appropriately and delicately, and, when, under conditions of maximum independence [*massime spezzando*], making the voices [individually] audible, and to hear subjects [as they rove from part to part].

Coming now to the structure of this instrument, [I am happy to say] that he has known exactly how to describe it as well as he has made it. Thus it would not be difficult to enable readers to understand its artifice. Nonetheless, without having an instrument before one, it will still be difficult to understand the description entirely. [Discussion of hammer mechanism.]

This new invention can take its place beside the other inventions we commonly discuss.

In this account the sharp dynamic contrasts in performances involving as many as 100 instruments were an artefact of the Arcadian propensity for outdoor concerts. Sound would not have carried at all well in the gardens of Cristina of Sweden, with which many accounts can be linked. So this pursuit of dynamic contrast was in its own way a by-product of Arcadian reform and a development parallel to that of the early concerto grosso, the first reports of which also come from the years 1696 (Bonporti) to 1700 (Albinoni). Harpsichord players were inevitably left behind in works with an expressive emphasis. Given that the aim of music in the early 17th century had been to evince heart-rending emotion, there may well have been a sense of frustration among harpsichordists, who had to adapt their playing to feign methods of expression more easily employed on other kinds of instruments.

Maffei's emphasis on the use of the fortepiano as a chamber instrument would have been consistent with its appeal to the nobility and their preferred musical recreations. It is possible to imagine that between the lines of Maffei's account there was an attempt to offer a rational bridge between two apparently contradictory values in Arcadian culture: the actual musical practices of the Arcadian groves (from which apocryphal accounts of 'a hundred' stringed instruments playing in the *concerto grosso* manner are numerous) and the otherwise respected design of the harpsichord, which now required improvement from scientific quarters. Through its use alone the checkerboard contrasts of the *concerto grosso* contrast of *ripieno* and *concertino* could now be simulated in the salon. The clearest clue to the instrument's initial reception is summed up in Maffei's affirmative final sentence: 'This new invention can take its place beside the other inventions we commonly discuss.'

The fortepiano of Alessandro Marcello

Not only a proficient musician and occasional composer, Alessandro Marcello was also a collector of musical instruments. His collection resided in Venice at the Marcello family *casino* (a summerhouse, not gambling parlour) on the Fondamenta Nuove. The collection may have been started by his father, who died in 1707. The *casino armonico* is first mentioned in a document of 1711.[34]

It was in 1724 that Alessandro Marcello acquired a *fortepiano* from Cristofori. This extended account is given in the *Cerimoniali Gradenigo*:

1724. An instrument of great craftsmanship and value has reached Venice from Florence. It has been added to the gallery of the noted patrician and academic ser Alessandro Marcello, the son of ser Agostino of the [parish of the] Maddalena. It is a work of the famous Bartolomeo, the cembalo master of the Most Serene Grand Duke of Tuscany. Both for the perfection of the manufacture and the suavity of the harmony [this instrument] is considered a marvel, and it is the first of its kind to arrive in this territory.[35]

It had long seemed possible that the undecorated Cristofori fortepiano now in the Museo Nazionale degli Strument Musicali in Rome, which was built in 1722 (illus.3), could be the one that Alessandro received in 1724, but when I visited the museum in 1983 the curator (Luisa Cervelli), although unaware of this possibility, was perfectly happy to have me inspect it at length. Uncovering the trail of the instruments' travels between 1724 and 1965 was not the kind of research that falls in place quickly. When Alessandro died in 1747 he was buried at his family's countryside estate in Paviola (near Padua). According to the late count Alessandro del Maio Marcello, who was an octogenarian when I had interviewed him in 1977, the collection of instruments that Alessandro assembled had gone to the Marcello family villa at Strà during the lifetime of Alessandro's son Lorenzo Marcello. Lorenzo, who served as head of the Council of Ten in the 1760s, was buried on the grounds in 1780. The count remembered it as having been particularly rich in keyboard instruments. According to him the collection was sold at auction in England *c.*1911. There is

3 (a) Fortepiano by Cristofori dated 1722: (a) general view; (b) overhead view; (c) keyboard with maker's inscription; (d) action (Museo Nazionale di Strumenti Musicale, Rome / Smithsonian Institution: photos by Hugh Talman).

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neither confirmation from auction records nor any information to contradict the count's story.

