon 4' pitched stops.

Looking across greater Europe, it will be seen that the tonal scheme of the Italian instruments from the 17th century is not that dissimilar to instruments utilized by the likes of composers Clarembaux and Couperin of the French Classical era. Yet, the scaling of the pipework in the Italian organ, especially southern variants of the 16th and 17th centuries, was optimized to produce a sweetness of tone in individual registers. This approach, to produce beautiful individual registers that are then combined into a gentle chorus, was also reinforced by a winding system based on low, gentle pressures as well as by low mouths on flue pipes. Gentle flutes at 4' and 2 2/3' were also included as *concertato* stops, for solo passages, and were not generally drawn as part of the *Ripieno*. Reed stops are found on later instruments, but generally not included regularly on Italian instruments of more modest means.

Why be so specific about the early Italian pipe organ? In short, the physical form and tonal design of the pipe organ across Europe during the 17th- and 18th-centuries (and beyond) was influenced very heavily by nationalistic trends in organ construction. Trumpets shared very consistent construction philosophies across Europe while pipe organs did not. Looking very generally at organs of the French and North Germanic regions from the same time period, there are few similarities in both the physical and tonal layout of the instruments. The differences in how the pipe organ was conceived as a music instrument, and the repertoires generated and/or supported by the implementation of those conceptions, led to great difference in how the instrument was perceived aurally. Northern Germanic instruments generally were developed under the evolving idea of a *Werk-Prinzip*, whereby groups of stops were considered a "division"

and consequently assigned to a given manual. Utilizing multiple manuals, there often was a *Great* division composed primarily of a large-scaled principal chorus, a *Solo/Choir* division on another manual, and a fully independent *Pedal* division. This conception strongly supported the move toward more contrapuntal and less homophonic music produced by Germanic composers of the time. The physical appearance of the instruments also echoed the tonal layout, with the various divisions enclosed in separate cases.

By 1650, a tradition in French organbuilding had been established that would last until nearly 1800: the French Classical Organ. Although just a few years later than the Fantini/Frescobaldi happening, the traditions of this school were very nearly in place by the time Mersenne published *Harmonie Universelle* (1636) and serve as a good example of nationalistic conceptions in organbuilding.³² Broadly, French instruments of the same time period physically resembled their Italian counterparts in physical layout, utilizing only one or two manuals and a coupled pedal division. Tonally, however, things were quite divergent. The French principal chorus, the *Plein Jeu*, closely resembled the Italian *Ripieno* in concept, but differed greatly in execution. In larger instruments, the *Plein Jeu* would often be built upon a sixteen foot foundation and would include multiple flute- and principal-toned stops coupled across the *Grand* and *Positif* divisions, generally containing pitches at 16', 8', 4', 2' plus a mixtures.³³ A French instrument scaled similarly to the one possibly utilized during the Frescobaldi and Fantini

³² Fenner Douglas, "The Classical French Organ," In *The Language of the Classical French Organ, a Musical Tradition before 1800. New and Expanded Edition* (New Haven: Yale University Press, 1995), 73-74.

³³ Ibid.

concert of 1634 would still retain the core of the *Plein Jeu*, but in a scaled back specification. It might look as follows:³⁴

8' Bourdon
4' Prestant
2' Doublette
Cymbale (mixture)

Notice that, although quite similar to the Italian *Ripieno*, the French *Plein Jeu* contains a full complement of stops displaced by an octave (8', 4', 2') plus a mixture, whereas the Italian *Ripieno* omits the 4' stop from its main chorus: instead utilizing it as a solo stop. The French use of a *Bourdon*, a wide scaled flute stop, as a foundation stop on small instruments, departs from the Italian use of a narrow scaled principal stop as its 8' foundation. These contrasts between Italian and French instruments provide very different sonic presentations to the listener.³⁵

In modern times, most trumpeters/organists do not have ready access to historic organs from varying nationalities with which to explore varying musical styles. As such, the idea of the

³⁴ Fenner Douglas, "The Classical French Organ," In *The Language of the Classical French Organ, a Musical Tradition before 1800. New and Expanded Edition* (New Haven: Yale University Press, 1995), 73-74.

³⁵ More interesting was the development of the French *Grand Jeu*. It was a more robust sounding chorus composed of a principal chorus topped with an extended mixture at multiple pitches as well as reed stops. For clarity, a *mixture* stop is actually a stop composed of multiple pitches (pipes) given a press of a single key on a manual. *Mixtures* are generally of high pitch and aid in adding brilliance to a chorus of lower pitched stops. Reeds, not as common in Italian organs, added sonic power and penetration to the *Grand Jeu* registration. The effect of the French *Grande Jeu* of this time period is not one of a mild, blended group of singing voices like the Italian *Ripieno*, but one of power and concentrated tone, with a bias towards brilliance in the upper-work and weight in the mid-range and bass via the addition of the reed voices. Lastly, unlike the Italian organ, French classical instruments often included solo reed stops reminiscent of an oboe or trumpet. Like Italian counterparts, the specification of French organ of the mid 17th century became very consistent throughout its given region. This discussion could also go on to include Spanish, Portuguese, South German (Italianate), Alsatian, and many other organs as a means to show the wide breadth of tonal and physical ideals that were utilized in organ building in varying European locales throughout the late Renaissance and early Baroque. Unlike trumpets, though, national trends in organ building generally remained confined to the regions in which they were created. In this way, the organ fared far differently than the trumpet; its literature and performance practice was far more intertwined with its physical and tonal design, whereas the trumpet was very similar across a wide geographic region with differences in literature and performance practice being more reliant on the abilities of the individual player as well as the whims of specific composers.

organ having a major impact on the performance of a particular repertoire is often lost on non-organists. Many modern instruments, however, do attempt to include basic stoplists from varying historical schools of organ building, across many manuals, within a single instrument. While this is indeed helpful for modern organists who must perform repertoire from a wide range of historical sources, it also compromises each of the included "nationalities" such that they might be used as part of a fuller combined full organ chorus. Such compromises include winding the entire organ on a similar pressure, using pipe scaling and cutups that allow for a slightly homogenized tonal palette, and a physical instrument layout (casework, pipe chest layout, and so forth) that is often at odds with the tonal intentions of historic instruments.³⁶

The Fantini/Frescobaldi concert probably took place in an Italian Villa and most likely utilized a small Italian chamber organ; potentially one by Giovanni Battista Boni da Cortona.³⁷ The tonal makeup of the organ both in terms of stoplist and winding/scaling would bear almost no resemblance to organs found in modern churches at the start of the 21st century. The acoustic of the space, also explored later in this work, would also probably be quite different than a modern church: possessing both the immediacy of a residential venue while also being very

³⁶ For example, on historic instruments that utilize older temperaments (ex. Meantone), a windchest layout that places pipes in groups of major-thirds will allow pipes to actually "draw into tune" if there are slight tuning discrepancies. Larger modern compromised instruments often have pipe layouts that seek to maximize efficient spacing which can be at odds with tuning for older music. Larger modern instruments also have to play a music from a large number of historical periods, which also means equal temperament is often a *best practice* in order to allow the organ to be as musically modular as possible. All of these things are not negative, in and of themselves. Yet, if one seeks to study how chamber music sounded in Italy, circa 1630, a modern large pipe organ might not be the best place to start.

³⁷ There is substantial documentary evidence that Boni was the harpsichord/organ builder of choice for Cardinal Scipione Borghese, including delivery of an acclaimed instrument for Frescobaldi's use in 1619. Although I put forth the argument, later, that the Fantini/Frescobaldi concert probably took place at the request of the Barberini, it most likely took place at one of Scipione's houses (with one of his organs). Bourdelot's letter to Mersenne, regarding the concert, specifically cites the use of "Borghese's Organ": which possibly connects Boni to famous concert. Further research is required in tracking down evidence as to which particular organ, if it still exists, might have been used.

resonant due to the architectural details of the rooms. All of these details, along with those regarding the national identities of baroque era pipe organ illuminate a problem facing historic trumpeters in modern times: how does one find an accompanimental instrument befitting an informed performance of this ancient music? Given the potential location and repertoire for the Fantini/Frescobaldi event, the current practice of playing this music on a local, modern church organ might seem almost farcical if historic sonic authenticity is a goal of the performers.

FRESCOBALDI AND FANTINI IN CONCERT: WHERE, WHEN, AND WHY?

The Fantini/Frescobaldi collaboration remains shrouded in mystery; the specifics are all up to a certain amount of speculation. Several scholars have researched the life of trumpeter Girolamo Fantini, but many details regarding his travels and whereabouts are missing. Even though Fantini is an important historical figure for trumpeters, he was not as noteworthy as those with whom he associated: namely Girolamo Frescobaldi, Cardinal Scipione Borghese, and the Barberini family. Knowing also that Frescobaldi's life intertwined with the Borghese and Barberini families provides ample opportunity for details about Fantini to be discovered: a sort of "guilt by association".

Given all the circumstantial evidence pointing to possible scenarios, we start with one piece of solid evidence in the form of a letter between physician and philosopher Pierre Michon Bourdelot and Merin Mersenne. Details in this letter, along with information about Bourdelot's life point to the fact that the concert most likely took place in the latter part of 1634. That letter outlines Bourdelot's account of Fantini's performance with Frescobaldi. Most often, that account is found as a quote in Father Mersenne's treatise *Harmonicorum Libri* (1635), rephrased in *Harmony Universelle* (1636).³⁸ In that treatise, Mersenne quotes Bourdelot:

“But when one continues to descend from the third to the second note [harmonic] one makes a passage of a minor third, and though it is very difficult before one touches the third note, a difficulty that the multitude of trumpeters cannot overcome, I believe that the best trumpeters can so regulate the breath so as to emit all the individual tones from the third or fifth ascending, that is, they may ascend by step. This idea was strongly confirmed in a letter sent to me from Rome by Mr. Bourdelot, a most skilled physician, in which he affirms to have heard Girolamo Fantini, the most excellent trumpeter in all of Italy, play with his trumpet all of the notes, and who united to those notes those of the

³⁸ Peter Downey, "Fantini and Mersenne: Some Additions to Recent Controversies," *Historic Brass Society Journal* 6 (1994): 355-62, Accessed March 6, 2014, http://www.historicbrass.org/Portals/0/Documents/Journal/1994/HBSJ_1994_JL01_017_Downey.pdf.

organ of Cardinal Borghese, while this was played with elegance by Girolamo Frescobaldi, organist of the Duke of Etruria and of the Roman church of San Pietro. I say this notwithstanding that the trumpeters of the Duke of Crequi, who was then extraordinary ambassador of our most Christian King Louis XIII, have asserted that the notes played by the above-mentioned trumpeter had been false, confused, and entirely disordered. However this may be, and whether these passages may be reason for which the above-mentioned intervals are not so easily played are worthy of investigation, so that some-one may finally learn the cause of such an extraordinary phenomenon.”

Both Bourdelot and Mersenne were considered philosophers and followers of the arts, and there was a measurable amount of correspondence between them.³⁹ What is most interesting about the events described in the in letter between them is they can be reasonably verified as happening in 1634 simply by cross-referencing them with an account of the life of Bourdelot. In 1634, Francois de Noailles made Bourdelot his physician and took him to Rome where Noailles served as the French ambassador.⁴⁰ They returned to Paris in 1638.⁴¹ By reasonable extension, this invalidates any claims that the concert took place at an earlier date if Bourdelot's account is considered valid. Also, Bourdelot did not graduate medical school until late 1632, so there is no chance that his travels to Rome as a physician could have happened at an appreciably earlier date than 1632.⁴² Given that a volume of their letters was published in Mersenne's collected

³⁹ Mersenne's correspondence have been collated into a series of 10 volumes entitled "*Correspondence du P. Marin Mersenne*" by C. de Waard (Paris, 1932–): one volume is devoted to his correspondence with Pierre Michon Bourdelot.

⁴⁰ Richard Westfall. "Bourdelot, Pierre Michon." The Galileo Project, January 1, 1995. Accessed March 12, 2014. <http://galileo.rice.edu/Catalog/NewFiles/bourdlot.html>.

⁴¹ Ibid.

⁴² Ibid

correspondences with important figures of the time, Bourdelot was clearly a person of considerable stature. It seems as though the 1634 trip is a verifying marker.⁴³

Referring back to Bourdelot's letter, it may at first appear that this concert happened at the behest of Cardinal Scipione Borghese. However, this is impossible, due to the fact that Borghese died in October 1633. Adding to the confusion is an oft-cited (yet incorrect) translation of Bourdelot's text, which errantly associated Fantini as Borghese's trumpeter. Given the clear ramifications of the 1634 timing of Bourdelot's letter to Mersenne and the publications of Bourdelot's letter in the 1635 publication of *Harmonicorum Libri*, in combination with other factors soon to be discussed here, it becomes apparent that the concert could not have been for Cardinal Scipione Borghese.

