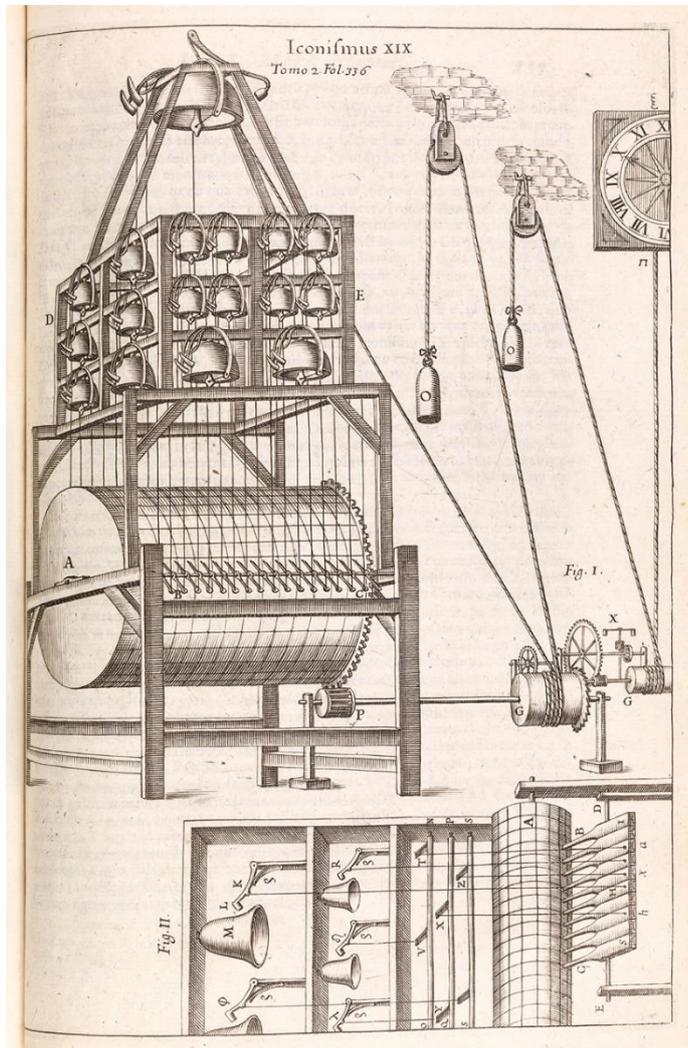


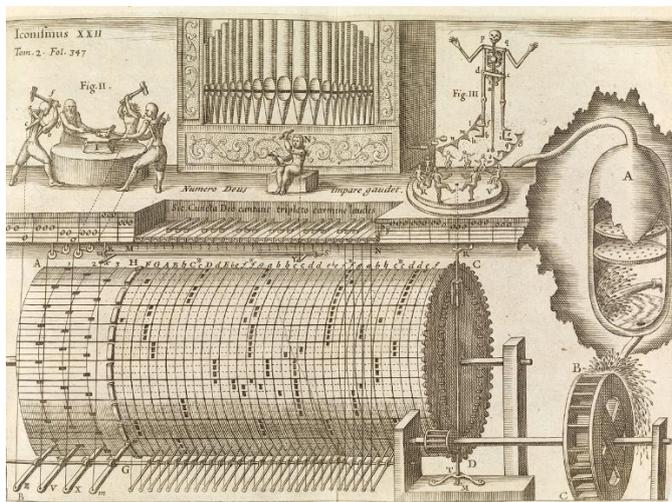
Musurgia universalis, by Athanasius Kircher Rare Music Collection, University of Melbourne Library



Automaton campanarium fabricari
(Design for automated chime bells)
from Athanasius Kircher (German,
1602–1680)

