

'This Charming Invention Created by the King'

Christian IV and his invisible music

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Even for a Renaissance monarch, King Christian IV had an exceptionally wide range of interests. He was one of Europe's most significant patrons of the arts, drawing renowned musicians, painters, and sculptors to his court. He was also highly interested in science, architecture, engineering, and trading, and invested in the infrastructure of his kingdom on a hitherto unprecedented scale. He founded new towns, trading companies and colonies, established manufactures, and mining in Norway, and pursued prestigious building projects, including representative buildings in Copenhagen and the castles of Rosenborg and Frederiksborg.¹ The remarkably wide range of his interests and activities stems from the range of skills he learned during his education at the court of his father, Frederick II.² His expertise was noted and admired by many of his contemporaries, for example by the German nobleman Heinrich Reuss who attended the king's coronation in 1596. Reuss reported that the king not only was a good musician, able to play various wind and string instruments, but also a good horseman, excelling in knightly games, 'a fully trained sailor, [also] excelling in fortification, in the art of painting, in short – in all distinguished arts'.³

His comprehensive education and training enabled Christian IV to supervise and control a variety of aspects, with regard to both courtly and state affairs. The Gottorf court official Gosche Wensin, who frequently visited the Danish court, noted in his diary: 'The king looks after everything, be it of small or high importance, knows everything, orders and supervises everything, even in regard to household management'.⁴

1 Jørgen Hein, *The Treasure Collection at Rosenborg Castle I. The Inventories of 1696 and 1718. Royal Heritage and Collecting in Denmark-Norway 1500–1900* (Copenhagen, 2009), 6.

2 See, for instance, Steffen Heiberg (ed.), *Christian IV and Europe. The 19th Art Exhibition of the Council of Europe, Denmark 1988* (Copenhagen, 1988), 262–67.

3 Original text: 'Sonst haben sie [= die königliche Majestät] uff vielen Instrumenten sich geübt als ein guter Trompeter, ein horniste, instrumentist uff der zincken, geigen, posau, und was nur müglich einem grossen herrn zu lernen, auch ein guter reitter, in ritterspielen excellirt, ein auslernnd schiffmann, in der fortification und malerkünsten und in summa in allen vornemen sachen haben i[hro] k[önigliche] mai[estät] zu der zeit excellirt'; author's transl., quot. Ole Kongsted, 'Christian IV. und seine europäische Musikerschaft', in Robert Bohn (ed.), *Europa in Scandinavia. Kulturelle und soziale Dialoge in der frühen Neuzeit* (Frankfurt a.M., 1994), 117.

4 Anders Andersen (ed.), *Jacob Fabricius den Yngres Optegnelser 1617–1644*, ([Tønder], 1964), 9: 'Rex ad omnia attendit [the King looks after everything]; ist nichts so gross oder klein, scit omnia [knows everything], bestellet und ordnet alles, etiam in oeconomicis [also in regard to household management]'; author's transl.

This seemingly archaic trait of his governmental style⁵ is, for instance, evident in the planning and execution of the lavish festivities of the so called ‘Great Wedding’ of 1634, about which a contemporary eyewitness reports: ‘otherwise His Majesty has written down and drawn up everything that was supposed to happen, small and great, with his own hand, and has personally given orders on everything that was supposed to be carried out.’⁶

Christian IV’s wide ranging interests and knowledge in the arts, in technology, and in other fields were clearly not ends in themselves, but tools to create and maintain control and power. The arts not only served as a means of royal propaganda,⁷ but also set the royal power ‘apart from the nobility by means not only of overwhelming splendour but also by certain new cultural forms, which in Denmark became the cultural monopoly of the court, [for instance, by] Renaissance (Manierist) architecture, silver furniture, court ballets and music at an international level.’⁸

Like many monarchs of his time, Christian IV used his expertise in the arts to create by their aid, to quote Jörg Jochen Berns, ‘a media-strategic system for the creation and maintenance of princely-courtly representation and pretension to power.’⁹ Court ceremonial was a particularly important ‘stage’ for the display of these strategic tools that he had assembled and that he commanded in front of an ‘audience’ of both foreign visitors and local nobility. Since, ‘according to early modern conceptions, every earthly ceremony is the realization of a heavenly ceremonial order that has descended to earth’, and since ‘every earthly ceremony has to be realized by means of all five senses’,¹⁰ music *had* to be represented in court ceremonial – mostly in connection with arts representing other senses, often creating a synesthetic experience.

Soon after his coronation in 1596, Christian IV established an impressive *Hofmusik*, comprising musicians of European fame, such as the English lutenist John Dowland (?1563–1626) and the English string players William Brade (?1560–1630) and Thomas Simpson (1582–?1628). The king used his *Hofmusik* as an acoustic ‘instrument of power’, both at home and when he was travelling abroad. But how and where was this outstanding ‘instrument’ actually ‘set in scene’ in ceremonial

5 On the term ‘hausväterlicher Hof’ (house-fatherly court) in early modern Europe, see Volker Bauer, *Die höfische Gesellschaft in Deutschland von der Mitte des 17. bis zum Ausgang des 18. Jahrhunderts. Versuch einer Typologie* (Tübingen, 1993).

6 Christian Cassius, *Relation von dem hochfürstlichen Beylager* (Hamburg, 1635): ‘Sonsten haben Ihr Maytt. alles was fürgehen sollte / klein vnd groß mit selbst eigener Hand verzeichnet vnd auffgesetzt; in eigener Persohn zu allem was sollte fürgenommen werden / ordre außgetheilet’; author’s transl., quot. Dieter Lohmeier, ‘Das Kopenhagener Große Beilager 1634. Politischer Anspruch, Repräsentation und höfisches Fest’, in Bohn (ed.), *Europa in Scandinavia*, 114.

7 Jørgen Hein, ‘Collecting in Prague and Copenhagen’, in Lubomír Konečný (ed.), *Rudolf II, Prague and the World* (Prague, 1998), 121.

8 Sebastian Olden-Jørgensen, ‘State Ceremonial, Court Culture and Political Power in Early Modern Denmark, 1536–1746’, *Scandinavian Journal of History*, 27 (2002), 70.

9 Jörg Jochen Berns, ‘Instrumental Sound and Ruling Spaces of Resonance in the Early Modern Period: On the Acoustic Setting of the Princely *potestas* Claims within a Ceremonial Frame’, in Helmar Schramm, Ludger Schwarte, and Jan Lazardzig (eds.), *Instruments in Art and Science: On the Architectonics of Cultural Boundaries in the 17th Century* (Berlin and New York, 2008), 479.

10 Ibid. 480.

situations, how was it used? 'What spatialities [were] opened by what sound instruments, or more precisely, what spatial types [were] made and served by what sound sources?'¹¹ Moreover, when and how was it used in connection with other 'media' such as visual arts, dining, and dancing? The spatial dimension of early modern court music, more specifically the use of both spaces and technology in performance situations, as well as the combination with other arts to create synesthetic effects in particular spaces, is a hitherto under-explored field of historical musicology. The Danish court music of Christian IV and the innovative ways of its spatial use in the context of court ceremonial can offer a particularly instructive case study in this field.