A possible, albeit unlikely, explanation exists. There was a subsequent "Cardinal Borghese" who could have potentially been the patron in question: Cardinal Maria Borghese. Maria was the heir to Scipione's vast estate and he very well could have been a part of this concert's proceedings. However, Jean Lionnet, Norma Deane, and John Whenham's research into the Borghese family's patronage of the arts before 1650 shows that there are few records available that give insight in Pier Maria's patronage of musicians in Rome in 1634. The Borghese Archive at the Vatican contains no records from his estate during this period.⁴⁴ The few family records that remain show that he kept but a few musical artists on the payroll: one uncommonly

⁴³ Igino Conforzi hints at this in "Girolamo Fantini, Monarch of the Trumpet": Recent Additions to His Biography" with some clever deductive work regarding reception of Mersenne's treatise in late 1634, but never willfully takes a stance on the date.

⁴⁴ Jean Lionnet, Norma Deane, and John Whenham, "The Borghese Family And Music During The First Half Of The Seventeenth Century," *Music and Letters* 74, no. 4 (1993): 528, Accessed October 2, 2014, JSTOR.

being a female.⁴⁵ There is little evidence in any place to show a significant involvement in the musical arts by Pietro Maria Borghese and certainly not enough between late 1633 and summer 1634 for him to be considered a person with whom Fantini and Frescobaldi shared a close relationship. It seems that, with Scipione's death in 1633, the Borghese family began its decline in influence on the arts in Rome. With Scipione dead, and Maria all but inactive, the question remains: For whom did Fantini and Frescobaldi perform?

The Barberini family was a considerable force in the arts in Rome in the mid-1630s. Preceding the summer of 1634, Girolamo Frescobaldi had moved to Florence in 1628 to work under the service of the Medici.⁴⁶ Trumpeter Girolamo Fantini had spent time in Florence prior to 1634 and surely would have had time to become acquainted with Frescobaldi.⁴⁷ Looking at the timelines provided in Igino Conforzi's work shown in Figure 8, it can be seen that he was employed by the Medici in Florence between 1631 and 1636.⁴⁸

20 September 1631-20 August 1632	Girolamo Fantini trombetto sc.120
19 September 1633-23 August 1634	Girolamo Fantini trombetta sc. 123
30 September 1634-27 August 1635	Girolamo Fantini trombetto sc. 120
20 September 1635-21 August 1636	Girolamo Fantini trombetta sc. 120

FIGURE 8. Record of Girolomo Fantini's payments from the Medici family in Florence⁴⁹

⁴⁵ Jean Lionnet, Norma Deane, and John Whenham, "The Borghese Family And Music During The First Half Of The Seventeenth Century," *Music and Letters* 74, no. 4 (1993): 528, Accessed October 2, 2014, JSTOR.

⁴⁶ Alexander Silbiger, "Predecessors, Contemporaries, and Followers," In *Frescobaldi Studies* (Durham: Duke University Press, 1987), 94.

⁴⁷ Igino Conforzi, "Girolamo Fantini, "Monarch of the Trumpet: Recent Additions to His Biography," *Historic Brass Society Journal* 5 (1993): 165, Accessed May 14, 2014, http://www.historicbrass.org/Portals/0/Documents/Journal/1993/HBSJ_1993_JL01_010_Conforzi.pdf.

⁴⁸ Ibid.

⁴⁹ Ibid.

The gap in pay in 1636 has generally been accepted as a leave during which Fantini traveled to Germany for the coronation of Emperor Ferdinand III in Regensburg.⁵⁰ The single woodcut portrait of Fantini (see fig. 3), as well as the ordering of music in his *Modo* back up this assertion. Other than this instance of leave, there seems to be no other time in which Fantini can be seen as away from Florence. Yet, the eyewitness account by Bourdelot of the Fantini/Frescobaldi concert implies that Fantini did travel out of Florence on occasion. It seems, then, that his occasional performances in Rome during that time surely would have been at the behest of powerful patrons: for occasions that would add to the prestige of the Medici family, or potentially act as a snub to the Medicis by rival nobility such as the Barberini. Frescobaldi, also employed by the Medici in Florence, returned to Rome in April 1634. Frescobaldi was brought back at their behest of Cardinal Francesco Barberini, and upon beginning employment, becomes the musician of highest stature in all of Rome. At the same time, it can be established that the Barberini commonly held "academies" in which social music concerts and instruction would take place in Villas across Rome.⁵¹ Although no pay record has been yet unearthed as to Frescobaldi's involvement in the academies, it seems overwhelmingly likely that he would have been involved. The cardinal owned, maintained, and utilized a consort of viols at Casa Barberini, and the 1635 edition of Frescobaldi's ensemble canzonas was published at a time during which Frescobaldi

⁵⁰ Peter Downey, "Fantini and Mersenne: Some Additions to Recent Controversies," *Historic Brass Society Journal* 6 (1994): 355, Accessed March 6, 2014, <http://www.historicbrass.org/Portals/0/Documents/Journal/1994/HBSJ_1994_JL01_017_Downey.pdf>.

⁵¹ John H. Baron, "Chamber Music Before Corelli" In *Intimate Music: A History of the Idea of Chamber Music* (Stuyvesant, NY: Pendragon Press, 1998), 24.

would have been at the home quite often.⁵² Lastly, in the wake of Scipione Borghese's death, one can envision the Barberini seeking to increase their influence in Rome by broadening their patronage of the arts to an extent comparable to Scipione. Scipione's patronage of the visual arts was unparalleled at the time, and his musical patronage was seen as nearly as important. In the post-Borghese era, the Barberini would have ample reason to expand their artistic influence in Italy. These factors, especially Frescobaldi's explicit employment by the Barberini, have led me to seek evidence of Fantini's employment by the Barberini, and subsequent proof of the "first concert" at their behest. This research continues, but there are physical records that indicate Fantini might have been known and employed by the Barberini in 1634, before Frescobaldi's return to Rome in April of that year. An assessment of archival material shows that Fantini and Frescobaldi were simultaneously in Rome. Looking at pay records in the Vatican's Barberini archives from the first part of 1634, shown in Figure 9, there are two entries that are of interest:

⁵² John H. Baron, "Chamber Music Before Corelli" In *Intimate Music: A History of the Idea of Chamber Music* (Stuyvesant, NY: Pendragon Press, 1998), 24.

On page 401, dated March 31st, 1634 –
*“expenses for service Geronimo Musico” 4.40 Florens*⁵³

On page 405, dated “Last day of March, 1634”
*“to Geronimo Musico (musician) for a list of charges made to his service” 7.50 Florens*⁵⁴

(And in October and December we find very similar entries)

On page 461, dated “October 21st, 1634”
*“to Geronimo Musico (musician) for a list of charges made to his service”*⁵⁵

On page 480, dated “Last day of December, 1634”
*“for a list of those expenditures made for Geronimo Musico (musician)” 4.90 Florens*⁵⁶

FIGURE 9. Barberini payment records for Geronimo Musico

These records raise some questions. Firstly, the label "Geronimo Musico" is as exciting as it is perplexing. A historical search of prominent musical figures working in Rome in 1634 reveals only two significant musical characters with the name "Geronimo"; Girolamo Frescobaldi and Girolamo Fantini.⁵⁷ Throughout this book of records, Frescobaldi is always noted with his full name, perhaps due to his stature in the community. Also, as has been established, Frescobaldi did not arrive in Rome for some time after the first March entry. The entries seem to indicate that

⁵³ Biblioteca Apostolica Vaticana (hereafter cited as BAV), Rome, Archivio Barberini, Computisteria 67, fol. 400v, 31st March 1634, “...spese per serv(io) di Geronimo Musico”

⁵⁴ BAV, Rome, Archivio Barberini, Computisteria 67, fol. 405, n. 341/369, “Last Day of March” 1634, “A Geronimo Musico per una lista di spese fatte suo servitio”

⁵⁵ BAV, Rome, Archivio Barberini, Computisteria 67, fol. 461, n. 317/349, 21st October 1634, “A Geronimo Musico per una lista di spese fatte suo servitio”

⁵⁶ BAV, Rome, Archivio Barberini, Computisteria 67, fol. 480, n. 373/388, “Last Day of December” 1634, “Per una lista chi spese fatte per Geronimo Musico”

⁵⁷ The various forms of the given name “Girolamo” can be confusing. Bourdelot’s letter to Mersenne describing the Fantini/Frescobaldi concert is in Latin; the chosen formal language of philosophers of the time period. As such, Fantini is described, by name, as “Hieronymo Fantino”. “Hieronymo” and “Hieronymus” are originally Greek, and are present in Latin. In Italian, they become “Girolamo” and “Geronimo” (Jerome in English). As such, searching the Vatican archives was an exercise in vigilance regarding the name “Geronimo”. Interestingly, all entries for either Fantini or Frescobaldi utilized the given name “Geronimo”.

“Geronimo Musico” was given recompense for multiple services under a single payment. Recalling the Italian tradition for “blowing-at-table” as well as the integration of the *Sonata* repertoire into the church service, it would not be too difficult to imagine that Fantini was present in Rome in order to perform various trumpet functions over a number of days. Given these indicators, it is possible that the anonymous “Geronimo Musico” was indeed Girolamo Fantini. As another indicator that this “Geronimo” is not Frescobaldi as seen in Figure 10, all payments to Frescobaldi (within the books to which I had access) are at an obviously higher pay scale in comparison to the figures associated with Fantini:⁵⁸

100 Florens	_____	“Geronimo Frescobaldi's journey from Florence to” ⁵⁹
30 Florens [illegible]” ⁶⁰	_____	“Frescobaldi for recognition of 6 month begins the 6th May
10 Florens [illegible]” ⁶¹	_____	“paid to Frescobaldi for recognition of two months as the
30 Florens	_____	“... Girolamo Frescobaldi for recognition ...” ⁶²

FIGURE 10. Barberini payment records for Geronimo Frescobaldi

⁵⁸ It must be noted that several other record books for the Barberini were out for conservation services, including one register chronicling payments to artists. There may be more evidence of Fantini's involvement with the Barberini contained therein. The "first concert" is, sadly, not explicitly noted in books I used (BAV Arch.Barb.Comp.167, Arch.Barb.Comp.93, and Arch.Barb.Comp.67). Still, a strong circumstantial connection between the Barberini and Fantini/Frescobaldi is present.

⁵⁹ BAV, Rome, Archivio Barberini, Computisteria 116, fol. 31v, “...Geronimo Frescobaldi suo [illegible: possibly “a onda”] del viaggio da Firenze a Roma un la mia famiglia somma esegue [illegible “a'lonho”].

⁶⁰ BAV, Rome, Archivio Barberini, Computisteria 116, fol. 39r, “frescobaldi par recognite di 6 mesi comincia al 6 Maggio”.

⁶¹ BAV, Rome, Archivio Barberini, Computisteria 116, fol. 45r, “pagati a Girolamo Frescobaldi [illeg.] ricognite di due mesi com[illeg] il [illeg.]”.

⁶² BAV, Rome, Archivio Barberini, Computisteria 67, fol. 480, n. 377/376 “Last day of December” 1634, “A spese... Geronimo Frescobaldi per a [illeg.] recognition che non [illeg.] diamo, come al Roma”.

Concurrently, the phrase "...on Borghese's organ" found in Mersenne's treatise merits further discussion as it applies to this particular performance. While there are records that show the maintenance and ownership of organs by the Barberini in the Vatican Archive, the specific mention of Borghese's name in Bourdelot's letter to Mersenne should be taken more as a clue to the potential location for the first concert.⁶³ It has already been established that the Barberini Academies took place not only at their own properties, but also at the homes of various nobility/clergy throughout Rome. A cross-reference of the Borghese family records with accounts of small pipe organs at particular estates reveals one possibility. From Scipione's personal archive, there is a small record book that contains an entry detailing the delivery of "*un organo di legno da S. Pietro al Palazzo in Borgo*".⁶⁴ This can be translated as "a small wooden organ delivered from St. Peter's to his Palazzo in Borgo". "*In Borgo*" refers to Palazzo Castellesi (Torlonia), a noble house designed by Antonio da Sangallo the Elder. It can be found roughly a block outside the current Piazza San Pietro. Owned by the Borghese family for several centuries, it would eventually be acquired by the Torlonia family. To this day it still belongs to them. No record has been found as to the specification or construction of that small wooden organ, but we can be fairly certain that it was a very small chamber organ, probably possessing a single manual.⁶⁵ Enough time spans between the organ's delivery in 1611 and the Fantini/Frescobaldi

⁶³ BAV, Rome, Archivio Barberini, Computisteria 116 and 67 shows several entries in which Huido Barbone is paid for servicing and tuning organs, including an interesting mention of the tuning of a "Graviorgano".