The somewhat more interesting question is what happened to the collection between 1911 and 1965. It has two answers, and both, I think, are worth citing. What is undisputed is that in the early 20th century the collection belonged to Evan Gorga (1865–1957),[36] a famous tenor who sang as *Rodolfo* in the première performance of Puccini's *La Bohème* (Turin, 1896). This much was acknowledged when the museum collection was formed in 1964. According to the official story, which is the one related by Edward L. Kottick and George Lucktenberg,[37] the state bought the collections in the 1960s. This omits mention of the travails of the collection under National Socialism and its demise.[38]

In 1916 a museum was developed in the Palazzo Venezia, which had been built in the 15th century by the papacy and was donated in the 17th century to the Venetian government as the new official residence of its ambassadors. In 1929 it became the headquarters of Benito Mussolini and the symbolic centre of the National Socialist party. The museum, which already included portions of Gorga's collections as well as portions of collections formed by Kircher and previously held in the Collegio Romano at the time Mussolini occupied it, was closed to the public in 1930, although acquisitions continued up to be made up to 1940.

In an interview given in 2000 Sibyl Marcuse (1911–2003) related that she had visited Gorga in Rome in 1948. She came at his behest, for he was

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attempting to sell the few instruments that were still under his control. Most, he said, has been impounded by Mussolini's government. As Marcuse conveyed the story, the collection fell into 'disputed ownership' after the Second World War (Gorga owed taxes on other property), and the instruments eventually became the property of the modern Italian state. The state relinquished it to the newly formed Museo Nazionale, which was provisionally housed in the Palazzo Venezia, in 1964. While Marcuse's statements cannot be verified, the nature of the surviving collection accords well with this sketchy history offered by Gorga in 1948.

A substantial proportion of the instruments now in Rome were made in Venice or the Veneto between

the 16th and the early 18th centuries. The consorts of 16th-century wind instruments in the Gorga/Nazionale collection appear to be by the Bassanos (they carry the mark of the rabbit (*coniglio*), which is accepted as a mark of Conegliano, the Bassano family's place of origin). These were still known in Venice in the 17th century. The glassichord is suggestive of the kind of academic interest in acoustics that academicians are known to have had.

The Cristofori instrument in Rome is preserved with other instruments which would collectively have constituted just the kind of cabinet of instruments that Alessandro is said to have housed in his father's old abode.[39] Such an instrument would have fit easily into the gatherings held in the *casino armonico* in the 1720s, where serenatas and cantatas were performed. The exhibition and demonstration of rare musical instruments could easily have found a place in such venues.[40]

Conclusions

A. Rupert Hall could have been discussing the *fortepiano*'s history when he wrote of all the inventions that were discussed in scientific societies,

> The . . . scientific societies, had little power to make science useful. . . . Their encouragement and recognition is deservedly linked with the finest intellectual achievements of the seventeenth century . . . [but] they were powerless to move society. . . . They had neither the money nor the administrative authority to push through major reforms in industry . . . even if they had possessed the knowledge to direct such reforms.[41]

In the case of the *fortepiano*'s fate we can conclude indirectly that it was very much tied up with the rise of Arcadia, which so strongly influenced the interests of Zeno, Maffei and Marcello. It was tangled up with the founding of the *Giornale de' letterati d'Italia* (1710) and to the uses and strengths of the instrument as enumerated in Maffei's account. The intellectual values of Arcadians were profoundly important in shaping musical values in Italy into the 1730s and in creating a sense of community among the noblemen and royalty who were Cristofori's exclusive patrons. Only the passing of the original generation of Arcadians liberated the instrument from these cultural constraints.

This parallelism begs an essential question: the dating (*c.*1698–1700) of Cristofori's initial attempt to build a prototype of what was to become the *fortepiano*, though fuzzy by the standards of modern bibliography, fits the coarser time-frame of the poetic moment when Arcadia had its greatest thrust in Italy, which can be roughly dated 1690–1710. Might the *fortepiano* have been conceived by academicians as a weapon in the Arcadian war on taste—one with the added virtue of resting on Newtonian mechanics? Such a stance would have suited those who had the earliest access to the instrument. Might what musicians regarded as the instrument's limitations—a volume that was relatively weak, a mechanism that was unfamiliar, and a professed association with works that were performed only in private—also have been virtues in the eyes of academicians? Such intentions will never be provable, but a consideration of their possibility can enrich our understanding of the instrument's curious early history.

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I should like to thank Laurence Libin, David Sutherland and Edwin M. Good for their comments.

1 The literature on Cristorofi instruments is an embarrassment of riches, for many excellent studies have appeared in recent years. Among them I would call attention to S. Pollens, 'The pianos of Bartolomeo Cristofori', *Journal of the American Musical Instrument Society*, x (1984), pp.32–68, and S. Pollens, *The early fortepiano* (Cambridge, 1995) for their careful treatment of the Maffei text discussed here. Also D. Sutherland, 'Bartolomeo Cristofori's paired cembalos of 1726', *Journal of the American Musical Instrument Society*, xxvi (2000), pp.5–56, presents strikingly apt visual

confirmation of the continuing Medici interest in astronomy: the instruments in question, now preserved in Leipzig, formed a 'conjugal pair'—both mechanically and decoratively. Valuable insight into mechanical issues is provided in E. M. Good, 'Reflections on a year with Cristofori', *Piano technicians journal*, xlv/12 (Dec 2002), pp.22–7; xlvi/1 (Jan 2003), pp.18–22, which refers to the instrument once owned by Alessandro Marcello and discussed later in this article.