Musurgia universalis

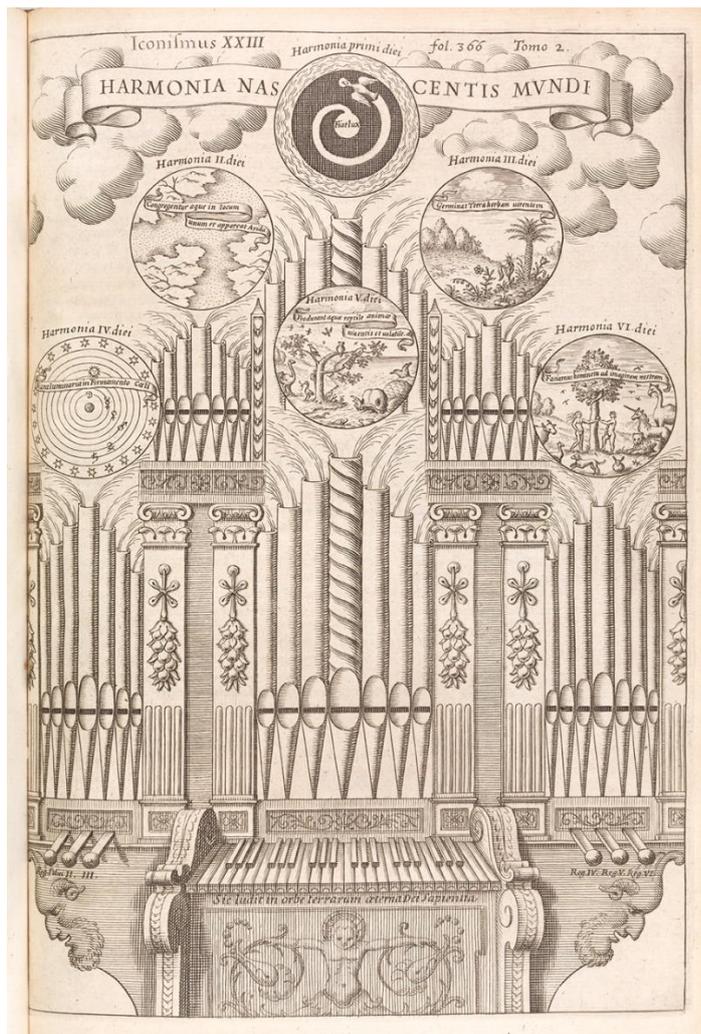
plate 19, vol. 2, facing p. 336
Rome: Francisci Corbelletti, 1650
Rare Music Collection
University of Melbourne Library



Numero Deus impare gaudet
(God delights in an odd number)
from Athanasius Kircher

Musurgia universalis

plate 22, facing p. 347, vol. 2



Harmonia nascentis mundi
 (Harmony of the birth of the world)
 from Athanasius Kircher
Musurgia universalis
 plate 23, facing p. 366, vol. 2

The Baroque-era Jesuit scholar Athanasius Kircher (1602–1680) was a significant contributor to early modern culture in a number of fields. As a polymath with an extraordinary breadth of knowledge and research, Kircher has been studied in the context of museum history, Egyptology, mathematics, botany and, on this occasion, the history of music theory. Among his approximately 40 publications, the text *Musurgia universalis* (1650) is one of his most cited and most famous – a compendium of historical and contemporary knowledge on music theory, alongside experimentation and speculative designs for complex instruments. It is also considered the first published text to discuss the ‘doctrine of affections’, a Baroque theory of musical aesthetics according to which music can imitate and invoke specific emotional responses in the listener.

Musurgia universalis has been cited by many authors over the subsequent centuries, both in its role as a complete encyclopaedia of music and as a book of musical experiments.

The first page illustrated above shows the design for automated chime bells, called *Automaton campanarium fabricari*. Also present in this volume are an early megaphone or ‘speaking trumpet’ and the *Arca musarithmica*, a device that could create random compositions.

Teaching Ideas

The University of Melbourne's curriculum is rich and varied, and changes from year to year. For more teaching ideas, [contact a collection manager](#).

From Plato to Einstein

Study plate 23 (facing p. 366 – reproduced above) of *Musurgia universalis*, titled *Harmonia nascentis mundi* (Harmony of the birth of the world), showing music dominating and creating the world: 'The first voice of the organ has been used by the Lord on the first day of Creation in order to generate light' (and so on through the seven days of creation). Consider Kircher's place in the history of thought on music and the cosmos, with such ideas stretching back to Pythagoras and Plato.