⁶⁴ Jean Lionnet, Norma Deane, and John Whenham. "The Borghese Family And Music During The First Half Of The Seventeenth Century." *Music and Letters* 74, no. 4 (1993): 519-29, Accessed October 2, 2014, JSTOR.

⁶⁵ The term *Organo di Legno* ("wooden organ") often refers to the Italian tradition of small wooden portative instruments based upon a 4' or 8' register. A survey of small wooden organs finds great difference in instruments that could be classified "small wooden organs". Of interest is that small Italian organs were often based upon an open principal stop, either at 4' or 8', as opposed to the common stopped-wood variants in other European small organs. The sound of an instrument based upon an open register, compared to those with stopped wooden

concert in 1634 to raise plausible doubt as to whether Palazzo Torlonia should be considered the probable location for the concert. At the very least it can be taken as a location where one could find "Borghese's organ". It also can serve as a precedent for the type of space in which a small pipe organ might be installed and used for chamber music. The construction type, materiality, and dimensions of the space could then be compared to similar spaces in other grand houses around Rome, in order to ascertain whether there is the possibility of similar acoustic characteristics across differing properties. Looking at other prominent homes owned by Scipione Borghese, Villa Borghese could also have served as a potential location for the concert. Palazzo Barberini, completed in 1633, is roughly a kilometer from Villa Borghese. Figure 11 shows how the close proximity of the two properties definitely supports the idea that the Barberini Academies, which took place in significant homes around Rome, could have taken place at Borghese's home. It also still seems quite plausible that the performance would have occurred at the behest of Francesco Barberini.

pipes, is one of fullness (not loudness) and greater overtone development. As an accompanimental instrument, the bass register is generally more discernable in terms of pitch. The sweetness and *stringiness* of a narrow scaled principal stop also tends to blend with strings and viols quite readily.

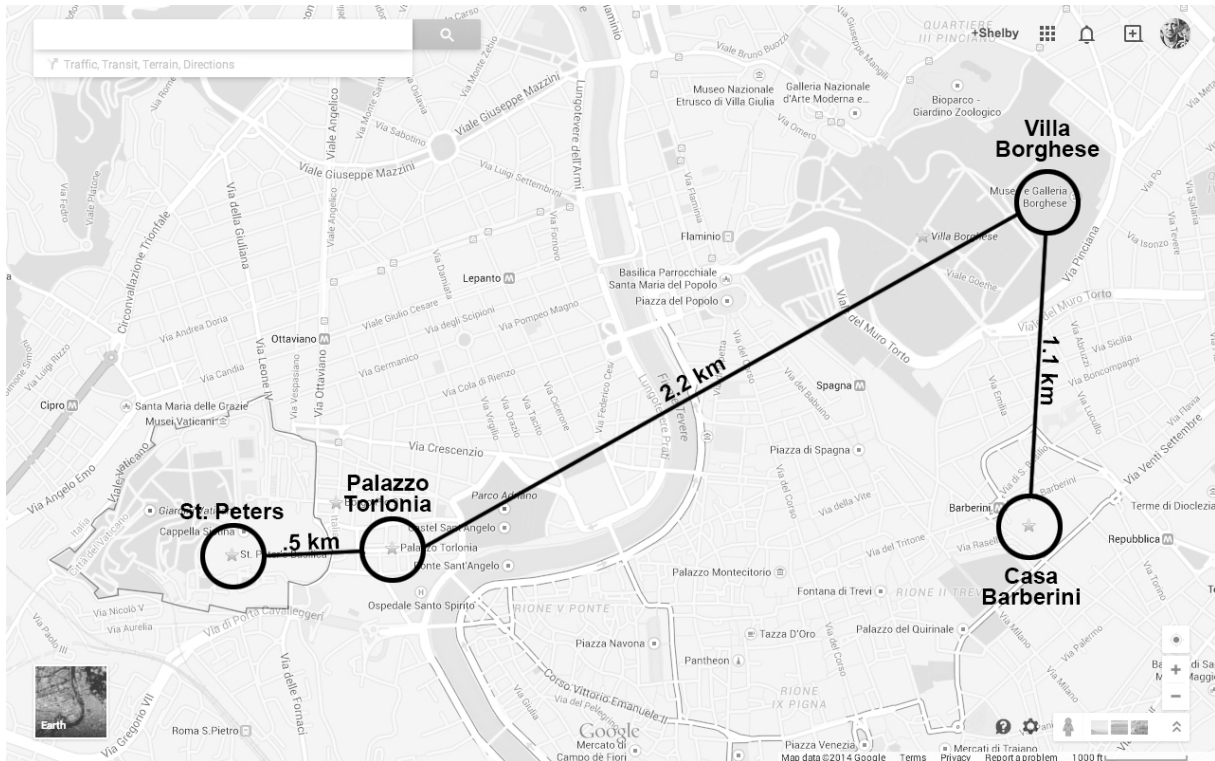


FIGURE 11. Locations of significant Borghese/Barberini properties in Rome, Italy

While the evidence for the Fantini/Frescobaldi concert happening at the request of the Barberini family is heavily circumstantial, a review of all the currently available information shows that there was definitely a motive and substantial means for Cardinal Francesco Barberini to stage such an event:

- 1) Frescobaldi was explicitly employed by the Barberini;
- 2) there is pay-record evidence that a connection between Fantini and the Barberini probably existed;
- 3) Cardinal Scipione Borghese had died in late 1633 and there was an opportunity for the Barberini to expand artistic influence in Rome;

4) the Barberini held (chamber) music academies in homes of significant people around Rome and these academies almost certainly involved Frescobaldi in a chamber-music setting and, by extension, possibly Girolamo Fantini;

5) Villa Borghese, Palazzo Castelessi (Torlonia), and Palazzo Barberini are within walking distance of one another; and

6) The Barberini family was in dispute with factions loyal to the Medici family (which eventually led to the Wars of Castro) which gives them reason to use Fantini and Frescobaldi in a fashion that would bolster the Barberini's perceived prominence; and potentially snub the Medici family, who employed Fantini at the time.

Given these circumstances, in combination with the evidence that this concert happened in 1634, it seems quite likely that the Barberini probably staged the Fantini/Frescobaldi concert at one of Borghese's homes, either Villa Borghese or Palazzo Castellesi (Torlonia). To the performer seeking to study the performance of the music associated with this event, it should be quite evident that the special qualities of instrumentation and acoustics involved in this concert are quite different than would be found in typical recital halls and churches in the modern Western world.

BRIEF THOUGHTS ON ARCHITECTURAL DETAILS AFFECTING PERFORMANCE

The Fantini/Frescobaldi concert probably took place in a grand Italian home in Rome. There are consistent details regarding the construction, materiality, and spatial scale of many of these homes that support the idea that the study of an archetypal villa can be applied loosely as a precedent; even if the exact location of this concert is still not ascertained with complete certainty. Across most of Europe, Gothic architecture (from roughly the 11th- through 16th centuries) sought to create structures of increasing height and elegance through the utilization of masonry ribbing, pointed arches, and careful structural design: a philosophy that often emphasized using the minimum structural members possible while attempting to pass structural loads to the foundation and, consequently, to the earth. As the Renaissance began to take hold, there was a move in Italy towards the use of some of the older Roman construction aesthetics (rounded arches and thick, load-bearing walls). As such, a majority of the palazzi in Rome, circa 1500-1800, are designed and built similarly. Designers such as Bramante, Antonio da Sangallo the Elder, Raphael, and Giulio Romano found themselves concerned less with construction type and more with spacial relationships and ornamentation that harkened back, at least superficially, to Greek and Roman ideals.⁶⁶ Through and through, the palazzi of Rome are of similar construction type and materiality. While this study has no current intention to catalog a substantial portion of the noble houses in Rome, looking at a few precedents closely related to the storyline can clarify details regarding the intricacies of potential performance scenarios.

⁶⁶ Colin Rowe and Leon George Satkowski, *Italian Architecture of the 16th Century*, (New York: Princeton Architectural Press, 2002), 103-125.

Following a visit to Villa Borghese in Rome, I was able to draw some conclusions regarding the acoustic and physical qualities of this particular grand home. My first reaction is that the scale of these homes would be lost upon anyone that has not visited them – myself included. Take, for instance, the floor plan of Villa Borghese (Appendix A). Although art installations made taking physical measurements of the rooms difficult, the central rectangular entrance hall, the *Salone di Mariano Rossi*, was estimated to be 22 meters wide by 30 meters in length. It is nearly as tall as it is wide. This is, as a residence, a tremendous volume of air to fill with sound; it still does not approach the size of a concert hall or cathedral. From a materiality standpoint, the floors are smooth marble and/or mosaic tile and the walls were also of heavily decorated load-bearing masonry. I measured the acoustics of the space from several vantage points and the abundance of smooth reflective surfaces made for an extremely reverberant space. I also measured the acoustics of the smaller *Sala del Sileno*, along the periphery of the home, and found it to be nearly as reverberant. It did, however, have an immediacy of sound not found in the larger hall due to the closer proximity of the sound source to the listener. Palazzo Torlonia was inaccessible during my visit, but a study of the floor plan and a selection of available images reveal some overlap in scale and materiality. The floor plan of Palazzo Torlonia (Castelessi) is found in Appendix A as well. A notable departure from Villa Borghese is that its large central space is in the form of a courtyard open to the sky. A colonnade borders this courtyard. Variability of weather conditions might merit the organ staying in an interior space, although the portable nature of some organs could allow for an “outdoor” concert. Looking at the remaining enclosed spaces, they are all scaled similarly to the smaller galleries at Villa Borghese and have

un-textured load bearing masonry walls and masonry, ceramic- and wood-tile floors, and similarly smooth ceilings.

Similarity of construction type, base materiality (floors, walls, ceilings), and scale can be accounted for in forming a baseline acoustic personality for these spaces. As such, the acoustic would likely be quite similar to those at Villa Borghese. In reality, no two spaces will be acoustically identical. But, for the purposes of this study, one can develop a sense of the sonic properties of these spaces by studying a few precedents and extrapolating to a larger sample. Obviously, though, the most significant unknown would be the presence of room furnishings and people within the spaces. Given that clothing, tapestries, draperies, rugs, and all manner of cloth would reduce reverberation, the actual concert day acoustics can only be viewed as a moving target.

FINAL REMARKS REGARDING FANTINI AND FRESCOBALDI

My hopes are that it is now easier, taking into account the information from the previous chapters, to visualize the conditions surrounding the fabled concert of 1634. One can imagine a late-renaissance-inspired trumpet played by Fantini alongside a gentle, but intense, chamber organ of modest means with Frescobaldi at the console; a general sweetness of tone present in both instruments due to the details of their construction. The space, a noble residence in Rome, would have been one of grand dimensions with matching acoustics and, consequently, concertgoers would have been members of an elite class of nobles and clergy. These are not superficial details that have only a minor role in the concert. Organology, performance location, and acoustics all had a profound effect upon the final aural presentation of this concert's music.

Specifically looking at the information presented thus far it can be said that this pair, Fantini and Frescobaldi, mostly likely performed for Pierre Bourdelot, and other unnamed concertgoers, in mid/late 1634. Documentary and biographical evidence from Bourdelot, Mersenne, Borghese, and the Barberini Archives all point to a situation in which Frescobaldi and Fantini were working within established professional relationships with the Barberini family. Details surrounding Bourdelot's letter to Mersenne, in combination with Scipione Borghese's death in 1633, imply social conditions whereby the Barberini would have been seeking to increase artistic influence in the region. The initiation of the Barberini's "Music Academies" in noble homes around Rome set a perfect stage upon which, figuratively and literally, the 1634 concert could have taken place.

Regarding the performance itself: Fantini's natural trumpet would have had the hallmark slower bell taper, and other associated details, one would find in trumpets belonging to the

transitional time between the Renaissance and Baroque periods in music. The tone would be rich and overtone-laden, but without the extreme brilliance found in later baroque trumpets: those possessing thinner bells with faster tapers. Frescobaldi's chamber organ would have been of modest means, 4-to-7 stops with no independent pedal division, and based upon a narrow-scaled open 8' register. The *Ripieno*-based stoplist would have presented a mild, yet intense, chorus very much suited for use in a residential venue. This would have been chamber music nearly at it's most essential: a two-man orchestra of sorts. Add to this pairing an acoustic that could be seen as perfect for this duo: richly reverberant due to the scale of the rooms and their associated materiality, but still possessing a clarity and immediacy due the close proximity of the performers to the concertgoers. With these details illuminated, we find ourselves in a position to apply the information to modern-day musical study in a meaningful and pragmatic manner; this is the domain of the second portion of this study.