Regarding space, the uses of court music seem to fall between the two extremes of 'exposing' and 'hiding', of 'presence' and 'absence'. The physical presence of court musicians in ceremonial contexts is well known and is generally seen as the 'normal' case in their performance routine. Musicians performed in musicians' galleries or on the floor during banquets or balls. In special cases they were publicly displayed as precious 'objects', for instance at the coronation festivities of Christian IV when they acted as lavishly dressed allegorical figures and played silver wind instruments.¹² This has a parallel in the use of musicians in the sixteenth-century intermedi and early opera, where instrumentalists 'appeared on stage and in character', for instance in the intermedi performed in Florence in 1589.¹³

However, apart from the visual display of musicians there was another, perhaps even more spectacular, form of use: in certain situations the Danish king kept his court musicians from view so that their music appeared as an acoustic miracle to visitors. The invisible music of Christian IV has been known to scholars, mainly art historians, for some time;¹⁴ it has quite recently been brought to the attention of a more general audience by the British writer Rose Tremain in her novel *Music and Silence*.¹⁵ She very evocatively describes a group of freezing court instrumentalists, performing in an unheated wine cellar of Rosenborg castle for Christian IV, who has breakfast in the Winter Room above and listens to the invisible music reaching him by sound channels. Since the publication of the novel, new evidence for sound conduits connecting the wine cellar with the Winter Room has come to light, documented by the curator of the royal collections in Rosenborg, Jørgen Hein.¹⁶ Hein has also discovered and made accessible hitherto unknown travel accounts that document the use of invisible music in buildings of Christian IV.¹⁷ Both discoveries shed new light on where and how the invisible music was used at his court. It is my aim in this article to describe what is currently known about the places of

11 Ibid.

12 Augustus Erich, *Außführliche vnd warhafftige Beschreibung Des Durchlauchtigsten... Herrn Christians / des Vierdaten ...den 29. Augusti Anno 1596 glücklich geschehenen Königlichen Krönung* (Copenhagen, 1597), sig. T^r.

13 John Spitzer and Neal Zaslaw, *The Birth of the Orchestra: History of an Institution, 1650–1815* (Oxford and New York, 2004), 39.

14 See, for instance, Vilhelm Wanscher, *Rosenborgs Historie 1606–1934* (Copenhagen, 1930), 62.

15 Rose Tremain, *Music and Silence* (New York, 2001), 28–30.

16 Hein, *The Treasure Collection at Rosenborg Castle*, 44.

17 Ibid. 140–45.

invisible music at the court of Christian IV, to compare his invisible music and the contexts of its uses in Denmark to two parallel cases in northern Europe (Dresden and Stuttgart), and to discuss possible functions and meanings of this phenomenon and its technology.

According to the current state of research, invisible music could be heard in three different royal buildings in Denmark: in the garden house Sparepenge that was located in the Frederiksborg castle park, built between 1599 and 1601;¹⁸ in Rosenborg Castle, built in several stages between 1606 and 1634;¹⁹ and in the Golden Summerhouse, a small octagonal structure built in 1619, located on the north-western side of the castle islet, very close to Rosenborg castle.²⁰ Sparepenge and the Golden Summerhouse were eventually demolished in later times,²¹ but many details regarding the construction and function of these two buildings can be ascertained from a number of travel accounts dating from the seventeenth century.²²

Sparepenge was one of the first representative building projects that Christian IV carried out after his coronation in 1596. It was an Italianate summerhouse comprising two storeys, a vaulted cellar and a flat roof, built to house the first mixed collection of the Danish royal family.²³ This collection was essentially 'an armoury that combined dress weapons and technical novelties and objects of ethnographic interest'.²⁴ The inspiration for the design and purpose of Sparepenge very likely came from Dresden, which Christian IV had visited incognito in 1597.²⁵ On the city ramparts of the Jungfernbastei, the present-day Brühlsche Terrasse, a summerhouse (Belvedere) of similar shape as Sparepenge was begun in 1589²⁶ (see Ill. 1). Its architect was the Italian Giovanni Maria Nosseni (1544–1620), a multi-faceted artist and art organizer who had been first employed at the Saxon court in 1575 and had expertise as a 'sculptor, stone-carver, painter, designer of court festivities' and even as a historian and poet.²⁷ The breadth of his activities and interests resembles those of other Renaissance architects, such as Bernardo Buontalenti (?1531–1608), who served the Medici Court in Florence during most of his life, and who most likely represented a professional model for Nosseni.²⁸ Nosseni and Christian IV must have been in contact in or before 1596, since the Italian designed an invention for

18 Ibid. 32–34.

19 Ibid. 46; see also Jørgen Hein and Peter Kristiansen, *Rosenborg Castle. A Guide to the Danish Royal Collections* (Copenhagen, 2005), 5–6.

20 Hein, *The Treasure Collection at Rosenborg Castle*, 146, 148.

21 Sparepenge was eventually demolished in 1720, see *ibid.* 32.

22 Documented *ibid.* 140–45.

23 Ibid. 32.

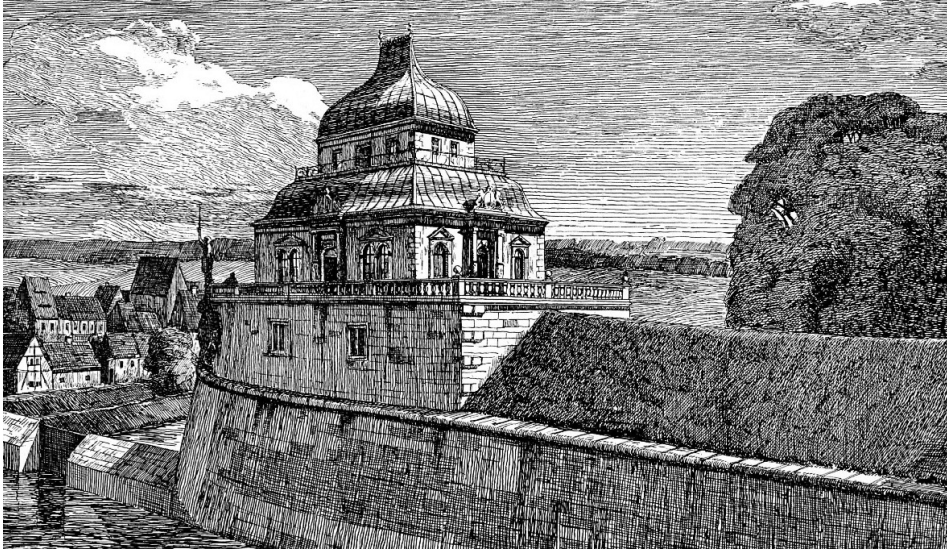
24 Ibid. 34.

25 Ibid. 14.

26 Helen Watanabe-O'Kelly, *Court Culture in Dresden. From Renaissance to Baroque* (Basingstoke and New York, 2002), 65.

27 Ibid., 42. See also Walter Mackowsky, *Giovanni Maria Nosseni und die Renaissance in Sachsen* (Berlin, 1904), 106–8.

28 Barbara Marx, 'Giovanni Maria Nosseni als Vermittler italienischer Sammlungskonventionen und ästhetischen Normen am Dresdner Hof', in Sibylle Ebert-Schifferer, *Scambio culturale con il nemico religioso: Italia e Sassonia attorno al 1600* (Milan, 2007), 105.



Ill. 1. The Dresden Belvedere, after a painting by Friedrich Hagedorn in the Stadtmuseum Dresden (Mackowsky, *Giovanni Maria Nosseni*, 78).

the running-at-the-ring at the king's coronation festivities,²⁹ and was also present during these festivities as a member of the entourage of Margrave Christian Wilhelm of Brandenburg, for whom he had designed this invention.³⁰

It is very likely that Nosseni was the architect of Sparepenge. This is not only suggested by the similarity of its layout to the Dresden Belvedere as well as Nosseni's connection to the Danish court, but also by the fact that Nosseni produced art work for Sparepenge such as 'a doorframe of Saxon serpentine'³¹ as well as Corinthian capitals.³² It is therefore very likely that Nosseni was also responsible for installing sound conduits for invisible music in Sparepenge, since they were also installed in the Dresden summerhouse (see below).

In 1623, Prince Christian II of Anhalt-Bernburg (1599–1658) visited Rosenborg and Sparepenge on his travels to northern Germany and Denmark. Christian of Anhalt had participated in the Battle of the White Mountain in 1620 on the Prot-

²⁹ Mara Wade, *Triumphus Nuptialis Danicus. German Court Culture and Denmark. The "Great Wedding" of 1634* (Wiesbaden, 1996), 45–46.

