

# Predecessors of the modern piano

## Harpsichord

- In use from approximately 1400 to 1800.
- Compass up to five octaves (F'-f''').
- The strings are plucked by a small piece of quill or leather (called a plectrum).
- The speed or force with which the key is depressed has no bearing on the volume of the note produced, so the possibilities of dynamic shading by touch alone were limited; articulation and arpeggiation of chords were important means of achieving a sense of accentuation in performance.
- Some harpsichords have two (occasionally three) manuals, with stops or couplers that enable a different tone or volume to be produced on each manual; some pieces, such as J. S. Bach's *Italian Concerto*, were specifically written for such an instrument.
- The virginal and spinet were relatives of the harpsichord.

The harpsichord was the predominant stringed keyboard instrument prior to the development of the piano. Although the piano is not directly related to the harpsichord in its mechanical construction, early piano music was often intended for performance on either piano or harpsichord.

## Clavichord

- In use from approximately 1400 to 1800.
- Small and rectangular in shape, with the strings running (more or less) perpendicular to the keys rather than parallel to them.
- Compass up to five octaves (F'-f''').
- The strings are struck by a small brass blade (called a tangent); the tangent divides the string into two parts - one of these parts vibrates, to produce the sound, while the other part is dampened by felt.
- The tangents remain in contact with the string while the note is sounding, and hence it is possible to make a type of vibrato called *Bebung* on sustained notes.
- The clavichord is capable of dynamic shading; however, its tone is very soft, which limited its use to solo performance (as opposed to chamber music) in a fairly small room.

The clavichord was J. S. Bach's favourite keyboard instrument, according to Forkel, his first biographer. The music of his son C. P. E. Bach is especially suited to the clavichord.

## Fortepiano

The piano of the late 18th Century is sometimes referred to as a fortepiano to distinguish it from the modern instrument. Some differences between fortepianos and the modern piano are:

- The frame was made of wood, rather than iron.
- The range was smaller (around 5½ octaves).
- The hammer was made of leather rather than felt.
- The strings all ran parallel to each other (there was no overstringing).
- The sustaining pedal was often operated by the knee, just under the keyboard, rather than by the foot.

The tone of the fortepiano is lighter and has less sustaining power than the modern piano.

# The development of the pianoforte

The first piano was made in Florence around 1700 by Bartolomeo Cristofori, and was called a *gravicembalo col piano e forte* (i.e. a “harpsichord with loud and soft”). By the second half of the 18th century it began to replace the harpsichord as the preferred instrument of C. P. E. Bach, Haydn, Mozart and their contemporaries. The chief advantages of the piano over the harpsichord are that it is capable of subtle changes in volume in response to the player’s touch, and has a mechanism for sustaining the tone after the key had been released (operated with the knee in the early instruments rather than by the foot). The 18th century instrument is usually referred to as a *fortepiano* (to distinguish it from the modern *pianoforte*), and had a thinner tone than today’s instruments, with less sustaining power and a smaller range (about five octaves).

The piano as we now know it emerged in the nineteenth century, after a number of important developments; the range was increased to seven octaves, the frame was made of iron rather than wood, and the hammers were covered with felt rather than leather. Also, the bass strings were “overstrung” (i.e. they run diagonally across the higher strings rather than parallel to them) which allowed the use of longer and thicker strings, and a “double-escapement” mechanism was invented to facilitate rapid repetition of a note. All of these developments became standard by the middle of the nineteenth century. With the modifications to the frame and strings, the piano was able to produce a sound capable of filling large concert halls, and the solo recital became popular. It was very successful as a solo instrument with an orchestra, and more concertos were written for piano in the nineteenth century than for any other instrument.

Before gramophone recordings, piano transcriptions were the principal way in which orchestral and operatic works became familiar. With the rise of the middle class, the piano became a symbol of culture; most middle class families owned a piano, around which many hours of entertainment were spent. The piano became the favoured instrument of many romantic composers, because it was capable of both intimacy and extravagant virtuosity, and an idiomatic style of piano writing developed.

Listed below are some important dates in the development of the modern piano. In most cases, the dates indicate the first appearance of a new development; it may take years or decades before the development became standard.

- 1700s Bartolomeo Cristofori, working at the court of Prince Ferdinand de’ Medici in Florence, invents the *piano e forte*. The strings are struck by a hammer, and there is an “escapement mechanism” to stop the hammers from rebounding on the strings. The range is 4 to 4½ octaves.
- 1780s Range increases to 5½-octaves.
- 1790s Range increases to 6 octaves.
- 1816 Range increases to 6½ octaves
- 1820s Metal frames begin to be used.
- 1821 Double-escapement action patented by Sébastien Erard, allowing greater ease and speed in repetition of a note.
- 1822 Range increases to 7 octaves.
- 1826 Felt covering for hammers patented by Henri Pape in Paris
- 1859 Overstringing, to better distribute string tension across the frame, and to allow for sympathetic vibration and longer strings, patented by Henry Steinway, Jr.
- 1874 Sostenuuto (selective sustain) pedal patented by Albert Steinway.