Ongoing research, well underway, is coming to grips with how modern technology can use information (in many guises) to form a performing intention with regards to a specific musical pairing: natural trumpet and chamber organ. The process that is emerging, one that takes *analog* research and then subsequently applies modern technology to the findings, could be utilized in a number of musical situations. Looking back upon all of the information presented to this point, it should be clear that an attempt has been made to draw clear connections between things that, at first, seem potentially disparate. Overlooking such details leaves one with an incomplete and potentially incoherent view of the circumstances surrounding the collaboration between Fantini, Frescobaldi, and their patrons. Without this substantial and detail-rich platform to stand upon, the further application of modern technologies amounts to no more than self-

indulgence in the service of superficial effect. It is with the commitment to providing such a platform that I am pursuing further research.

ONGOING AND FURTHER RESEARCH

The following remarks will deal with the ongoing research that builds upon the historical research already put forth in prior portions of this study. Given the establishment of date and potential location for the Fantini/Frescobaldi concert, continuing work will show how digital tools might intercede in an attempt to establish an image of how the performing conditions might have affected the performance. Before introducing the process and workflows associated with the digital tools suitable for this study, it might be helpful to clarify why these tools, and their applications in early music, are useful. This particular study views these tool, first and foremost, as augmentative to traditional study of performance practice.

If one looks at the broader study of music as applied to brass instrumentalists, it becomes readily apparent that the conservatory method of training is the most prominent in contemporary Western cultures. That one should find a teacher at a post-secondary educational institution and study with that teacher until moving on to a place of employment, or another teacher at another conservatory, is the model followed by essentially all instrumentalists in western art music at this point in the early decades of the 21st century. The older system of private apprenticeship with an established individual (or members of a guild) is generally no longer followed. Within the conservatory model, instruction takes place, physically, in the private teaching studio. In light of the special requirements of historically informed performance practice, the conservatory model can offer some serious challenges to brass students who wish to study early music in greater depth: especially as it applies to performance venue and acoustic. As far as early music for trumpet and pipe organ is concerned, most institutions in America present glaring difficulties in providing appropriate facilities to support the study of this literature.

At a more specific level, the study of early music for brass instrumentalists often involves only a cursory look into performance practice. Tempi, dynamics, articulation, pitch level, and stylistic conventions are often chosen simply because they have become engrained in the teaching canon and passed on, subsequently, between generations of teachers and students. In Baroque music, the “slur-two, tongue-two” convention (often applied to groups of four semiquavers) is a basic example of a brass practice becoming a stylist convention with little basis in historic precedent. This is not to say that these practices are unmusical or ineffective: only that this is not what would be now considered *Historically Informed Performance* (HIP) practice.

All music performance is influenced by performing site conditions. These conditions are often not taken into account during concert preparation, although acoustic can have a great effect on the performance quality. Even more specifically, historic music for the trumpet and pipe organ can involve a great variation of instruments, temperaments, performance space acoustics, and distances between performer and audience. Ignoring location-based cues associated with older music for trumpet and organ can put one at a great disadvantage when seeking a musically effective and well-informed performance. It must be said that I am seeking the idea of being well-informed, at least in this paper, such that the performer may establish a meaningful intention in the performance study of this music.

Inclusion of sample-based technology, acoustic simulation, and recording technology can go a long way towards helping early music practitioners develop an internal picture of historic performance conditions, allowing for more nuanced musical choices. These tools can be used in the university teaching studio, and are perhaps ideally suited to this use. The tools that will be explored at length in the second part of this study as follows:

- 1) Sample-based virtual instruments
- 2) Acoustic simulation through the use of impulse responses and convolution based reverb
- 3) MIDI Sequencing
- 4) Recording technologies to facilitate the use of the previous mentioned tools

Zeroing in on an intentional workflow that includes digital samples, acoustic simulation, and recording technology, the remainder of this paper will deal specifically with why these tools might be helpful and how these tools might be applied in service of deeper investigation of the historic Frescobaldi/Fantini concert in 1634.

Introduction to Sample-Based Technology

Broadly, sample-based instruments can be seen as discrete recordings of "real" instruments that are then stored in the memory of a digital device to be recalled by some sort of triggering device. Once recalled via a trigger, the sample (recording) is converted to an analog signal and played through a loudspeaker or headphones. The modularity of the system, to this day, proves to be useful in a myriad of applications. A commonly found device that used sampling, in the late 20th century, is the sampling keyboard. To this day, still incorrectly confused with a "synthesizer", the sampling keyboard is a device that contains a standard piano-based keyboard that acts as a triggering interface. The internals of the keyboard feature digital memory to store previously recorded samples as well a processor to deal with the communication between triggers and samples, and the subsequent playback. Via programming, specific samples are associated with specific keys on the keyboard and are recalled for playback when those keys were pressed. One of the shortcomings of the system, however, is that the sample has historically

been a single, discrete recording of a particular sound and as such lost the variability and randomness – *human-ness* – generally associated with the performance of acoustic instruments by a performer in real time. This shortcoming cannot be overlooked. It has often lead to the assumption that these instruments have little place in live performance due to the limited ability to control the expressive qualities of the instrument. Given the rise of the microprocessor and the incredibly quick evolution of personal computers, there now exists enough processing power in most home computers to take advantage of technologies that help to alleviate the somewhat sterile qualities of older generation samplers. The ability to sample multiple instances of a single source and, in turn, use programming algorithms designed to intelligently randomize the recall of said samples, has allowed for a more sonically compelling case for this technology. Pipe organs and harpsichords, which generally are seen as instruments which offer less fluid control of micro-dynamics in comparison to other acoustic instruments, are perfect mates to this technology.

In Hauptwerk (TM), a sample-based software system specifically designed for the pipe organ community, one finds a perfect example of how sampling can be put to effective use in the service of the exploration of early music, and specifically towards the study of the first trumpet/organ concert by Fantini and Frescobaldi. On the surface, Hauptwerk is designed as a "virtual pipe organ" whereby entire organs are recorded, pipe by pipe, to create a virtual sound record of the instrument. Not limited to recordings of each pipe as a single sample, Hauptwerk allows one to record multiple samples of each pipe note attack, body, and release as well as longer samples (7 seconds and beyond) for the body of a note. Once imported into the application, complex algorithms randomize which samples are used, leading to varying degrees

of randomness in the reproduction of the organ's sound. These variations potentially allow for a much more musical presentation. This type of complex sampling, as controlled and triggered by computers, has historically been unable to avoid the problems associated with the sheer amount of data needed for instant recall when requested by a key-press. Hauptwerk deals with this issue by loading the samples completely into RAM, bypassing issues of hard-drive latency.

Leveraging this ability has also allowed for entire pipe organs, from the largest church/theater instruments to the smallest portatives, to be included in the growing archive of sample-sets available for users of the software. Beyond the pipe samples themselves, the graphical user interface (GUI) involves virtually recreating the original console on the computer screen such that the stops, keys, pistons, and associated devices are available via a click of the mouse or, more commonly, a touch-sensitive monitor. Beyond the GUI, almost all functions of Hauptwerk are controllable via MIDI. This allows for a myriad of opportunities in recreating modern control systems for a wide range of keyboard instruments, including playback from a sequencing and/or notation program. Given even the least expensive MIDI capable keyboard, one has the ability to play virtual recreations of instruments from a period of time spanning from the 15th century until present day including church pipe organs, theater pipe organs, and harpsichords.

The system also has the ability to deal with ambient sound conditions. Recording sample sets uses traditional recording technologies. As such, microphone choice, placement, and recording format all have an effect on the final outcome of the sample set. During the creation of the original sample set for a given instrument, recording technicians have the choice whether to record the samples from a distant "ambient" listener's perspective or from a "dry" close perspective. The ability to download a dry sample set allows for the study of music in multiple

acoustics, and to make musical decisions based upon the performer's intentions within that acoustic. The sound output of the software can be routed through a digital or analog effects processors whereby ambiance can be added in post-production. The modular approach to sample sets and acoustic allows Hauptwerk to exist as an excellent exploratory tool for music associated with contemporary and historic keyboard instruments. Alongside acoustic simulation (to be discussed later) through the production of room impulse responses, it acts as a powerful platform for the discovery of how particular repertoire might be interpreted within historic spaces. While Hauptwerk has been chosen for this study, due to its application to historic keyboard instruments and its robust feature set, know that the overriding concept that uses sampled keyboard instruments alongside recreated historic acoustics is the most important factor in this study. Applications in the teaching studio (and in live performance), covered later in this paper, are the ultimate goal of this study.

Acoustic Archiving and Simulation

Alongside the use of sample-based technologies, the inclusion of acoustic simulation in performance preparation of early music has the potential opportunity to provide great insights into how this repertoire might have been approached in its original time and locale. To clarify, this study will look at the creation of convolution-based reverb taken from room impulse responses as a means for capturing, archiving, and later utilizing a room's ambiance in support of a more well-informed performance intention. Although the process of creating impulse responses and their associated convolution-based reverb possesses certain intricacies that may seem daunting at first glance, a few overriding rules can be followed that will allow for many performers to explore this tool. Beyond that, the impulse response files created by an individual

will be usable within many free/commercially available sound editors. As such, individuals who are not interested in the actual creation of these reverb files still have the opportunity to use them in their study of historic music.

Firstly, convolution reverb attempts to recreate, within the digital domain, the actual ambiance of a physical space. In simple, pragmatic terms the following list outlines the process:

1. *A chosen physical space is excited* with a dry, full-frequency sound.
 - a. The sound is generally a 20hz-20khz sine sweep
 - b. It is played through a powered studio monitor.
 - b. The monitor can be placed anywhere, but in this study it will be placed at the "performer's position".
2. *The excitation is recorded.* Factors that can affect this step:
 - a. Do you want a mono, stereo, or true-stereo?
 - a. Microphones, as neutral in character as possible, should be omnidirectional such that they record the direct and indirect sound equally
 - c. Microphones can be placed anywhere, but in this study they will be placed at various "listener's positions".
3. *Software then filters* the dry (unprocessed) sine sweep through the recorded (ambient) sine sweep in order to create a convolution reverb preset that simulates the physical acoustic properties of the recorded space: for application within the signal processing chain for recorded/live performance.
4. *Musicians can record themselves* on any number of devices in a dry room, such as a conservatory teaching studio, and then apply the convolution reverb to make decisions about volume, articulation, and so forth based upon the space within which they might perform.

Note that this process need not be limited to the study of historic spaces. This process can be used to create reverbs presets for hardware devices as well as any space within which a microphone and sound source can be placed; stairwells, recital halls, teaching studios, tents, and even camping coolers are just a few creative possibilities. What is most useful, in my view, is the

process that allows for the recreation of an acoustic condition and the subsequent analysis that ensues.

Establishing a workflow for capturing acoustic space can be a complicated or simple affair, and generally one will find that the more "neutral" and "analytical" one wishes the process to be will affect the amount of complexity involved. As a starting place, there are some broad choices that need to be made at the outset of the process:

- Space to be recorded
- Method of capturing room ambiance
- Equipment with which to record
- Software with which to deconvolve the recorded impulse response file
- Playback software/hardware

Within each of these broader categories, there are several sub-decisions to be made regarding specific working methods. These will be covered in subsequent sections.

With regards to the choice of space, this is solely up to the intention of the performer/researcher. However, the nature of the space to be recorded will have a great effect on the type of equipment required to faithfully reproduce the ambiance of a particular space. This particular investigation is taking the first trumpet and organ concert by Fantini/Frescobaldi as a point of departure, and an actual recording session has already taken place in Villa Borghese. The specific room within which this historic even took place is still unknown, so a sampling of several rooms of several sizes was made in order to further investigate the acoustic possibilities of performing there. The equipment can have a great bearing on travel arrangements and electrical requirements. As a general guideline, smaller spaces will require smaller equipment, while larger spaces will require far more extensive resources to capture, faithfully, due to the amount of air that must be excited in the space; requiring larger loudspeakers in order to play the

sine sweeps at a level that offers an ample signal-to-noise ratio for the recording equipment. One should also seek to have the quietest ambient conditions possible while recording material for use in reverb files. The ambient conditions at the site will therefore play a major role in the effectiveness of the recording. Given a site in a noisy urban environ, one might find it nearly impossible to create a clean enough recording due to the amount of noise from cars, pedestrians, and similar ambient noise makers. This was a difficulty that I faced in Rome, although the sine-sweep method does offer some latitude in this regard. Seasonally, the use of air conditioning/heating might also affect the recording process. For example, given hot seasons in the Deep South of the United States, one might find it difficult to acquire permission to have these systems turned off for long enough to allow for recording in a truly quiet space. Power considerations must also be taken into consideration. Although most recording gear these days can effectively be powered by portable sources, the loudspeaker(s) needed to produce the materials being recorded can require substantial power. Smaller spaces might allow one to use a portable battery-powered inverter in order to provide electricity to a powered monitor. In larger spaces several powered monitors, and potentially a subwoofer, will be needed. These require more power than a portable battery solution can generally provide. Consequently, one will need to access power from electrical outlets in the wall. Traveling internationally from the USA will also call for the use of equipment that will function on 220 volts of power, or the use of converters that will step the voltage down to 110. All of these factors show that the choice of location has a large bearing upon the feasibility of the recording process as well as the amount of preparation needed to make the recording project a success.