³⁰ Mackowsky, *Giovanni Maria Nosseni*, 94. It seems significant that Christian IV used a 'mobile' invisible music in his pageant at the *Huldigung* festivities in Hamburg in 1603; he placed his court instrumentalists underneath his chariot and covered them under a silver cloth. On this chariot he posed as 'sun king'. See Arne Spohr, 'How chances it they travel?' *Englische Musiker in Dänemark und Norddeutschland* (Wiesbaden, 2009), 259. It seems possible that Georg Engelhart Löhneysen, a court equerry and festival designer employed at the courts in Dresden and Wolfenbüttel, had learned this idea from Nosseni.

³¹ Hein, *The Treasure Collection at Rosenborg Castle*, 34. See also: Copenhagen, Rigsarkivet, Regnskaber 1559–1560. Bygningsregnskaber. 1596–1646 Bygningsregnskaber, Beholdningerne af marmor 1600.

³² Meir Stein, *Christian den Fjerdes billedverden* (Copenhagen, 1987), 83.

estant side, had been imprisoned by imperial troops, but had eventually been freed in 1621. He 'presumably acted as imperial informer during his visit to Denmark',³³ which would explain his very detailed accounts of Christian IV's buildings. His travel diaries³⁴ are important political and cultural documents of his time, recording a multitude of aspects, including art and music. His record of Sparepenge, for instance, allows us to reconstruct the organization of the building as well as that of the royal collection, which was on exhibit there:

The Prince's visit falls into three parts. He starts in the armoury, which was arranged in several rooms and encompassed firearms and blank weapons as well as saddlery... After the armoury the Prince saw the dining room, which had ceiling paintings, a buffet boasting 120 cups that Christian IV had won in tilting at the ring and a model of a mine.³⁵

Finally, Christian of Anhalt visited the musicians's room ('Musikantenstube'), about which he notes:

I saw the place in the musicians's room where the musicians make a sound for the king when he is in his room above. The sound reaches him through lions' heads that are placed above, so that the musicians and the trumpeters can play music invisibly. Moreover, there is a little trap door under the king's table which allows, whenever the king opens it by his foot, the music underneath to be heard, so that a foreign visitor does not know where it comes from.³⁶

Tubes in the walls and ceiling transmitted the sound of the court ensemble from the musicians's room to the banquet room situated above, where the king dined, and where his model of a mine and his cups were on display for guests. When someone visited the royal collection in Sparepenge, he not only experienced visual splendour, but also heard a miraculous sound coming from out of sight. Besides Christian of Anhalt's travel diary, there are more travel accounts dating from the 1630s to the 1660s describing technical provisions for invisible music. However, they do not refer to Sparepenge, but to Rosenborg castle and the neighbouring Golden Summerhouse. Charles Ogier, the author of one of these accounts, was a French diplomat who had been sent to Denmark as an envoy to the wedding of the Prince Elect and the Saxonian princess Magdalena Sibylla in 1634.³⁷ While the authors of the other travel accounts describe only the technical provisions for the invisible music, Ogier describes his aural impressions of it.

33 Hein, *The Treasure Collection at Rosenborg Castle*, 141.

34 Modern edition: Gottlieb Krause (ed.), *Tagebuch Christians des Jüngerer, Fürst zu Anhalt* (Leipzig, 1858).

35 Hein, *The Treasure Collection at Rosenborg Castle*, 34.

36 See Krause, *Tagebuch*, 101. German original: 'In der Musikantenstube den Ort gesehen, da die Musicanten dem König droben, durch Löwenköpfe die droben stehen, einen Ton geben, und unsichtbarer weise Musiciren können, wie auch die Trommeter. So hatt es auch unter des Königs Tisch ein Thürlein, welches, wann es der König mit dem Fuss eröffnet, kann man auch die Musica so drunten ist hören, und ein frembder nicht wissen wo sie her kompt'; author's transl.

37 See Wade, *Triumphus Nuptialis Danicus*, 157–278.

When Christian IV received Ogier in Rosenborg, he first led his guest 'to a small pavilion with windows on all sides, in which on one stone table there lay some sweetmeats, which the King offered him'.³⁸ Hein has identified this small pavilion as the Golden Summerhouse. After visiting the pavilion the king took Ogier, according to his report, 'to a square antechamber adorned by paintings, beneath which he was accustomed to placing his musicians'.³⁹ According to Ogier, the invisible music suddenly started at that very moment when the king and he were standing in the very centre of this room:

All the musicians, both instrumentalists and singers, [began] to play music in which they harmonised with each other, which sudden delight we experienced with amazement, as the sounds reached our ears through various vents, as though they were sometimes closer, sometimes more distant. In the meantime the French ambassador with delight praised this charming invention created by the King, and we tried to communicate this [our amazement] to the King by our looks. When we had come outside and were sitting in the carriage in the actual gatehouse, we could still for a long time distinguish that subterranean and invisible, but not unpleasant music, which presumably was played at the behest of the King.⁴⁰

It should be noted that the context of Ogier's visit to Rosenborg is entirely different from Christian of Anhalt's visit to Sparepenge. While the latter informally toured through the building, possibly led by a local court official, Ogier had the favour of being personally guided by the king, and experienced the invisible music as part of a ceremonial situation.

The actual location of the 'square antechamber' in which Ogier heard the invisible music has been disputed by scholars. H.C. Bering Liisberg located the music in the 'round summerhouse in Krumspringet to the south-west of the islet',⁴¹ whereas Vilhelm Wanscher placed Ogier's experience of the invisible music in the so-called Winter Room on the ground floor of Rosenborg Castle.⁴² Wanscher's theory is supported by newly found evidence: During recent restoration work of the castle cellar, three sound conduits were discovered that connect the Winter Room with the cellar room directly underneath, 'running from the vaulting in the castle cellars to the floor in the Winter Room',⁴³ where they emerge in three places, originally hidden by armchairs (see Ill. 2). A fourth sound conduit discovered in a cellar wall seems to have led to the Golden Summerhouse, which was technically possible due to its close proximity. Thus it was possible to hear the invisible music both in the Winter Room in Rosenborg and the Golden Summerhouse.

A travel account recently discovered by Hein supports this new evidence. The lawyer Heinrich Meyer, a member of Bremen City Council, visited both Rosenborg

38 English transl. from the Latin original, Hein, *The Treasure Collection at Rosenborg Castle*, 141.

39 Ibid. 141.

40 English transl., *ibid.*; transl. of the second sentence by author.

41 Ibid. 149.

42 Ibid. 149–50.

43 Ibid. 44.



Ill. 2. Sound conduit in Rosenborg Castle. Picture reproduced by kind permission of Jørgen Hein and Rosenborg Castle.

and Sparepenge in 1642. While he does not mention any provisions for invisible music in Sparepenge, this phenomenon clearly caught his attention in Rosenborg and the Golden Summerhouse, along with a number of works of art and technical devices. In the Winter Room, Meyer notices an oven capable of bearing very high heat, as well as a device through which the king could raise and lower the draw-bridge near the castle.⁴⁴ He also reports: ‘By the table of His Majesty there was a small, covered hole, through which, by means of a channel, one could speak to someone at the door, even though people who are in this room cannot hear it.’⁴⁵ In the same room there was a very similar device for invisible music: ‘In both corners there are two hollow armchairs, through which the music coming from the vaults downstairs sounds, whenever His Majesty wants to entertain in the chamber.’⁴⁶ Moreover, Meyer’s travel account demonstrates that the Golden Summerhouse had the same device, transmitting music through sound channels from the cellar vaults of the castle. In this summerhouse the sound of the invisible music came out of an

⁴⁴ Ibid. 142.

⁴⁵ Ibid. English transl. of this quotation and the two following ones by the author. German original: ‘Bey I. K. Mtt. Tisch war / ein klein Loch, drin per Canalem, so / Verdeckt, man mit jemandt an der / thür reden könnte / ob schon die mit im / Gemach sein, nichts davon verstehen’.