2 Random examples between 1680 and 1740 are cited in E. Selfridge-Field, *The calendar of Venetian opera*, 2 vols. (Stanford University Press, forthcoming).

3 The visiting Brazilian has no demonstrated relationship to the important Portuguese keyboard composer José António Carlos de Seixas (1704–42), who may have been a pupil of Domenico Scarlatti in the early 1720s.

4 In 1714 Domenico Scarlatti was appointed *maestro di cappella* to the Marquis de Fontis, the Portuguese ambassador to the Vatican. In 1719 he accepted the analogous position at the patriarchal chapel in Lisbon (where he was joined by Carlos Seixas in 1720) and remained there until 1728. He followed his prize pupil, the Infanta Maria Barbara, to the Spanish court and served there until his death in 1757. Good points out (private correspondence) that the 1767 Antunes in Vermillion 'has an action and hammer type exactly like the 1722 Cristofori'.

5 For a discussion of some conflicting elements of his biography, see the account in W. Kirkendale, *Musicians of the Florentine court during the Medici patriciate* (Florence, 1995).

6 Only three confirmed instruments survive today. They are in the Metropolitan Museum of Art, New York (1720); the Museo Nazionale degli Strumenti Musicali, Rome (1722); and the Museum of Musical Instruments in Leipzig (1726).

7 Ferdinand was a connoisseur of harpsichords and *prime donne*. The musical interests of the Medici household were greatly diminished by his death.

8 Facsimile edition (Florence: Studio per Edizioni Scielte, 1982).

9 Galileo attracted the attention of the Medici to his work by proposing to name all the constellations he could see after members of the Medici household.

10 Various models and dates. The instruments we know were refined in the 18th century, the Fahrenheit thermometer in 1714 and the Celsius in 1742.

11 Among them was Vincenzo Viviani, who noted the inventor's life-long musical interests in his biography. Viviani stated, 'His lute was so finely crafted that he, being an excellent player, could match voices exactly and make them sound like they had come from the reeds of an organ . . .' ('. . . e il liuto con tal arte fabbricato che sonandolo egli per eccellenza, cavava ad arbitrio suo dallecorde le voci continuate e gogliardiche come se uscissero dalle canne di un organo . . .').

12 See Good, 'Reflections on a year with Cristofori', pp.23ff.

13 Zeno and Alessandro Marcello were school contemporaries at the Collegio de' Cherici Regolari Somaschi in the Castello district of Venice. Maffei was born and raised in Verona.

14 It was established in 1998 that Galileo's telescope was first used nearby, at the top of the Janiculum, on grounds now owned by the American Academy.

15 (Rome: Antonio de' Rossi, 1711), pp.346f.

16 Initially the Venetian Arcadians met four times a year for recitations of poetry, oratory and music. An anonymous source of the early 18th century (Venice, Biblioteca Nazionale Marciana, Cod. It. x-95 ['6565]) reports, however, that meetings were held every other Thursday during Lent and on Fridays at other times of year. From 1 November until Easter they met at night, starting at one hour after sunset. After Easter they met after the midday meal. This schedule should be understood to pertain to periods of the year when the government was in session; Venetian nobles tended to leave Venice when the government was not sitting (roughly from mid-June until early November).

17 Among the major outlets for lengthy reports were the *Journal des Sçavans*, established in 1665. Italy had spawned a similar publication, the Roman *Giornale de' letterati*, in 1668 (it continued until 1683), and it was only a few years before similar efforts were organized in Venice (1671), Ferrara (1688) and Parma (1690). A composite equivalent in Germany was the collected *Acta eruditorum*, published in Leipzig from 1682 until 1731. These collections of learned papers operated in parallel with monthlies in which news was aggregated from various sources. Such publications included *Le Mercure de France* (or *Le Mercure galant*), which began in 1672, and its Venetian imitation, *Pallade veneta*, which first appeared in 1687 (portions edited in E. Selfridge, *Pallade veneta: writings on music in Venetian society, 1660–1750* (Venice, 1985). Short items of musical interest could appear there, but they were likely to focus on personnel, circumstances and opinion. The *Giornale veneto de' letterati* had died out in 1690, a year before the Accademia degli Animosi was organized in Venice.

18 Some literary and historical topics considered in the first issue were Dante, Guarini, Marco Polo and the Holy Bible in the vernacular. Among the scientific topics were a dialogue about acids and alkalis, a design for a horseless carriage started by turning a crank (perhaps designed by Vincenzo Coronelli; the context is unclear), and the function of (human) Malphigian tubes.