As an example of this process, in 2008, F. Martellotta, E. Cirillo, M. D'Alba, E. Gasparini, and D. Preziuso presented a paper at the Acoustics '08 conference in which they described an attempted to establish whether the opulent and plentiful draperies and decorations found in iconographical sources, and consequently installed at San Petronio (Bologna, Italy) during religious feast days in Baroque times, might have had an influence upon the music composed for the space: as well as on the forces hired to perform said music. In order to establish an acoustic baseline, they followed a process that closely resembles the one outlined above. From their paper:

“A set of acoustic measurements was carried out in unoccupied conditions, complying with the ISO 3382 standard. An omni-directional sound source made of twelve 120 mm loudspeakers (with a frequency response from 100 Hz to 16 kHz) mounted on a dodecahedron, together with an additional sub-woofer to cover the frequencies below 100 Hz, was used. High-quality impulse responses were collected by using a B-format microphone (Soundifield MkV) and a binaural head and torso (B&K 4100D). The signal used to excite the rooms was a constant envelope equalized sine sweep generated with MATLAB according to Möller and Massarani so that the spectrum of the radiated sound was substantially flat from the 50 Hz to 16 kHz third-octave bands. The room responses were recorded at a sampling rate of 48 kHz and 24 bit depth, to obtain, after deconvolution, impulse responses with very low noise (the signal to noise ratio was generally higher than 60 dB even at the lowest frequencies).”

One can readily deduce that the amount of equipment required to excite the air in such a cavernous space such as San Petronio is extensive, and quite expensive. Of note is that the study then went on to model the entire interior of the Basilica in a 3-D computer modeling application and then use the software program Catt-Acoustic™ to run similar impulse-response calculation in the virtual domain, with feast day decorations added within the computer model.

The current study location of this paper, Villa Borghese, contains rooms with much smaller air volumes and requires much a less extensive list of equipment to excite the air within

the spaces. A single JBL LSR305 powered loudspeaker, possessing quite a flat frequency response from 43HZ to 22Khz, was used to emit a sine sweep spanning from 43Hz to 20Khz. Although the addition of a subwoofer to generate frequencies below 43Hz would be a welcome addition, travel considerations (weight, size, electrical concerns) made it's inclusion impractical. Musically, it was also unnecessary as the keyboard compass of a small Italian chamber organ in 1634 would have only gone as low as C2 at a pitch level of A=465Hz (sounding a modern C#2/Db2). The pitch of C#2 is 69.296hz, which falls within the frequency response of the JBL LSR305, and capturing frequencies below that would not be completely necessary in order to study this particular repertoire. There also would not have been other instruments at 16' pitch doubling the bass line. An acoustically matched pair of Rode NT5 microphones fitted with the excellent NT45-O omnidirectional capsules and mounted on a stereo bar approximately 7 inches apart (approximating the distance between human ears), facing towards the loudspeaker, were used as a means to capture the emitted sine sweep. The NT5 microphones with the omnidirectional capsules are generally regarded as offering quite a flat frequency response, neutral rendering character, and very low self noise. They also present a good value, monetarily. Microphones were phantom powered by a Tascam DR-680 Digital Recorder. Although I have some very low noise wall-powered Grace Designs M101 microphone preamps, the gain and low noise of the Tascam was quite sufficient for the easy-to-power NT5 microphones. The preamps are also widely considered as quiet, neutral, and offering good dynamic range. They provide excellent specifications for recording impulse responses where one needs sufficient gain, low noise, and a neutral sound signature in a portable battery driven form factor. As a means to safeguard against computer-based difficulties (crashes, hard drive failures, and so forth), the

Tascam DR-680 multi-track digital recorder also served as the recording device. The digital recorder's gain remained very low which kept the signal-to-noise ratio of the entire system as high as possible. The Tascam DR-680 also records directly to SD memory cards that have proven themselves to be robust and very rarely prone to failure. The sine sweep itself was generated, specifically to fall within the studio monitor's playback frequency range, from a program called AudioTest. A second version provided by AudioEase, makers of the AltiVerb Convolution Reverb Software, was recorded as well in case I decided to use their particular software at a later date. The sweep was then exported as a high bit rate FLAC. It was played from an iPhone feeding the monitor with an unbalanced 1/8" stereo to 1/4" mono cable. The resulting files from this initial study have proven to be quite useful in recreating the ambiance of the grand villa.

Sequencing and Notation Software

The last major digital component to be used in the virtual study of Fantini/Frescobaldi Concert of 1634 involves the use sequencing, generally using MIDI as the means of communication between components. While oftentimes MIDI is utilized to allow a device (keyboard, drum machine, and so forth) to trigger a pre-recorded sample, here it is being used a means to produce performance “maps” of sorts. One starts with a score for a work for trumpet and organ that might have been used by Fantini and Frescobaldi. Hypothetically, let us choose Fantini's “Sonata detta del Gonzaga”. After entering the organ part into a computer notation program (Finale 2012 in this case), the notation program then has the ability to allow you to record a performance of the work. Using the “tempo tap” function, one can actually embed slight fluctuations in tempi; accelerando, rallentando, ritardando, and so forth. A link is then

established between Finale and either a sequencing program such as Apple's Logic Pro or directly with Hauptwerk(tm) by way of Apple's *Audio Units* protocol. With the connection established between software programs, one can play the "performance" from Finale while allowing Hauptwerk to be the virtual "instrument" that provides the palette of organ tones and tunings. With several baroque Italian sample sets taken from true historic organs available, such as the Adriatic model from Sonus Paradisi, one has the ability to hear a performance of this old music being played from an appropriate instrument. These performances can then be recorded by Hauptwerk and saved as audio files in various formats to be scrutinized and or used as accompaniment tracks for trumpeters.

Moving Forward and Putting It All Together

We find ourselves at a place where issues regarding organology, date, and location have been clarified. Given these details, alongside the comprehensive suite of digital tools, it will now be possible to recreate a trumpet and pipe organ duo that would leave a sonic impression very close to one heard by concertgoers in Rome in 1634. Using sequencing to produce a performance map of the organ score, the information can be routed from Finale into Hauptwerk, where the performance data will be played through a dry sample set produced from an authentic, small Italian baroque pipe organ. That sound file can then be saved and used as a play-a-long accompaniment track in the teaching conservatory studio where ideas like pitch, endurance, and articulation can be studied. Playing along with the track on a natural (any) trumpet while recording the performance gives a performer the ability to hear how the duo sounds as a pairing. The magic truly happens when the acoustic from Villa Borghese is then applied and one can listen back, critically, and assess whether musical decisions made regarding such things as

dynamics, tempo, and articulation have produced a compelling music statement within the virtual space of the Villa.

CONCLUSION

I find myself, in the midst of this study, energized to know that I am potentially closer than ever to hearing what this music might have sounded like to ears of Romans in 1634. Yet, of equally great interest to me has been how traditional research has proven its worth repeatedly in laying the groundwork for further research utilizing a non-traditional suite of digital tools and, subsequently, helping to establish a process by which further research might be possible; regardless of time period or repertoire. Given all of the steps involved, acquiring a more focused view of the Italian trumpeting tradition, organological concerns with regards to trumpets and organs, establishing a date and locale for this important concert, deciding from which suite of digital tools to draw, I find the idea of *connectedness* has overwhelmed me the most. I've found a connectedness of data, a connectedness of processes, a connectedness of people and places. In a sense, Rome in 1634 and Baton Rouge in 2014 are now inexorably linked.

From a more pragmatic stance, my hopes are that practitioners of early music will see great value in the processes and conclusions found here; that this *stream of ones and zeroes* can prove to be a meaningful force to those who might be caught up in the dogma that oftentimes accompanies musical performance practice. To hear the likeness of Frescobaldi and Fantini playing a sonata in Villa Borghese will be thrilling. The strange reality is that it might be the only way to hear such a performance again... or that it might lay the groundwork in an effort to recreate a similar performance with original instruments in that very space.

Moving forward from this portion of the project, the aim is create a series of studies surrounding the details of this concert; performances that use the information and tools present here in an attempt to both relish this music as well as look critically at the effects of those things

often overlooked in performance: acoustic, distance-to-listener, historic articulation within an historic acoustic, temperaments, and a myriad other issues not readily accessible by traditional means in southern Louisiana. Given time, I see the technology helping to bridge the gap between early music and live online performance by allowing listeners at the other end of an internet connection to hear a performance that is sonically compelling and authentic, even if emanating from the most pedestrian of locations. Given time, the addition of virtually created spaces, motion video, and/or (historic) imagery might be interwoven to create a visual experience that supplements and expands the auditory experience of hearing a performance that uses these tools.

Lastly, I would be remiss if I didn't say that I also hope that further exploration of this subject leads to more live performances of "old music" in front of live audiences. While the process of connecting all of these seemingly disparate bits of information into a plausible narrative about an event from nearly 400 years ago continues to be both inspiring and daunting, the final outcome of this study still is invariably connected to making a decision about how one might decide to perform a given musical work. In my mind, performances are meant to be a time in which a gift is shared with the listener. It would be a failure of some magnitude, for me, if this study were to become an isolated blip in my musical life. As such, I have high hopes that the chance at hearing Fantini and Frescobaldi almost 400 years later will prove interesting, thought provoking, and ultimately inspiring to others. Moving forward, I have Krebs and Viviani in my sights.

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APPENDIX A: SELECTED DISCOGRAPHY OF THE TRUMPET WORKS OF GIROLAMO FANTINI

Authors Note: The following discography attempts to catalog, in one place, the substantive recordings of trumpet works by Girolamo Fantini. Building upon the “Fantini” category of the 2009 *ITG Historic Trumpet Discography* by Joseph Bowman, it also contains more recent recordings and the catalog numbers of recently reissued older recordings. Each entry contains information about work(s) on the recording, the album title, trumpeter(s), and catalog number(s).