⁴⁶ Ibid.: ‘An beiden ecken seindt zwo durch= / gehölete Sessel drauff / drauss wan I. K. / Mtt. erlustigen wollen im Gemach / die Musica auss dem Gewölbe drunten erklin= / get’.

opening in the floor that was situated underneath a table'.⁴⁷ Meyer's statements are supported by a later travel account, Nils Rubinus's diary from 1662.⁴⁸

The invisible music, however, seems to eventually have fallen out of use soon afterwards:

After 1668 the travel accounts have no more to say about summerhouses containing music conduits. In 1681, the Wine Cellar was fitted out as State Archives and could no longer be used by the King's Musicians. The sound conduits thus lost their original function, and the Golden Summerhouse disappeared.⁴⁹

Ogier mentions paintings in the 'square antechamber', which he saw while he was hearing the invisible music. Even though he mentions them *en passant*, without specifying their subjects, character and function, it is clear that paintings were, together with the invisible music, part of a larger, multi-media concept, a concept that resembles the arrangement found in Sparepenge. There are two paintings still extant, associated with the Danish court and having musical themes, dating from the 1620s. They have attracted a considerable interest of art historians and music historians.⁵⁰ However, these paintings have to this date hardly been evaluated in their original function, namely to 'visualize the hidden music';⁵¹ that could be heard in the same room in which they were exhibited. One of them is the illusionist ceiling painting that today covers the ceiling of the southern gable room (also known as the Queen's Room) in Rosenborg Castle (see Ill. 3). As the art historian Meir Stein suggests, it may have been painted by the Danish artist Søren Kiær around 1620, although it has also been attributed to the German painter Francis Clein.⁵² It shows musicians playing from a gallery in illusionistic perspective, a heavenly ensemble that might at the same time show real members of the Danish *Hofkapelle* active in the 1620s.⁵³ The other painting, signed by Reinhold Timm (Thim) and dated ca. 1623, shows four lavishly dressed court musicians (see Ill. 4), in the foreground a harpist, most likely Darby Scott (Skott), who had been recruited in Britain in 1621, and a viol player, possibly the Englishman Thomas Simpson who was employed at the Danish court between 1622 and 1625. There are two more musicians in the background, a lutenist, and a flautist. It seems likely that these four musicians formed a standing ensemble that specialized in repertoire from the British Isles.⁵⁴

47 Ibid.: 'Uffgerichtet ist auch daselbsten / ein rundes Lusthaus übergüldet / untern Tisch ist ein durchgebrochen Loch, / daselbsten per canalem der Musichlen kan / hingeleitet werden, aussem Schloss, wie / wohl die Musici weith von dannen auch / nicht gesehen werden können'.

48 Ibid. 143.

49 Ibid. 150.

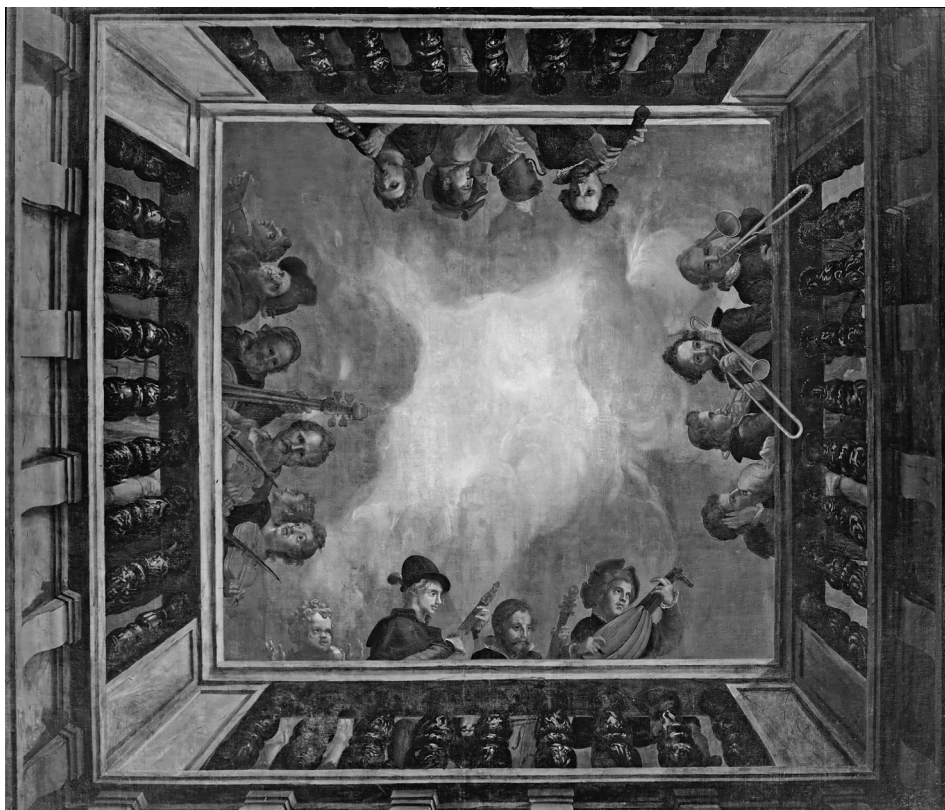
50 See, for instance, Meir Stein's seminal article on the ceiling painting: 'A Ceiling Painting at Rosenborg Palace and Its Prototype', in Joan Römelingh (ed.), *Art in Denmark 1600–1650* (Leids Kunsthistorisch Jaarboek, 1983, 2; Leiden, 1984), 127–36.

51 Hein, *The Treasure Collection of Rosenborg Castle*, 151.

52 Ibid.

53 Stein, 'A Ceiling Painting', 133. See also Spohr, 'How chances it they travel?', 209, 219–20.

54 Ole Kongsted, 'Christian IV and Music', in Steffen Heiberg (ed.), *Christian IV and Europe. The 19th Art Exhibition of the Council of Europe* (Copenhagen, 1988), 121–43. See also Spohr, 'How chances it they travel?', 173, 222–23; and Peter Holman, 'The Harp in Stuart England. New Light on William Lawes's Harp Consorts', *Early Music*, 15 (1987), 188–203.



Ill. 3. Francis Clein or Søren Kiær, 'Christian IV's Court Musicians' (detail of ceiling painting), Rosenborg Castle *c.*1620. Reproduced by kind permission of Jørgen Hein and Rosenborg Castle.

The history of the display and use of both paintings can be partially reconstructed. The ceiling painting 'was hung in the southern gable room in the ground floor ... during Frederick's conversions of Rosenborg 1705–9 ... , when the ceiling paintings from Christian IV's audience chamber ... were moved to the Winter Room'.⁵⁵ Hein suspects that 'Clein's ceiling painting might originally have derived from [either] the Golden Summerhouse or the Winter Room'.⁵⁶ According to an inventory, in 1718 Timm's painting of the four musicians 'hung above the fireplace in the bottom room in the Summerhouse with the Four Knobs', another summerhouse situated in the park surrounding Rosenborg, where it had been previously placed either in 1669–70 or in 1707, to be combined with ceiling allegories by the Dutch painter Karel van Mander. It is tempting to suggest that it was originally part of the internal decoration of the Golden Summerhouse, since it

⁵⁵ Hein, *The Treasure Collection at Rosenborg Castle*, 151.

⁵⁶ *Ibid.*



Ill. 4. Reinhold Timm, 'Musicians from Christian IV's Court', c.1622, MMCCS Inv. No. OB 122; photo by Ole Woldbye, The Danish Music Museum (Musik-historisk Museum & The Carl Claudius Collection).

cannot have hung in the Winter Room, where the panelled walls are set with Flemish landscapes. So it cannot be excluded that Clein's and Timm's pictures of musicians both derive from the Golden Summerhouse, Clein's from the ground floor, Timm's from the first floor.⁵⁷

As the travel accounts demonstrate, the sound conduits for the provision of invisible music installed in Sparepenge, Rosenborg, and the Golden Summerhouse clearly caught the attention of visitors; together with other works of art and technological devices, they formed a prime attraction of these buildings. The accounts also suggest that the invisible music was part of a larger concept involving different senses, particularly the visual and aural, and were meant to create a synesthetic effect. In Rosenborg and the Golden Summerhouse, paintings of a 'heavenly ensemble' and four precious foreign musicians visually corresponded to a mysterious music whose source could not be located, thereby causing amazement and admiration. In Sparepenge, the invisible music was an acoustically present item of a royal *Kunstammer*.