19 By retaining his membership in the Venetian Animosi he alienated them, and by 1717 was virtually at war with the Florentine Nation and the Accademia della Crusca (which concerned itself with language and lexicography) as well as the Pontifical Court.

20 *I-Vnm* Cod. It. V-347 ('7164).

21 Most of the biographical details given here are derived from F. Negri, *La vita di Apostolo Zeno* (Venice, 1816), *passim*.

22 The *Giornale* was more concerned with subjects of literary and artistic interest than the *Galleria*.

23 After Zeno moved to Vienna, his brother, a priest named Pier Caterino Zeno, took over the *Giornale*. From 1718 it was published at less frequent intervals, eventually becoming an annual publication. It continued under various auspices through 1739.

24 Maffei was engaged in archaeological research in France from 1732 to 1736, then travelled to Oxford to receive an honorary doctorate, and returned by way of Holland and Germany. In his final year of life he took up the study of Hebrew, which he claimed to have mastered.

25 Details are given in E. Selfridge-Field, *The music of Benedetto and Alessandro Marcello* (Oxford, 1990). See esp. pp.432–4, 442–5, 457–9. In 1705 he painted a cycle called the 'Quattro amori'. Among his lost works are allegorical paintings for the family's parish church of San Marcuola, scenes from the life of Mary Magdalene for the church of Santa Maria Maddalena in Venice, a copper engraving called *Diana alla caccia*, and a painting of Cleopatra. In 1708 his *Cantate*, op.1 were published. Some of his Latin epigrams were written in 1708 and 1709, although the principal prints of them occurred between 1720 and 1730.

26 Here Zeno did not follow in suit: he later alienated the Florentine Accademia della Crusca (a self-appointed language-police agency) by criticizing its celebrated *Vocabulario*.

27 The independent publication was in turn translated into German and public by Mattheson in his *Critica musica* (1725).

28 *Giornale de' letterati d'Italia*, xxxii, p.575.

29 G. Silvestri, *Un europeo del settecento: Scipione Maffei* (Treviso, 1954), p.13.

30 Detailed accounts in musical sources consider this visit to have occurred in the autumn, but biographical sources on Maffei allow for the possibility that it was in the spring of 1709. Since Maffei was so prone to be perpetually on the move, he could have passed through Florence twice in 1709.

31 Silvestri, *Un europeo del settecento*, pp.27f. L. Och, 'Bartolomeo Crisotofi, Scipione Maffei e la prima decrizione del 'gravicembalo col piano e forte', *Il flauto dolce*, xiv/xv (1986), pp.16–23, speculates, however, that much of 'Maffei's' account of the *fortepiano* may have been written by Cristofori himself.

32 The issue is dated 21 April 1711.

33 Some readers have questioned my translations of the words *concerto* ('concert') and '[il più] soave' ('suavest'). The word 'concerto' in English has a much more restricted meaning than its generic usage in in Italian, and the word *soave* has a much richer meaning than its English counterpart. Something that was *soave* was alluring, commendable and appealing, irrespective of its specifically musical qualities.

34 *I-Vas* Senato, Parte, Redecime di 1711, entry of 29 agosto. Some sense of the scope of collection had be gained by perusing L. Cervelli, *La galleria armonica: catalogo del Museo degli strumenti musicali di Roma* (Rome, 1994).

35 *I-Vmc* Cod. Gradenigo 200, ii, f.38*v*: '1724. È giunto da Firenze a Venezia un strumento di grande artificio, e molto valore, che à stato collocato nella Galleria dell'assennato Patrizio ed Accademico s. Alessandro Marcello, fu de s. Agostino della Maddalena; à opera del famoso Bartolomeo Maestro di Cembali del Ser[enissi]mo Gran Duca di Toscana, quale per la perfezione della manifattura, e p[er] la soavità dell'armonia riesce maraviglioso, ed è primo, che di tal sorta sia capitato in questa Dominante.'

36 Gorga was much more significant as a collector of medieval and ancient glass (150,000 pieces) and Renaissance pottery. These collections passed to the Museo Nazionale di Archeologia, also in Rome. Among the most important pieces of the first are some from 12th-century Constantinople.

37 E. L. Kottick and G. Lucktenberg, *Early keyboard instruments in European museums* (Bloomington, 1997), p.154.

38 Portions of the official story are related in Cervelli, *La galleria armonica*, pp.2f.

39 The frontispiece of several of his publications show a gallery of instruments. The drawings could be by Alessandro himself, for he was known as skilled at drawing and design.

40 Academicians with demonstrated musical skills indulged a degree of interest in earlier music and means of producing it. Benedetto composed a book of madrigals (1717) and left a transcription of Camillo Angleria's tract on counterpoint (1622) during a stay in Florence in 1706.

41 A. R. Hall, *From Galileo to Newton* (New York, 1963; rev. edn 1981), p.331.