Date: 1960
Work(s): *Sonata a due Trombe detta dei Gucciardini, Brando detto il Bianchi, Capriccio detto del Carducci, Capriccio detto del Gondi*
Album: The Golden Age of Wind Music
Trumpeter(s): **Walter Holy, Edward Tarr**
Catalog #: Vanguard, VCS-10046

Date: 1960
Work(s): *L'Imperiale*
Album: Venedig-Festlich Kirchenmusik in San Marco
Trumpeter(s): **Edward Tarr and others**
Catalog #: EMI, 037-45 579

Date: 1961-1966
Work(s): *L'Imperiale*
Album: Musik in europaischen Stadten u.Residenzen
Trumpeter(s): **Edward Tarr Brass Ensemble**
Catalog #: EMI, 637-252 238-2

Date: 1964
Work(s): *Chiamata di capriccio, No. 3, Chiamata di capriccio, No.6*
Album: Music for Trumpet and Orchestra, Vol. 5
Trumpeter(s): **Roger Voisin**
Catalog #: Kapp, KS-3384

Date: 1969
Work(s): *Sonata a due Trombe detta del Gucciardini, Balletto Detto la Squilletti, Brando Detto L'albizi, Saltarello Detto Del Naldi*
Album: Italian Baroque Trumpet Music
Trumpeter(s): **Stephen Keavy, Crispian Steele-Perkins**
Catalog #: Hyperion, CDH55192

Date: 1969
Work(s): *Sonata No. 8*
Album: Baroque Music for Trumpet
Trumpeter(s): **Robert Nagel**
Catalog #: Mentor Music Records, LP-101

Date: ca. 1970
Work(s): *Sonata a due Trombe detta del Gucciardini, Brando ditto il Bianchi, Capriccio detto del Carducci, Capriccio detto del Gondi*
Album: Alte Blasmusik.
Trumpeter(s): **Walter Holy, Edward Tarr**
Catalog #: Soli Deo Gloria, SDG 610801

Date: 197-?
Work(s): *Caprice, Courante, Sonata in C*
Album: Dix-septieme siecle italien au Bec-Hellouin
Trumpeter(s): **Michael Morisset**
Catalog #: Grand Orgue, MBM 790.510

Date: 197-?
Work(s): *Sonata No.8*
Album: Trompeten—Konzerte und Sonaten aus dem 17. Jahrhundert
Trumpeter(s): **Werner Fink**
Catalog #: Colosseum, Colos SM 0541

Date: 1970
Work(s): *Prima Sonata di Tromba, Sonata No. 2, Sonata No. 8*
Album: Trompette et Orgue. Vol. II
Trumpeter(s): **Maurice André**
Catalog #: Artistique, RC 350

Date: 1970
Work(s): *Balleto detto il Lunati, Sonata No. 8*
Album: La Tromba Sacre
Trumpeter(s): **Adolf Scherbaum**
Catalog #: Deutsche Grammophon, 136 558 SLPEM

Date: 1973
Work(s): *Sonata No.3, Sonata No.8*
Album: Baroque Masterpieces for Trumpet and Organ—Vol. II
Trumpeter(s): **Edward Tarr**
Catalog #: Nonesuch, H-71270

Date: 1975
Work(s): *Sonata a due Trombe detta del Gucciardini*
Album: Trompeten, erschallet—Don Smithers, Clarion Consort
Trumpeter(s): **Don Smithers, Michael Laird**
Catalog #: Phillips, 6500 926 LY

Date: 1975
Work(s): *Sonata No.3, Sonata No.6, Sonata No.8*
Album: Fantini/Frescobaldi—A Concert in Rome, 1635
Trumpeter(s): **Fred Sautter**
Catalog #: Ars Forma, 4001

Date: 1976
Work(s): *Prima Sonata di Tromba, Sonata No. 2, Sonata No. 5, Sonata No. 6, Sonata No. 7, Sonata No. 8*
Trumpeter(s): **Jean-Louis Chatel**
Catalog #: Radio Canada international (CBC), RCI 406

Date: 1978
Work(s): *Five Dances*
Album: The Baroque Trumpet and Organ
Trumpeter(s): **Fred Sauter**
Catalog #: Crystal, S 700

Date: 1978
Work(s): *Prima Sonata di Tromba, Sonata No. 2, Sonata No. 7*
Album: Baroque Masterpieces for Trumpet and Organ—Vol. III
Trumpeter(s): **Edward Tarr**
Catalog #: Nonesuch, H-71356

Date: 1978
Work(s): *Prima Sonata in C, Sonata No. 6*
Album: Old and New Music for Trumpet and Keyboard
Trumpeter(s): **Anthony Plog**
Catalog #: Crystal, S364

Date: 1981-82
Work(s): *Sonata No.8*
Album: Bachtrompete und Orgel
Trumpeter(s): **Dirceu Braz**
Catalog #: RBM, 463 065

Date: 1985
Work(s): *Sonata No.3*
Album: Die Dresdner Hoftrompeten
Trumpeter(s): **Ludwig Gutler**
Catalog #: Capriccio 12 425C

Date: 1986
Work(s): *Sonata No.1 – No.8*
Album: Eight Sonatas for Trumpet and Organ
Trumpeter(s): **Miroslav Kejmar**
Catalog #: Opus, 9111 1515

Date: 1986
Work(s): *L'Imperiale*
Album: Music from the Italian Baroque
Trumpeter(s): **John Wallace**
Catalog #: Nimbus, NI-5079

Date: 1987
Work(s): *Balletto detto il Ghisilieri, Brando detto il Baglioni, Brando ditto it Ruceila, Courrente detta la Schinchinelli, Sonata detta la Renuccini*
Album: Jonathan Impett, The Clarion Ensemble
Trumpeter(s): **Jonathan Impett**
Catalog #: *Catalog Number:* Amon Ra, CD-SAR 30

Date: 1987
Work(s): *Primo Sonata di Tromba, Entrata imperial*
Album: Die Italienische Trompete
Trumpeter(s): **Edward Carroll**
Catalog #: FSM/Pantheon, PD 10 729

Date: 1987, 2005
Work(s): *Balletto detto lo Squilletti, Brando del l'Albizi, Saltarello detto del Naldi, Sonata a due Tromba detta del Gucciardini*
Album: Italian Baroque Trumpet Music
Trumpeter(s): **Stephen Keavy, Crispian Steele-Perkins**
Catalog #: Hyperion, CDA66255
Hyperion: CDH55192

Date: 1988
Work(s): *Fanfara*
Album: Una Stravaganza dei Medici: Intermedi (1589) per "La Pellegrina"
Trumpeter(s): **Michael Laird, Michael Harrison**
Catalog #: EMI Reflexe 47998
Virgin Classics 77877
HMV 5 73863 2

Date: 1988
Work(s): *Prima Imperiale*
Album: Italian Trumpet Spectacular
Trumpeter(s): **John Wallace**
Catalog #: Nimbus, NI-1405

Date: 1989
Work(s): *Sonata Imperiale No.3, Sonata No.5 "Del Niccolini",
Sonata No.8 "detta Del Nero"*
Album: Pistons and Pipes
Trumpeter(s): **Richard Giangiulio**
Catalog #: Crystal Records, CD 666

Date: 1989
Work(s): *Sonata Imperiale No. 1, Sonata Imperiale No. 2*
Album: Festive Mass at the Imperial Court Of Vienna 1648
Trumpeter(s): **Peter Seymour**
Catalog #: Novello, NVLCD105
Novello/Allegro Corporation B000000TR0

Date: 1991
Work(s): *Trumpet Etude Excerpts*
Album: Festival Mass at the Imperial Court of Vienna—1648
Trumpeter(s): **Baroque Brass of London**
Catalog #: Pickwick, PCD 974

Date: 1991
Work(s): *Balletto detto il Lunati, Balletto detti la Squilletti, Brando detto I'Albizi, Corrente
belle Staccoli, Sonata Imperiale I, Sonata Imperiale II, Sonata a due detta del
Gucciardini, Saltarello detto del Naldi, Sonatas No. 1 – 8*
Album: Sonatas for Trumpet and Organ: Toccatas
Trumpeter(s): **Gabriele Cassone**
Catalog #: Nuova Era, 6832

Date: 1992
Work(s): *Sonata No.1, Sonata No.2, Sonata No.3*
Album: Concerti und Sonaten des italienischen Barock.
Trumpeter(s): **Hector Herzig**
Catalog #: Har HM, 1055-2

Date: 1992
Work(s): *Sonata No.1 – 8*
Album: Works for Trumpet and Organ
Trumpeter(s): **Graham Ashton**
Catalog #: Pickwick, PCD 986

Date: 1996
Work(s): *Ricercata no 9 “Detta del Castiglioni”*
Album: Soaring—The Music of Italy
Trumpeter(s): **Thomas Freas**
Catalog #: Clarino, CI-CV101

Date: 1996
Work(s): *Sonata No.1 “detta del Colloredo”*
Album: Edward Carroll: Italian Trumpet—Venetian Renaissance and Italian Baroque
Trumpeter(s): **Edward Carroll**
Catalog #: Vox, CDX-5147

Date: 1997
Work(s): *Five Sonatas a Tromba / a Due Tromba*
Album: 400 Jahre Naturtrompete
Trumpeter(s): **Freidemann Immer**
Catalog #: Balance B000RF0NLO

Date: 1997
Work(s): *Sonata No.3 “Detta del Niccolini, Sonata No.8 “detta del Nero”*
Album: The Art of the Baroque Trumpet Vol. 2
Trumpeter(s): **Niklas Eklund**
Catalog #: Naxos (USA), 8.553593

Date: 1998
Work(s): *Prima entrata imperial*
Album: Nicolas Gombert: A la Incoronation
Trumpeter(s): **Gabriele Cassone**
Catalog #: Bongiovanni 5083

Date: 2001
Work(s): *Sonata Imperiale No.1 "Del Colloredo", Sonata Imperiale No.3 "Del Niccolini", Sonata No.8 "detta Del Nero"*
Album: Windows
Trumpeter(s): **John Wallace**
Catalog #: Wallace Collection

Date: 2003
Work(s): *Sonata detta del Monte, Balletto detto del Velzer, Balletto detto il Luanti, Brando detto il Ruccellai, Balletto detto il Luanti, Saltarello Detto Del Naldi*
Album: Con Voce Festiva
Trumpeter(s): **Thomas Sheibels**
Catalog #: Cavalli 319

Date: 2004
Work(s): *L'imperiale*
Album: Trompetenmusik des italienischen Barock
Trumpeter(s): **John Wallace**
Catalog #: BMG, Aris 880 431-909

Date: 2005
Work(s): *Prima entrata imperiale, Sonata Imperiale II: Intrada, Battalia*
Album: Baroque Battle Music for Trumpet
Trumpeter(s): **Ingino Conforzi**
Catalog #: Arts Music 47666-8 SACD

Date: 2005
Work(s): *Sonata No.2 "Detta del Gucciardini", Sonata No.3 "Detta del Niccolini"*
Album: Italian Baroque Trumpet Music
Trumpeter(s): **Stephen Keavy, Crispian Steele-Perkins**
Catalog #: Helios, CDH55192

Date: 2006
Work(s): *Sonata Detta del Monte, Sonata Detta del Capponi, Sonata Detta del Panicalora*
Album: The Intimate Sonate
Trumpeter(s): **Thom Freas**
Catalog #: Champignon International B000FI999A

Date: 2006
Work(s): *Sonata a due Trombe dette del Ri, Sonata detta del Niccolini, Sonata detta del Nero, Gagliarda a due Trombe detta del Coppoli*
Trumpeter(s): **Bahb Civiletti**
Album: Bahb Und Freunde

Date: 2006
Work(s): *Sonata No.8 “detta del Nero”*
Album: Art & Music: Rembrandt—Music of His Time
Trumpeter(s): **Niklas Eklund**
Catalog #: Naxos (USA) 8.558118

Date: 2008
Work(s): *Sonata No. 4 for Trumpet and Organ - Duet for 2 Trumpets*
Album: Baroque in Blue
Trumpeter(s): **Friedemann Immer, Klaus H. Osterloh Jaroslav Roucek, Thibaud Robinne**
Catalog #: K&K, B00151HYY8

Date: 2009
Work(s): Entrata – imperiale seconda
Album: HAOTAT (Heroic Art Of Trumpet And Timpani)
Trumpeter(s): **Jean-Francois Madeuf, Igino Conforzi, Joel Lahens, Gilles Rapin, Graham Nicholson, Richard Casany, Tranquillo Forza, Andrea Inghisciano**
Catalog #: Tibcinies B007SAKQCW

Date: 2010
Work(s): *Sonata Risposte and Entrata, Balletto detto lo Squilletti*
Album: Creation
Trumpeter(s): **Helen Barsby, Nicholas Emmerson, Gabor Hegyi, Andreas Kalthoff, Sebastian Kroll, Femke Lunter, Wim de Vries, Susan Williams**
Catalog #: Laika 3510266.2