There are other contemporary examples of invisible music in the context of court culture illustrating how it was employed in connection with visual arts. It has been mentioned that the Dresden summerhouse designed by Nosseni was very likely a model for Sparepenge. According to the detailed description of the Dresden Belvedere by the Augsburg merchant, diplomat and art agent Philipp Hainhofer (1578–1647), the ground floor of the Belvedere was designed to house a *Kunstammer*, displaying 'drinking vessels and dishes made from every kind of semi-precious stone', as well as a grotto and 'an organ made of green serpentine', while the walls 'were decorated with paintings of the most important deeds of the Saxon dukes'.⁵⁸ Next to its function as *Kunstammer*, this room could also serve as a dining room. The chamber on the upper floor could also be used as a banquet room; it had a ceiling painting 'depicting the four elements, Day and Night, ... the seven planets and the twelve signs of the Zodiac and the history of troy'. The room also 'contained twenty stone statues of the last five Holy Roman Emperors, the last five Electors and the ten Virtues'. Tubes led from the ground floor through the walls to behind each of the twenty statues, where, according to Hainhofer,

there were holes designed for a special [invisible] music. Whenever there is a banquet in this upper hall, one places the musicians in the lower hall and closes it off, so that the sound pleasantly arises through the air holes. On top of the room, underneath the ceiling, there are also devices for invisible music, so that one can hear invisible music separately in 32 different places.⁵⁹

57 Ibid. 152.

58 For this and the following two quotations, see Watanabe-O'Kelly, *Court Culture in Dresden*, 67–68.

59 German original of Hainhofer's text quoted after Oscar Doering (ed.), *Des Augsburger Patriciers Philipp Hainhofers Reisen nach Innsbruck und Dresden* (Wien, 1901), 217: 'Hinder iedem bild ist es hool, vnd dergestalt gerichtet, das man aine sondere music darhinder halten kan. Wann man in disem obern saal speiset, so stellet man die musicanten auch in vndern saal, schleusset zu, so

It is obvious that the aesthetic concept realized in the Dresden 'Belvedere' has strong similarities to those concepts found in the Danish buildings. Just as in Sparepenge, the musicians perform underneath the banquet room on the first floor, so that the invisible music becomes part of dining ceremonies. In the banquet room the invisible music resonates with ceiling paintings above with 'heavenly' themes, resembling the painting of the 'heavenly court ensemble' in either Rosenborg or the Golden Summerhouse. The multitude of pipes and air holes providing invisible music must have greatly added to the mysterious effect of acoustic blurriness and displacement as described by Ogier. However, it is a novelty in the Dresden concept that not only paintings, but also statues are involved in this audio-visual generation of illusion, and that in a particularly sophisticated way, since each statue offers an individual hearing experience. The *Kunstammer* on the ground floor recalls the mixed collection in Sparepenge, even though a (possibly automatic) organ made of green serpentine takes the place of the invisible music produced by real musicians. This precious 'musical machine', itself a visible *Kunstammer* object, presumably provided the music for downstairs dining and visitors of the *Kunstammer*, recalling the automatic organs found in gardens of Italian Renaissance villas, the Villa d'Este in Tivoli being a prominent example.⁶⁰

There is another example of a garden house north of the Alps that provided both music by an automatic organ *and* invisible music performed by a hidden court ensemble as acoustic attractions – the Neues Lusthaus in Stuttgart, built between 1583 and 1593 by the architect Georg Beer.⁶¹ Here, a musicians' room was located above each of the two main doors leading into the main hall on the first floor, which was used for dances, allegorical representations and other festivities.⁶² In each of the rooms was an organ, one of them automatic.⁶³ To the visitors and dancers, the invisible music performed by either the court ensemble or the organ seemed to emerge out of sculptures located on top of the doorframes, namely armed soldiers who thus seemingly played music on their weapons.⁶⁴

Both the (automatic) organ and the invisible music as parts of a larger scale 'installation' of different art forms seem to have been derived from Renaissance garden villas in Northern Italy.⁶⁵ Thus neither Nosseni nor the Danish king were the true creators of this 'charming invention'; it seems very likely that the Italian artist had brought this idea from northern Italy where he had visited several palaces in the Florence area during his travel to Italy in 1588, such as the Villa Pratolino,

gehet die resonanz durch die lufftröhler lieblich hinauf. Oben hero vnder der deckin ist es auch zu verborgner music gerichtet, so, das man von 32 orthen verborgne music, iede absonderlich, hören kan'; author's transl.

60 Walter Salmen, *Gartenmusik. Musik – Tanz – Konversation im Freien* (Hildesheim, Zürich, and New York, 2006), 121–25.

61 Ulrike Weber-Karge, 'Einem irdischen Paradeiß zu vergleichen'. *Das Neue Lusthaus in Stuttgart* (Sigmaringen, 1989), 26–27.

62 Ibid. 46–47.

63 Ibid. 51.

64 Ibid. 47.

65 The present author is currently preparing a study on the cultural origins and theory of invisible music in Italy.

and where he had met with the local ‘gardener and fountain engineer’.⁶⁶ It has been suggested that Nosseni ‘modelled his plans [for the Dresden Belvedere] on the Forte di Belvedere in Florence which he had seen’.⁶⁷

All spaces of invisible music hitherto discussed were located in garden houses. The Renaissance garden villa in Italy was a revival of a cultural practice of Roman antiquity and became a model for garden houses north of the Alps.⁶⁸ The Italian garden villa ‘embodied artifice and control at several overlapping levels – siting, geometry, hydraulics, and scenography – often with close connections to contemporary theatrical practices’.⁶⁹ Garden houses represented an ideal world of aristocracy, microcosms of their own, containing the world and its richness in a nutshell. They were places of recreation, representation, and experimentation, places to demonstrate, exhibit, and develop instruments of power. They housed *Kunst-* and *Wunderkammern*, and galleries representing the ruler’s ancestry, they were used for dining, for dancing, court festivities and spectacles.⁷⁰

Significantly, Bernardo Buontalenti, the architect of the Belvedere in Florence, was also a stage designer, and was involved in the production of the Florentine Intermedi of 1589. The practice of hiding musicians backstage to create a particular effect was frequently practised in intermedi and early opera,⁷¹ and it seems possible that the idea of the invisible music was originally conceived in the context of theatre before it was applied to other spaces, such as garden houses. For instance, in Claudio Monteverdi’s *dramma per musica*, *L’Orfeo* (1607), there were five string players hidden backstage to create a special sound effect, as part of his concept of ‘symbolic instrumentation’.⁷² The same effect was used in Monteverdi’s next opera, *Arianna* (1608), where the whole instrumental ensemble was hidden offstage.⁷³ In the first production of Antonio Cesti’s opera, *Il pomo d’oro* (1668), musicians were hidden on stage behind statues, a setting that resembles the arrangement in the Dresden Belvedere.

Christian IV’s ‘charming invention’ in the context of his garden houses illustrates the Danish king’s knowledge of cultural and technical innovations of the South and the remarkable speed at which he brought these innovations to Denmark. Since the

66 ‘Gärtner und Wasserkünstler’, see Monika Meiner-Schawe, ‘Giovanni Maria Nosseni. Ein Hofkünstler in Sachsen’, *Jahrbuch des Zentralinstituts für Kunstgeschichte*, 5/6 (1989/90), 289.

67 Watanabe-O’Kelly, *Court Culture in Dresden*, 65.

68 Steffen Heiberg, *Christian 4. Monarken, mennesket og myten* (Copenhagen, 1988), 71.

69 James M. Saslow, *The Medici Wedding of 1589: Florentine Festival as Theatrum Mundi* (New Haven and London, 1996), 135.