Music History: Monteverdi to Mozart

Position *Musurgia universalis* in the burgeoning music scene of the 17th and 18th centuries. Consider in particular the 'doctrine of the affections', first published in this volume, and its contribution to the music of Bach, Handel and later composers.

The Renaissance in Italy

Discuss advances made in music during the Italian Renaissance, in particular the developments in polyphony outlined in *Musurgia universalis*.

History and Philosophy of Museums

Kircher was responsible for one of the earliest museums of art and science. His Kircherian museum at the Collegio Romano in Rome now forms the core of the National Roman Museum. Discuss Kircher's contribution to the rise of the modern museum, and consider features of *Musurgia universalis* that may reflect his other collecting and experimental practices.

Music Psychology

Discuss the historical basis for current music psychology practices, examining the 'doctrine of the affections', first published in *Musurgia universalis*. Consider this early theory in light of today's scientific knowledge about the links between music and the brain.

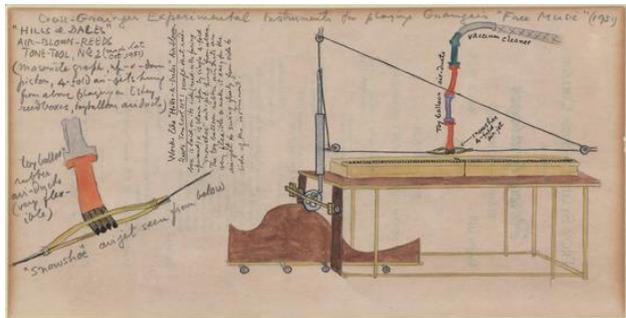
Music History: Impressionism to Present

Australian pianist and composer Percy Grainger (1882–1961) was, like Athanasius Kircher, an innovator and experimenter, particularly in the field of music machines. Most famous are his designs for Free Music Machines, intended to generate unbroken, flowing melodies that were 'free to roam through tonal space as a painter is free to draw & paint free lines'. Discuss other musical innovators throughout history and their importance to contemporary experimental composition.

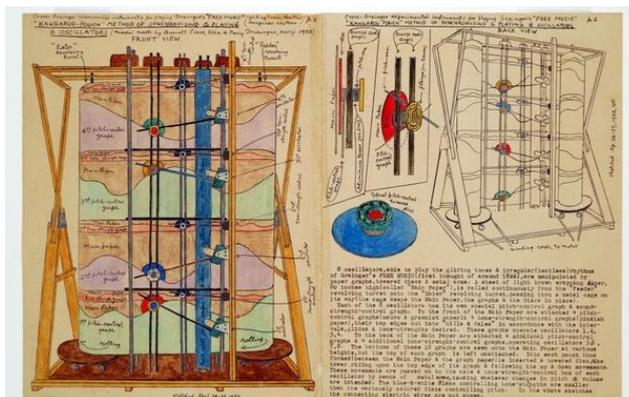
Knowledge, Learning and Culture

Consider the position of Athanasius Kircher in the history of the world's great thinkers. What contributions did he make to knowledge and culture in the 17th century, what influenced his own studies, and what was his legacy?

Intersecting objects



Percy Grainger (Australian/American, 1882–1961)
'Hills and dales' air-blown-reeds tone-tool, no. 2 (snowshoe), October 1951
 watercolour, ink and pencil on paper
 14.2 × 27.9 cm (sheet)
 Grainger Museum
 University of Melbourne
 04.0167



Percy Grainger (Australian/American, 1882–1961)
'Kangaroo-pouch' method of synchronising and playing 8 oscillators, April 1952
 watercolour, ink and typescript on paper
 28.0 × 43.5 cm (sheet)
 Grainger Museum
 University of Melbourne
 04.0173

To learn more, visit the websites of the [Rare Music Collection](#) and the [Grainger Museum](#).

Further reading

Paula Findlen (ed.), *Athanasius Kircher: The last man who knew everything*, New York & London: Routledge, 2004.

Paul Henry Lang, 'Musical thought of the Baroque: The doctrine of temperaments and affections', in William Hays (ed.), *Twentieth-century views of music history*, New York: Scribner's, 1972, pp. 191–203.