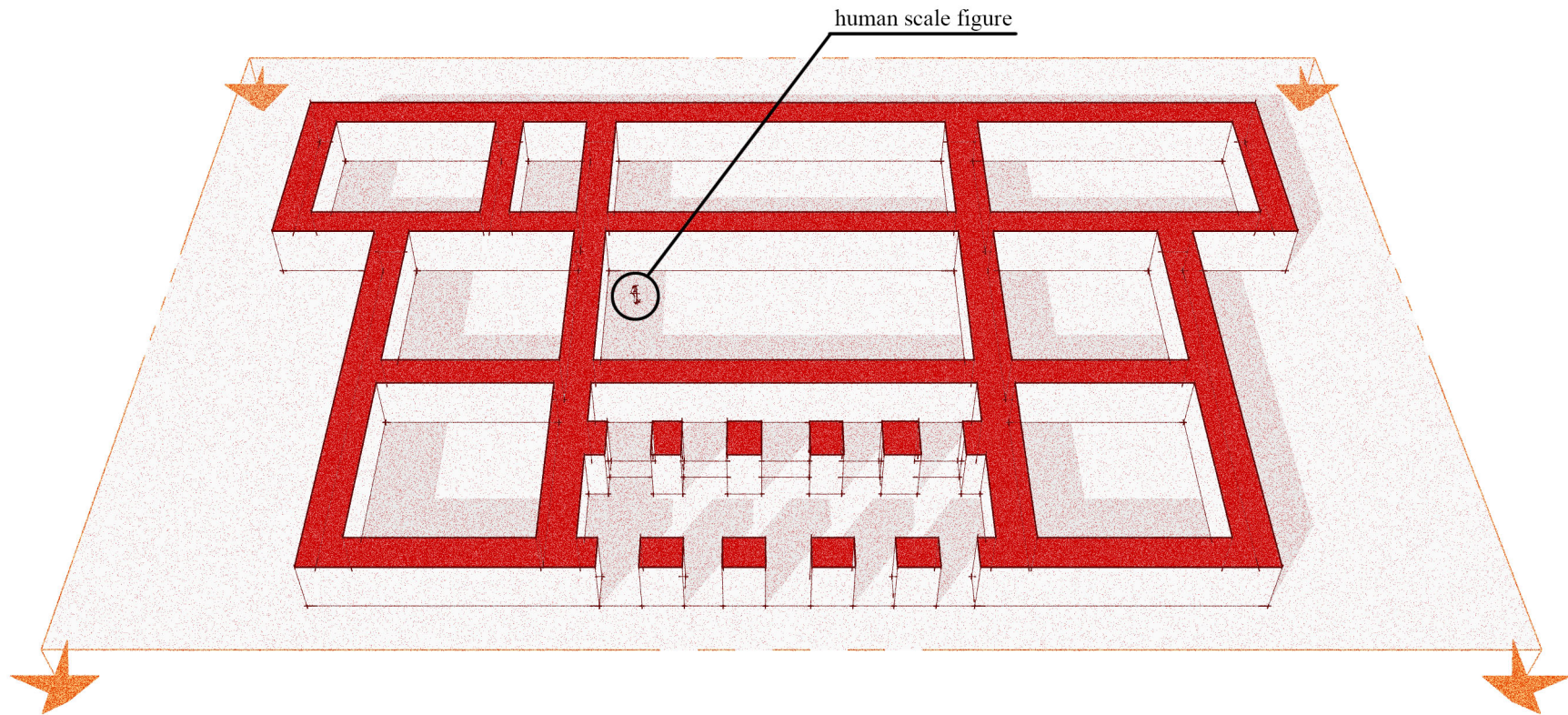
DATES NOT AVAILABLE:

Work(s): *Sonata No.6, Sonata No.8*
Album: Chamber Instrumental Music of the 17th Century; Sonatas and Fantasies
Trumpeter(s): **Georgy Yudashkin**
Catalog #: Melodiya, C10 21983 006

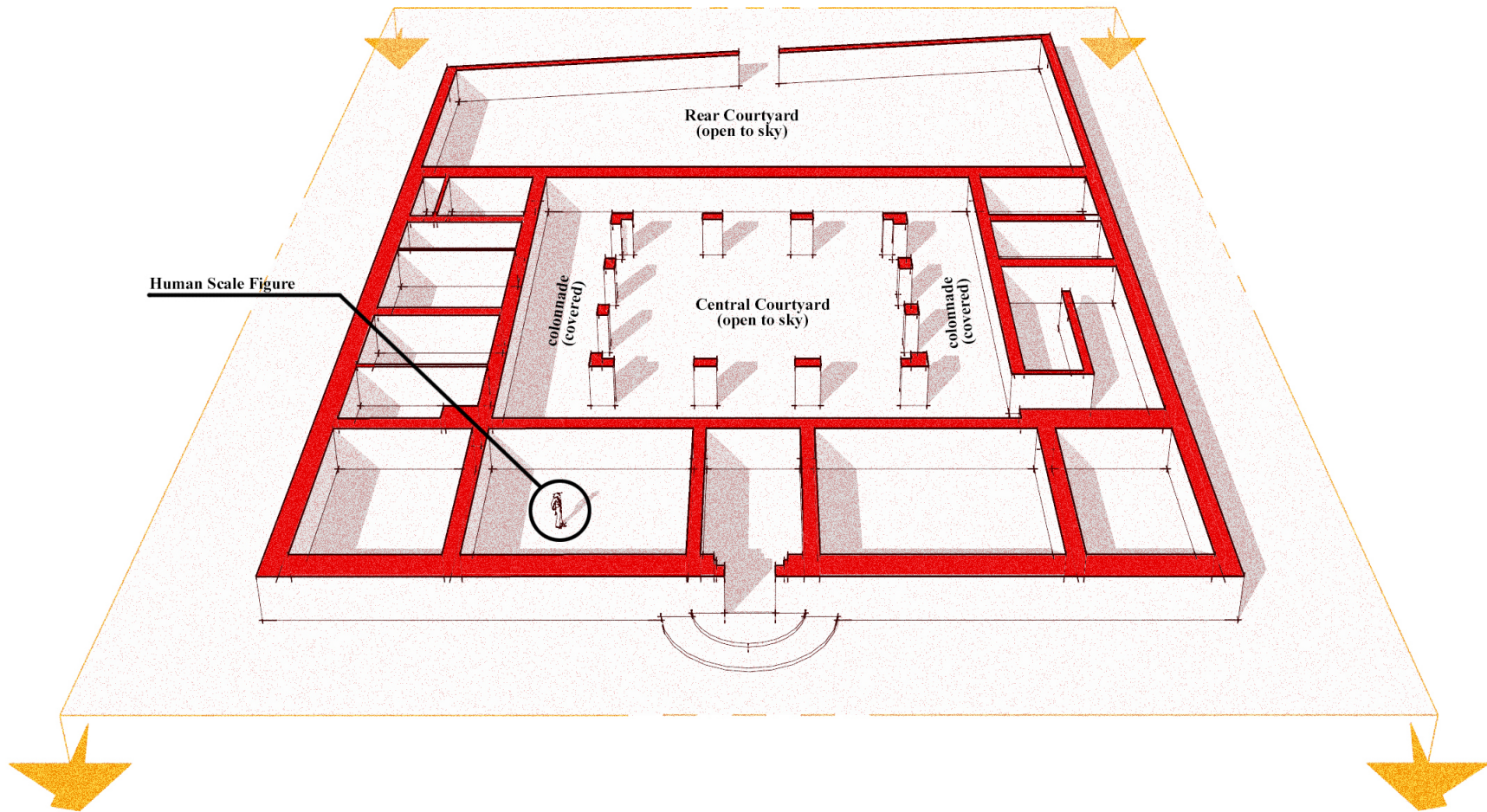
Work(s): *Balletto detto lo Squilletti, Capriccio detto del Carducci, Capric- cio detto del Gondi, Capricci detto il Caleppi, Capriccio detto il Visconti, Corrente detta dello Staccoli, Saltarello detto del Naldi, Sarabanda detto del Zozzi*
Album: Concerto per Tromba e Organo
Trumpeter(s): **Angelo Riggione**
Catalog #: Eco, 595C

Work(s): *Sonata a due Trombe detta del Gucciardini*
Album: The Baroque Trumpet
Trumpeter(s): **Robert Delmotte, Albert Adriano**
Catalog #: Nonesuch, H-71002

APPENDIX B: SECTIONAL FLOOR PLANS OF SIGNIFICANT VILLAS IN ROME

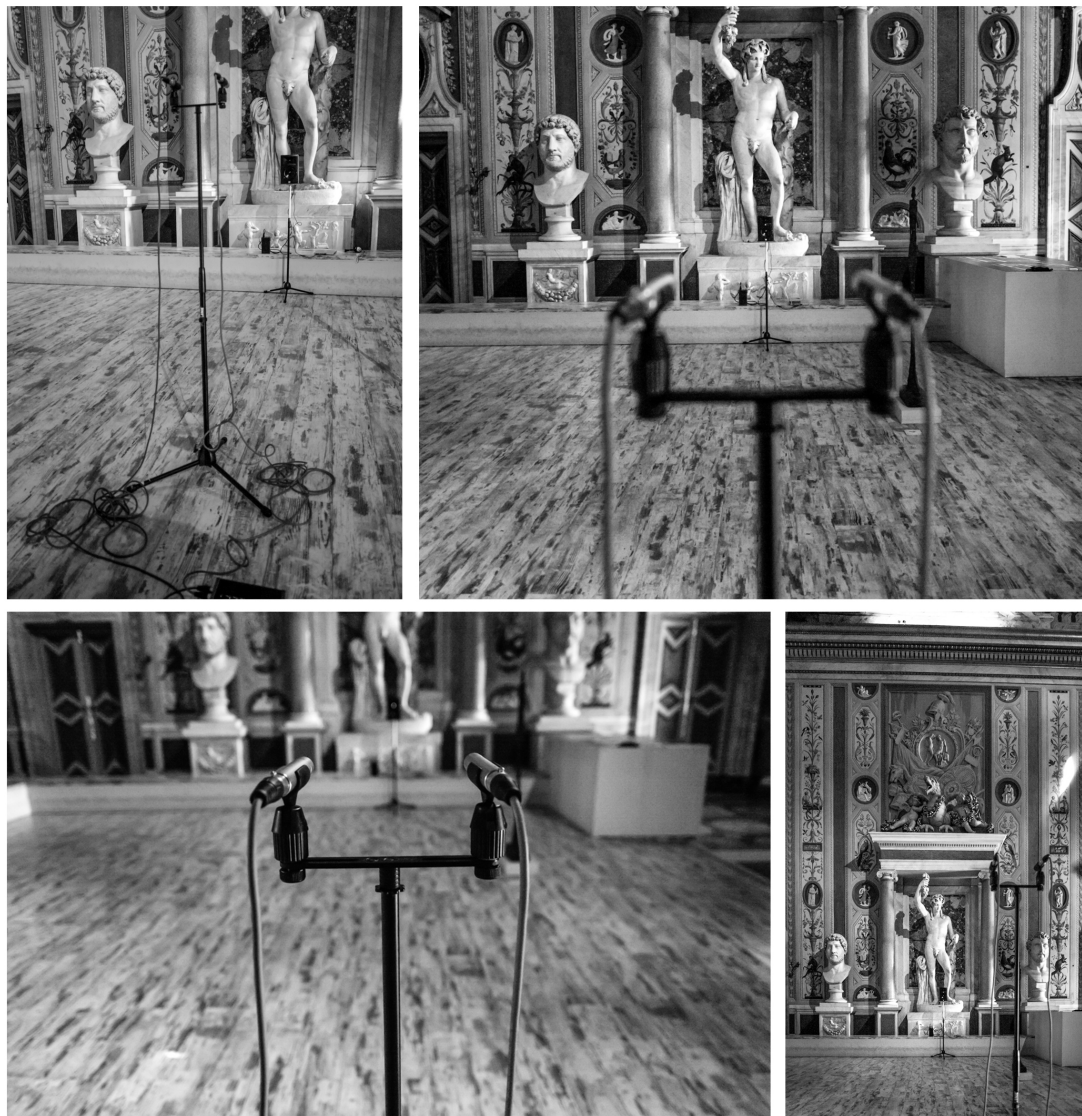


SECTION/FLOORPLAN OF VILLA BORGHESE WITH SCALE FIGURE



SECTION/FLOORPLAN OF PALAZZO TORLONIA (CASTELESSI) WITH SCALE FIGURE

APPENDIX C: PHOTOGRAPHS FROM VILLA BORGHESE RECORDING SESSION, MAY 10th, 2014







APPENDIX D: COPYRIGHT PERMISSION AND RELATED CONTENT



Shelby Lewis <shelby.lewis@gmail.com>

Neapolitan Organ - Photo Permission

2 messages

Shelby Lewis <shelby.lewis@gmail.com>
To: sacredmusic@nd.edu

Mon, Dec 1, 2014 at 10:34 AM

Good morning,

My name is (Mr.) Shelby Lewis and I am an alumnus of the University of Notre Dame (Masters of Music, '97) and former student of Dr. Craig Cramer. I am currently finishing up a Doctor of Musical Arts Degree at the Louisiana State University in Baton Rouge, Louisiana.

My current monograph research deals with Italian music for trumpet and pipe organ from the 17th Century. In my paper I have referenced the small Neapolitan Organ in the Reyes Organ & Choral Hall at the DeBartolo Performing Arts Center.

This photograph http://sacredmusic.nd.edu/assets/113929/fullsize/italian_nd2.jpg embedded in this page <http://sacredmusic.nd.edu/facilities/organs/neapolitan-organ/> at this location would be very helpful if included in my paper.

Might I have permission to use it and, if so, are there any special forms I might need to submit?

It would *only* be included in my DMA Monograph for educational purposes.

Thanks so much for your time and consideration. I look forward to your reply.

Best,
Shelby Lewis
University of Notre Dame '97

--

Shelby Lewis
Professional Trumpeter & Photographer
DMA Candidate in Trumpet Performance
Louisiana State University

Shelby Lewis <shelby.lewis@gmail.com>
To: sacredmusic@nd.edu

Wed, Dec 3, 2014 at 10:13 AM

Forwarding this for your review.