70 Weber-Karge, ‘*Einem irdischen Paradeiß zu vergleichen*’, 74.

71 For invisible music in the Florentine Intermedi, see, for instance, Daniel P. Walker (ed.), *Les fêtes du mariage de Ferdinand de Médicis et de Christine de Lorraine Florence 1589. I. Musique des Intermedes de ‘La Pellegrina’* (Paris, 1968), xxxviii; Massimo Ossi, ‘Dalle machine ... la meraviglia: Bernardo Buontalenti’s *Il rapimento di Cefalo* at the Medici Theater in 1600’, in Mark A. Radice (ed.), *Opera in Context. Essays on Historical Staging from the Late Renaissance to the Time of Puccini* (Portland, 1998), 22; Nina Treadwell, ‘Music of the Gods: Solo Song and *effetti meravigliosi* in the Interludes for *La pellegrina*’, *Current Musicology*, 83 (2007), 61–63.

72 Spitzer and Zaslaw, *The Birth of the Orchestra*, 43.

73 Ibid. 44.

construction of the Dresden Belvedere was completed about 20 years after Sparepenge, Christian IV was among the first princes north of the Alps to have provisions for invisible music at his court. Christian IV must have quickly realized the propagandistic potential of the invisible music when he became acquainted with this idea and technology.⁷⁴ Which functions and meanings, then, did the invisible music have within his 'media-strategic system' (Berns) that he employed in his garden houses? I am going to discuss three aspects which are central to the aesthetics of invisible music.

I. THE INVISIBLE MUSIC, 'MUSIC OF THE SPHERES' AND 'HEAVENLY CHOIR'

The presence of both invisible music and paintings in the 'square antechamber', most likely the Winter Room in Rosenborg Castle, during Ogier's 1634 visit created a synesthetic, illusionistic effect. The ceiling painting of the 'heavenly *Hofkapelle*' that the French diplomat must have seen either in the Golden Summerhouse, right before his entry into Rosenborg, or in the Winter Room itself, recalled the idea of the 'heavenly music' still present in early modern philosophical discourse. It was acoustically enforced by mysterious, bodiless music coming from out of sight. There were two complementary models of heavenly sound in seventeenth-century philosophy and theology – the Neoplatonic model of the 'music of the spheres' and the 'biblical model of the heavenly choir as described in the vision of Isaiah'.⁷⁵ Both ideas could be adopted 'in earthly ceremonial sign systems',⁷⁶ drawing on the idea of a correspondence between macrocosm and microcosm:

The Pythagorean theory of universal harmony states that the cosmos is a harmonious structure conforming to natural laws that can be experienced musically, that identical laws operate in nature, in human hearing, and in music. According to Christian theologians, on the other hand, the heavenly music described by Isaiah is present in liturgical song and in the movement of the human pulse.⁷⁷

Ogier's report subtly implies how the king's body and his 'earthly ceremonial' were linked, stressing the staged, choreographic character of the king's movement: the music began this very moment when both the king and Ogier himself had entered the centre of the room, presumably being surrounded by an audience of foreign visitors. This movement points at the king as the centre of this arrangement, showing himself as the cause of the mysterious music,⁷⁸ as well as the 'creator' of this 'charming invention'. By the aid of his 'invention' the king staged himself symbolically as centre and cause of harmony in the microcosm and, accordingly, as the cause and the preserver of political order and peace. This reading becomes even more plausible

⁷⁴ This is not to say there were no practical reasons behind his adaptation as well. For instance, the Winter Room was probably too small to house a large-scale court ensemble during a reception of foreign diplomats, thus the placement of the musicians in the cellar certainly saved space.

⁷⁵ Berns, 'Instrumental Sound and Ruling Spaces', 480.

⁷⁶ Ibid. 481.

⁷⁷ Ibid.

⁷⁸ Ibid. 488.

when the political context of the Great Wedding is taken into account: next to forging a dynastic link between Denmark and Saxony, the wedding and its spectacles

served as a platform from which to launch and maintain the proposed role of the Danish king as the arbitrator of the European, that is, the German peace. The spectacles consolidated both domestic and international support for Christian IV as the creator and sustainer of peace among nations. Moreover, it served as a summit meeting for the powers of Europe at a critical moment in the Thirty Years' War, at a time when many hoped for – and came to expect – a cessation of strife.⁷⁹

2. THE INVISIBLE MUSIC AS A MACHINE

Both art and technological aspects equally attracted the attention and admiration of visitors to Sparepenge and Rosenborg. Heinrich Meyer, for instance, mentions the secret 'house phone system', a 'special heat-saving stove of Norwegian stone'⁸⁰ and the technical provisions for invisible music in the same breath. This interest in technology reflects a Renaissance and Baroque fascination with machines, and it seems that the invisible music and its technical provisions were viewed within this categorical framework. The most obvious analogy between invisible music and machine is its seemingly automatic functioning, the cause of its impetus being hidden. It is significant in this context that, for instance, in the Stuttgart Lusthaus *either* an ensemble of real musicians *or* an automatic organ was used to create an acoustic illusion. Thus (automatic) organ and invisible music were closely related phenomena that served very similar purposes.⁸¹

The early modern concept of the machine reflects a transition period between pre-rational (magical) and rational thinking: even though the construction of a machine is founded on rational principles, and therefore rationally intelligible, it also became a symbol for transcendence, creating 'wonder and astonishment at the order of things'.⁸² It is, therefore, not surprising that performances of machines were frequently staged in the seventeenth century, just as a play in a theatre.⁸³ The theatre, in turn, became a particularly prominent field for the use of machines. The collaboration between machine and art for the purpose of heightened illusion reached its climax in the stage machinery of late Renaissance and Baroque theatre.⁸⁴

The invisible music as a virtual machine not only was a tool to generate illusion and create admiration, but also an instrument to execute control over sound. Since

⁷⁹ Wade, *Triumphus Nuptialis Danicus*, 16.

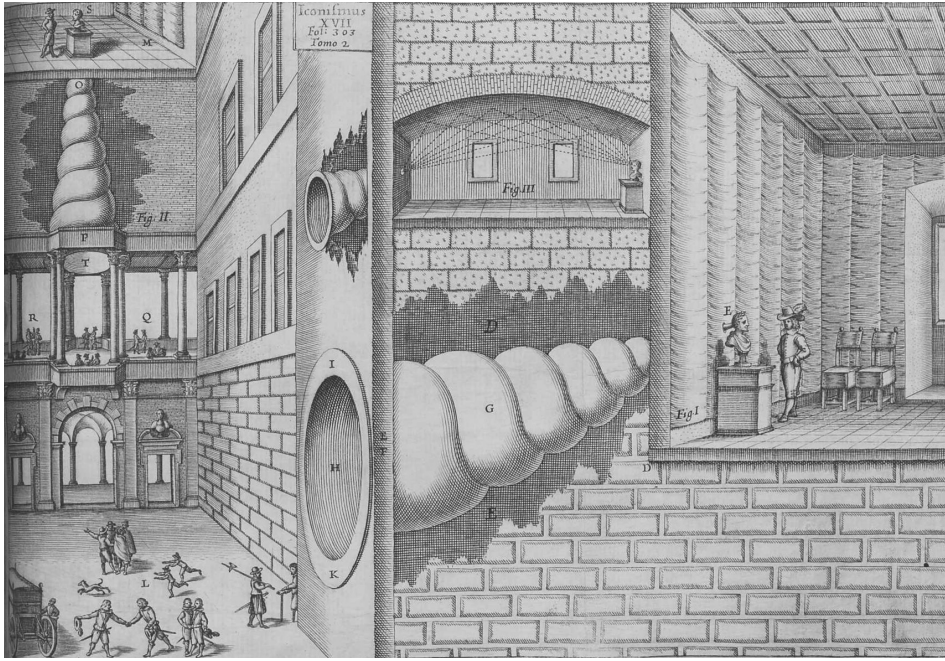
⁸⁰ Hein, *The Treasure Collection at Rosenborg Castle*, 44.

⁸¹ 'The organ, one could say, is not an instrument but a partly automated machine because it integrates many and potentially all musical instruments, thus making them superfluous – it is a universal and universalizing sound machine, and it tends towards automation', Berns, 'Instrumental Sound and Ruling Spaces', 501.

⁸² Jan Lazardzig, 'The Machine as Spectacle: Function and Admiration in Seventeenth-Century Perspectives on Machines', in Schramm, Schwarte, and Lazardzig (eds.), *Instruments in Art and Science*, 153. For the Renaissance concept of *meraviglia* in the context of literature, see, for instance, Baxter Hathaway, *Marvels and Commonplaces. Renaissance Literary Criticism* (New York, 1968).

⁸³ Lazardzig, 'The Machine as Spectacle', 153–54.

⁸⁴ Ibid. 153, 162–64. For a particularly instructive case study on Bernardo Buontalenti's stage machinery, see Ossi, 'Dalle machine ... la meraviglia', 15–35.



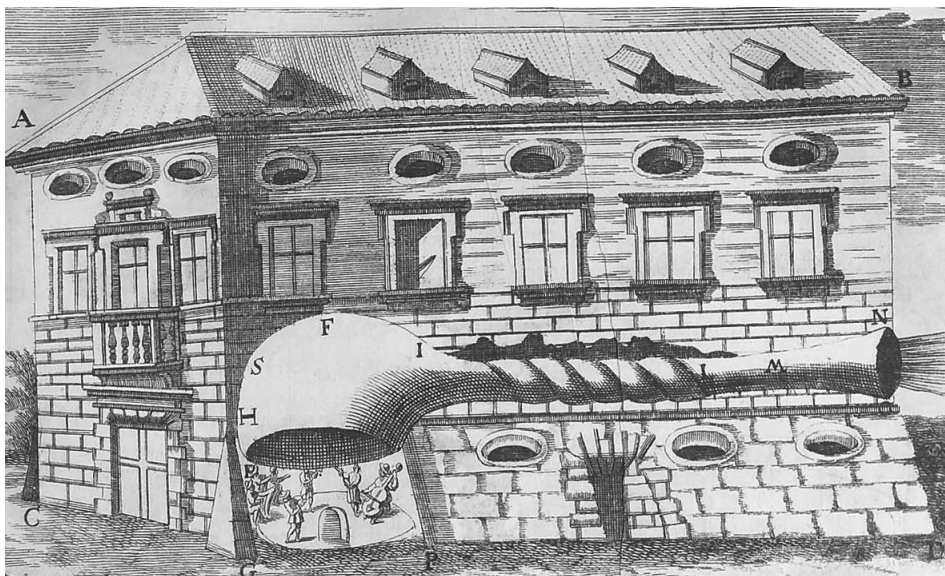
Ill. 5. Athanasius Kircher, *Musurgia universalis* (Rome, 1650). Image courtesy of the Herzog August Bibliothek Wolfenbüttel.

the king was, in early modern understanding, 'the origin and center of ceremonial',⁸⁵ he had to have means to regulate the sound that was at his disposal. As Christian of Anhalt's account of Sparepenge illustrates, the king could 'turn on and off' the music by a trap door. As part of a multi-media arrangement, the invisible *Hofkapelle* became even more an object at the king's disposal than in its visible, bodily present form. With the physical source of sound hidden, music was represented in idealized, artificial visual objects, such as paintings and sculptures. In this arrangement, the musicians lost their 'real bodies', to be replaced by artefacts created by court painters and sculptors at the king's order, to serve his propagandistic goals even more effectively.

It fits to its purpose of control that the system of sound conduits and tubes could also be used in the opposite direction, to 'speak to someone at the door, even though people who are in this room cannot hear it', and surely also to spy on court officials and other subjects. It is several decades later that we find this acoustic technology of sound transmission as an instrument of sound control described in Athanasius Kircher's works *Musurgia universalis* of 1650 and his *Phonurgia nova* of 1673 (see Ills. 5 and 6), showing how much Christian IV was ahead of his time. Kircher demonstrates 'how princely power could be secured acoustically – by subjecting the people to a barrage of sound, as well as by means of listening systems'.⁸⁶

⁸⁵ Berns, 'Instrumental Sound and Ruling Spaces', 496.

⁸⁶ Ibid. 489.



Ill. 6. Athanasius Kircher, *Phonurgia nova* (Kempten, 1673). Image courtesy of the Herzog August Bibliothek Wolfenbüttel.

3. THE INVISIBLE *Hofkapelle* AS AN ACOUSTIC *Wunderkammer*

According to Christian of Anhalt's report, invisible music could be heard during a visit of Sparepenge and the royal collection on exhibit there. Whenever an ensemble of court musicians performed in Sparepenge, it became part of this collection, as an invisible, but audibly present *Wunderkammer* item. This way of presentation points at the construction of the Danish *Hofkapelle* itself, which can be viewed as a royal collection, as a musical *Wunderkammer* purposefully assembled by the Danish king.⁸⁷ The Danish king's systematic construction of his *Hofkapelle* as a microcosm of European musical traditions and his use of invisible music as a *Wunderkammer* object strongly resonate with the theme of collecting.⁸⁸ By collecting rare and exotic works of art, natural objects, and scientific instruments, princes and scholars attempted to give a summary overview on the universe.⁸⁹ There was a variety of

⁸⁷ Susan Lewis Hammond sees another analogy to the *Wunderkammer* idea in Christian IV's building projects in Copenhagen: 'The city itself was "collected" together almost instantaneously from the best, most necessary, internationally acknowledged requisites for a capital: the castle, the tall spires, the city hall, the ship works. There was a strangely anthologized nature to the new city; its creation testifies to the same acquisitory juxtapositions one finds, in displaced form, in the anthology of musical objects'; Susan Lewis Hammond, 'Collecting *Italia* Abroad: Anthologies of Italian Madrigals in the Print World of Northern Europe', Ph.D. diss. (Princeton, 2001), 201.

⁸⁸ For the following, see also Spohr, 'How chances it they travel?', 200–7.

⁸⁹ Arthur Mac-Gregor, 'Die besonderen Eigenschaften der Kunstkammer', in Andreas Grote (ed.), *Macrocosmos in Microcosmo. Die Welt in der Stube. Zur Geschichte des Sammelns 1450 bis 1800* (Opladen, 1994), 61.

concepts and motives behind this fashion of collecting and the establishment of prestigious *Kunst-* and *Wunderkammern*, reaching from intellectual curiosity to the representation of wealth and princely power.⁹⁰

There are, in fact, various analogies between Christian IV's employment policy and the principles of collecting that can be observed in *Wunderkammern*. The extent to which the Danish king himself controlled the employment policy of his *Hofkapelle* illustrates the political importance of his court music. The king often personally chose his musicians, examined their skills and determined their appointment.⁹¹ It is evident that Europe-wide networks of agents, similar to princely collectors of art or books, enabled the king's success in recruiting musicians.⁹² Historians frequently explain his commitment simply through his personal interest in music, but it can only be fully understood in the context of politics and court ceremonial. The king used his *Hofkapelle* as one of his most prestigious instruments of political power.

The king's recruitment policy followed distinctive patterns, by recruiting specialists for certain instruments and favouring musicians from a variety of foreign countries. Moreover, he initiated a 'study abroad programme' for native Danish musicians that princes in Protestant Germany soon imitated. He sent young Danish talents such as the instrumentalists and composers Mogens Pedersen and Hans Nielsen to Venice to study with Giovanni Gabrieli.⁹³ As a result of this policy, Christian IV had, only a few years after his coronation, a *Hofkapelle* that was not only equal to the largest European *Hofkapellen* in terms of quality and quantity, but also incorporated an immense variety of European musical traditions. There is hardly another *Hofkapelle* at that time that had such a diverse profile, comprised of musicians from western, eastern, central and southern Europe as well as native Danish musicians.⁹⁴

One of the most striking parallels to the idea of the *Wunderkammer* is the exclusive character of the court music, since the Danish king appointed a number of musicians with extraordinary skills who received higher salaries than ordinary musicians.⁹⁵ Another analogy can be seen in the exemplary character of the recruitment, since the king was keen on drawing the best available musicians for particular instru-

90 For the political aspect of collecting, see, for instance, Thomas DaCosta Kaufmann, *The Mastery of Nature. Aspects of Art, Science and Humanism in the Renaissance* (Princeton, 1993), 174–94.