Thanks so much,
Shelby Lewis (Notre Dame, 1997)

----- Forwarded message -----

From: **Shelby Lewis** <shelby.lewis@gmail.com>
Date: Mon, Dec 1, 2014 at 10:34 AM
Subject: Neapolitan Organ - Photo Permission
To: sacredmusic@nd.edu

Good morning,



Shelby Lewis <shelby.lewis@gmail.com>

Howdy

2 messages

Craig Cramer <ccramer@nd.edu>
To: shelby.lewis@gmail.com

Sun, Dec 7, 2014 at 7:38 AM

Hi Shelby--sorry to be so late in reply.

You may of course use the photo. No problem. However, I think there are better photos on Martin Pasi's site. The one on our website is so dark. Will that work? Don't know who took it.

Best and hope you all are well! Let's talk soon.

Best,

Craig

Shelby Lewis <shelby.lewis@gmail.com>
To: Craig Cramer <ccramer@nd.edu>

Sun, Dec 7, 2014 at 11:16 PM

Craig!

Thanks so much for the reply. Martin Pasi, indeed, has some better photos... and I've forwarded a request to him. Thanks for the suggestion.

I was just in NYC last week playing a concert in St. John the Divine with John Thiessen. I stayed at his place while in town. We both spoke fondly of our times with you. He said that the concert in Brooklyn more closely resembled a concert here in Louisiana, with the heat and all (but that it was quite a fun concert).

I hope you're well.

I'm traveling a ton over the next month, but let's catch up in early January if you're able. I've been doing a bunch of research on Italian stuffs, but would really like to hear what you're up to these days.

In about 10 days, I should be "Dr. Lewis".

'bout time.

Best!

Shelby

[Quoted text hidden]

--

Shelby Lewis
Professional Trumpeter & Photographer
DMA Candidate in Trumpet Performance
Louisiana State University



Shelby Lewis <shelby.lewis@gmail.com>

Photo permission

1 message

Shelby Lewis <shelby.lewis@gmail.com>
To: martin@pasiorgans.com

Sun, Dec 7, 2014 at 11:11 PM

Good evening,

My name is (Mr.) Shelby Lewis and I am an alumnus of the University of Notre Dame (Masters of Music, '97) and former student of Dr. Craig Cramer. I am currently finishing up a Doctor of Musical Arts Degree (historic trumpet... and a jazz minor) at Louisiana State University in Baton Rouge, Louisiana.

My current monograph research deals with Italian music for trumpet and pipe organ from the 17th Century. In my paper I have referenced the small Neapolitan Organ in the Reyes Organ & Choral Hall at the DeBartolo Performing Arts Center. There is a photo at the Notre Dame Sacred Music website that I requested, and my request was forwarded to Craig. He suggested that I see if you all have a better photo... and, indeed, you do.

This photograph http://www.pasiorgans.com/italian_pos/fullsize/Italian_facade_B_fs.jpg ... embedded in this page http://www.pasiorgans.com/italian_pos/italian_pos_photos.html ... would be very helpful if included in my paper.

Might I have permission to use it and, if so, are there any special forms I might need to submit? Full credit would be given where due.

It would *only* be included in my DMA Monograph for educational purposes.

Thanks so much for your time and consideration. I look forward to your reply.

Best,
Shelby Lewis

--

Shelby Lewis
Professional Trumpeter & Photographer
DMA Candidate in Trumpet Performance (Jazz and Historic Instruments)
Louisiana State University



Shelby Lewis <shelby.lewis@gmail.com>

P1000658.JPG

2 messages

Martin Pasi <martin@pasiorgans.com>
To: shelby.lewis@gmail.com

Mon, Dec 8, 2014 at 10:38 AM

Hi Shelby.

Thanks for writing about using the photo of the Italian organ. Here is a high res photo of the one you asked for and I will try to find the other one too.

No problem about using these photos. I took the photos in case you are giving credits.

All the best.

Martin

P1000658.JPG

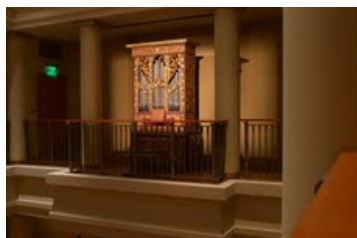
Martin Pasi

Pasi Organ Builders Inc.
32215 8th Ave. South
Roy WA 98580

Phone: [253 843 2914](tel:2538432914)

Mobile: [253 279 8339](tel:2532798339)

www.pasiorgans.com



P1000658.jpg
1005K

Shelby Lewis <shelby.lewis@gmail.com>
To: Martin Pasi <martin@pasiorgans.com>

Tue, Dec 9, 2014 at 11:16 AM

Thank you, Martin, for this. It is truly appreciated. Please let me know if there is anything I can do in return.

Much appreciated!
Shelby

[Quoted text hidden]

--

Shelby Lewis
Professional Trumpeter & Photographer



Shelby Lewis <shelby.lewis@gmail.com>

Van der Heide article

3 messages

Jeffrey Nussbaum <president@historicbrass.org>
To: shelby.lewis@gmail.com

Thu, Dec 4, 2014 at 9:44 AM

Dear Shelby
As far as the HBS is concerned you can use the information but we ask that you cite it in your publication.
However,
technically Geert jan van der Heide owns the copyright on his article so you should consult him directly. If you
can't
find contact information for him by doing a Google search please contact me and I'll look for a contact. Please do
keep
us informed of your research and I hope you might consider submitting an article for possible consideration for the
HBS
Journal.
best wishes
Jeff Nussbaum
President, Historic Brass Society

--

~Jeffrey J. Nussbaum, founder of



Shelby Lewis <shelby.lewis@gmail.com>
To: Jeffrey Nussbaum <president@historicbrass.org>

Tue, Dec 9, 2014 at 11:22 AM

My apologies for the belated reply... it's the traveling season for baroque trumpeters!

Thanks for the information. I'll contact Geert and see what comes of it. I do have some potentially very interesting
information regarding Fantini and Frescobaldi as well as some acoustics research regarding (fuzzy!) details
surrounding their first performance. As soon as I get my paper defended at the end of this semester, I'll send you
some information about my project.

Best,
Shelby
[Quoted text hidden]

--

Shelby Lewis
Professional Trumpeter & Photographer
DMA Candidate in Trumpet Performance
Louisiana State University

Jeffrey Nussbaum <president@historicbrass.org>
To: Shelby Lewis <shelby.lewis@gmail.com>

Tue, Dec 9, 2014 at 12:16 PM



Shelby Lewis <shelby.lewis@gmail.com>

Photo Use (foto gebruik)

2 messages

Shelby Lewis <shelby.lewis@gmail.com>
To: heidevd@wxs.nl

Tue, Dec 9, 2014 at 11:33 AM

Good Morning Mr. van der Heide,

I have recently written a paper for my graduate degree that deals with Italian trumpet and pipe organ music from the early 17th century. In that paper, I reference your reconstruction of the the trumpet by Lissandro Milanese.

On page 50 of your article for the Historic Brass Society journal, there is a photo (Figure 8) of the original trumpet situated next to the reconstruction. I would love to use that photo in my paper.

Might I have permission to use it? Full credit would be given to you and it would be utilized for educational purposes only.

I have attached the page of the article for your reference.

Sincerely,
Shelby Lewis

(dutch from Google Translate)

Goedemorgen heer Van der Heide,


Ik heb onlangs een paper geschreven voor mijn graduaat dat zich bezighoudt met de Italiaanse trompet en pijporgel muziek uit de vroege 17e eeuw. In dat document, ik verwijzen naar uw reconstructie van de trompet door Lissandro Milanese.

Op pagina 50 van uw artikel voor de Historische Brass Society tijdschrift, is er een foto (figuur 8) van de oorspronkelijke trompet gelegen naast de wederopbouw. Ik zou graag die foto in mijn papier te gebruiken.

Zou ik toestemming om het te gebruiken? Volledige krediet zou worden gegeven aan u en het zou worden gebruikt voor educatieve doeleinden.

Ik heb de pagina van het artikel voor uw referentie bevestigd.

Met vriendelijke groet,
Shelby Lewis

 **HBSJ_1996_page_50.pdf**
385K

Geert Jan <heidevd@wxs.nl>
To: Shelby Lewis <shelby.lewis@gmail.com>

Tue, Dec 9, 2014 at 12:15 PM

Dear Shelby,

Thanks for your mail and the question to get permission to use the picture I made.
That is completely OK with me. I hope it will help you.

I appreciate you to being so correct!

Wish you a lot of succes and to get a copy.....

Geert Jan van der Heide

From: [Shelby Lewis](#)

Sent: Tuesday, December 09, 2014 6:33 PM

To: heidevd@wxs.nl

Subject: Photo Use (foto gebruik)

[Quoted text hidden]



Shelby Lewis <shelby.lewis@gmail.com>

Image Licensing for Educational Use (Monograph)

2 messages

Shelby Lewis <shelby.lewis@gmail.com>
To: is-crc@ed.ac.uk

Wed, Dec 3, 2014 at 6:47 PM

Good morning,

My name is (Mr.) Shelby Lewis and I am currently finishing up a Doctor of Musical Arts Degree at the Louisiana State University in Baton Rouge, Louisiana, USA.

My current monograph research deals with Italian music for trumpet and pipe organ from the early 17th Century. In my paper, I would like to reference the Hofmaster 1760 trumpet in your collection as an example of a much later baroque instrument (in comparison with the earlier instruments my paper references)

This photograph <http://collections.ed.ac.uk/mimed/record/17823/7/0034742c-0008.jpg> linked to in this page <http://collections.ed.ac.uk/mimed/record/17823?highlight=trumpet+1760> would be very helpful if included in my paper.

Might I have permission to use it and, if so, are there any special forms I might need to submit?

It would *only* be included in my DMA Monograph for educational purposes.

Thanks so much for your time and consideration. I look forward to your reply.

Best,
Shelby Lewis

--

Shelby Lewis
Professional Trumpeter & Photographer
DMA Candidate in Trumpet Performance
Louisiana State University

MARTIN Darryl <Darryl.Martin@ed.ac.uk>
To: "shelby.lewis@gmail.com" <shelby.lewis@gmail.com>

Wed, Dec 17, 2014 at 9:34 AM

Dear Mr Lewis,

My apologies for the delay in replying to this email.

Yes, you may use the image in your thesis as you request. There is no fee or other requirement, but we would request that you caption the image with a copyright note to the "University of Edinburgh".

Best wishes,

Darryl Martin

VITA

Shelby Lewis is currently pursuing the Doctor of Musical Arts degree at Louisiana State University, Baton Rouge, and will be graduating in May, 2015. His emphasis is in trumpet performance, with an minor in Jazz Studies. During his tenure as a student at LSU, Shelby served as teaching assistant to Dr. Brian Shaw 2010-2013. As teaching assistant, he also acted as director of the LSU Jazz Lab Band: a 21 piece Jazz Ensemble from 2011 to 2013. Shelby holds the Master of Music degree from the University of Notre Dame (1997) where he studied with the Chicago Symphony trumpet section member William Scarlett. While there, he also studied applied pipe organ and pipe organ literature with Dr. Craig Cramer. He also holds a Masters of Architecture Degree from Louisiana State University (2005) where he was awarded the LSU Dean's Medal, the Charles Adam A.I.A Award, and departmental awards in Architectural History and Design. In 1994, he graduated with his Bachelor of Music degree from Tennessee Technological University where he studied with Dr. Charles Decker (Trumpet) and Professor Chris McCormick (Jazz).

From 2010 to present, Shelby has pushed forward with an express goal to work, consistently and successfully, not only as a modern classical and jazz trumpeter but also as a baroque/natural trumpeter within the field of early music. He has had engagements with Music City Baroque (Nashville), The Houston Bach Society, Chatham Baroque (Pittsburgh), Saint Cecelia's Baroque Orchestra (Austin), Atlanta Baroque, La Follia Austin Baroque, The American Bach Soloists Festival Orchestra, Early Music New York, and the Boston Early Music Festival. An unashamed generalist and autodidact, Shelby also performs and teaches actively "on

the bayou”, in Baton Rouge and New Orleans, as a classical, jazz, and commercial trumpeter; and has begun making plans to build historic trumpets, mutes, and mouthpieces this coming spring. Finally, Shelby is at the front end of a long-term study of historic performing conditions for trumpet and pipe organ; a study that aims to fully utilize, in tandem, his musical and architectural training. He now resides in Baton Rouge with his wife Alicia, his children Simon, Tabitha and Ian, and two cats, Molly and Chester.