91 See, for instance, Angul Hammerich, *Musiken ved Christian den Fjerdes Hof. Et Bidrag til Dansk Musikhistorie* (Copenhagen, 1892), 132, 187.

92 For instance, the merchant John Stokes acted as the king's cultural agent in England. See also Spohr, 'How chances it they travel', 130–32.

93 See, for instance, Heinrich W. Schwab, 'Italianità in Danimarca. Zur Rezeption des Madrigals am Hofe Christians IV.', in Bohn (ed.), *Europa in Scandinavia*, 127–53. See also Bjarke Moe, 'Italian Music at the Danish Court during the Reign of Christian IV. Presenting a picture of cultural transformation', *Danish Yearbook of Musicology*, 38 (2010/11), 15–32.

94 For musicians from Eastern Europe, see Ole Kongsted, 'Polnisch-dänische Musikbeziehungen im späten 16. und frühen 17. Jahrhundert', in *Musica Baltica. Danzig und die Musikkultur Europas* (Danzig, 2000), 94–112; and Hammerich, *Musiken*, 20–21. For musicians from the British Isles, see Spohr, 'How chances it they travel?', 176–225. For musicians from the Netherlands and Bohemia, see *ibid.* 203–4.

95 *Ibid.* 212–14.

ments or particular voice ranges to his court. There is also an aspect of exoticism in the *Hofkapelle* that is reminiscent of the exotic objects of *Wunderkammern*: the Danish king recruited musicians in distant and remote countries, such as the harpists mentioned before; he was probably the first and the only prince in continental Europe around 1600 who employed a musician from Ireland (the harpist ‘Carolus Oralii’)⁹⁶ and who owned an Irish wire-strung harp. During the 1620s, the Irish harpist Darby Scott seems to have been a particular musical attraction at the court. Both Christian of Anhalt and Gosche Wensin record that they heard him play and particularly mention his instrument for its exotic qualities.⁹⁷

According to Christian of Anhalt, it was the custom at the Danish court that the instrumentalists – there were about 40 at that time – played in small ensembles rather than a large orchestra, so that every day of the week a different ensemble could be heard – similar to the organization of *Hofkapellen* at other European courts at the time, such as the English court music.⁹⁸ This way it was possible to show off the virtuosi with their special qualities and also to demonstrate the variety of the different performance traditions and instrumental and vocal colours available within the Danish *Hofkapelle*, which had, due to its cosmopolitan nature, become for some time a ‘laboratory’ for musical exchange and experimentation and a centre of musical innovation in northern Europe.⁹⁹

As Reinhold Timm’s painting suggests, not only large instrumental and vocal ensembles (as described in Ogier’s report) were featured as invisible music, but also (and, perhaps, more frequently) individual ensembles, such as the mixed ensemble of flute, bass viol, lute, and Irish harp depicted by Timm. The exotic sound of this court ensemble must have greatly added to effects of aural displacement and mystification. Exotic sound qualities of particular ensembles as well as their respective repertoires have to be considered to more fully understand the manierist concept¹⁰⁰ of the sound installations in Christian IV’s garden houses.

In turn, it seems possible to suggest that the invisible music as a manierist form of sound presentation corresponded with aesthetic currents in the musical repertoire

96 His name might have been Charles O’Reilly, see Peter Holman, *Four and Twenty Fiddlers. The Violin at the English Court* (Oxford, 2nd edn 1995), 161.

97 Krause (ed.), *Tagebuch Christians des Jüngerer*, 98: ‘Nach dem Abendessen hat Georg Rasch auf der Lauten und ein Irländer auf einer sonderbarlichen Irländischen lieblichen harffe gespiellet’; ‘Bericht des Gottorfer Gesandten Gosche Wensin’, 1622: ‘Endtlich seyn J.K.M. zuo waßer widerumb nach derho garthen undt kunnichl. lusthaufße gefharen, daselbst taffell gehalten, undt nhiemandts mher, dhan deroselben Canzler Crÿstian Frieße, der hoffmarschalck, undt meÿne pershon darzuo erfordert worden. aber ganz lieblich erstmaln auf eÿnher Irlandischen harffen midt meßingst seÿden bezogen, dan durch Willhelmb Brahe undt seÿner schöne gesampften music, und herrlich durch achte Vhiolen instrumentalisch alleÿn villmalß musiciren laßen.’; Schleswig, Landesarchiv Schleswig-Holstein, Abt. 7, Nr. 74.

98 Krause, *Tagebuch Christians des Jüngerer*, 98. For the organization of the English court music, see Holman, *Four and Twenty Fiddlers*, 173.

99 Spohr, ‘How chances it they travel?’, 176–225, 353.

100 For the use of the term manierism in art history and literary history, see Wolfgang Braungart, ‘Manier, Manierismus’, in Harald Fricke (ed.), *Reallexikon der deutschen Literaturwissenschaft* (Berlin and New York, 2000), vol. 2, 530–35.

composed and performed at the Danish court. In this context, not only the aforementioned mixed ensemble centred around an Irish harp can be viewed as manierist, but also the daring formal experiments that William Brade, an English string player and composer active at the Danish court during three periods (1594–96, 1599–1606, 1620–22), pursued in his pavans for string ensemble.¹⁰¹ The complex interaction between sound, performance, musical style and form, spatial presentation of music, and arrangements of acoustic, visual and other media in late Renaissance court culture certainly deserves further study. Locating court music within the larger context of illusionist and manierist aesthetics and their use of media, can significantly add to our further understanding of the musical culture at the court of Christian IV and that of other European courts in the late sixteenth and early seventeenth centuries.

SUMMARY

Court ceremonial in early modern Europe functioned, in Jörg Jochen Berns's words, as 'a media-strategic system for the creation and maintenance of princely-courtly representation and pretension to power'. Music was an essential part of this system, since it legitimized the ceremonial by linking it to the Pythagorean idea of the 'harmony of the spheres'. This idea, still present in early modern discourse, was evoked through music in connection with other media, such as visual arts, and in specific spatial situations.

This article explores a particularly spectacular form of musical display that was practised at several European courts during the late Renaissance and has so far largely escaped the attention of musicologists. The Danish King Christian IV (1577/1588–1648), who employed musicians of European fame in his *Hofmusik*, not only publicly staged them as precious objects, but also kept them from view so that their performance, through the 'charming invention' (in the words of a contemporary visitor) of sound conduits, appeared as an acoustic miracle to visitors. Provisions for invisible music could also be found at the courts of Stuttgart and Dresden.

The article presents an outline of what is currently known about the settings of invisible music at the court of Christian IV, discussing both recently discovered sound conduits in Rosenborg Castle and hitherto unnoticed seventeenth-century travel accounts. Moreover, it evaluates possible cultural sources, such as installations in garden villas in northern Italy as well as theatrical practices in the Florentine *Intermedi*, placing invisible music in the context of other currents in mannerist aesthetics, such as *Kunst-* and *Wunderkammern* and musical machines. It also discusses Christian IV's use of his 'charming invention' as a political instrument. The king used this acoustic device not only as a cultural capital that set him apart from the local nobility and neighboring princes in northern Germany, but also as a tool that allowed him to symbolically stage himself as cause and center of earthly harmony and, accordingly, of political order and peace in the destructive times of the Thirty Years War.

¹⁰¹ William Brade's pavans for string ensemble, are, in fact, hybrid forms between pavan, galliard, allemande, and the multi-sectional Italianate canzona, which he developed into a kind of miniature suite, comprised of contrasting sections like a kaleidoscope; see Spohr, 'How chances it they travel', 328.