Welcome to the world of historic keyboard instruments!

The Western Early Keyboard Association, Portland Baroque Orchestra, and Reed College are pleased to present to you the world of three early keyboard instruments: harpsichord, clavichord and fortepiano; all are precursors to the modern piano. It’s exciting and inspiring to hear the sounds of these wonderful keyboard instruments and to learn more about them, adding so much enjoyment and new understanding of the music we all love and cherish.

The Harpsichord

Harpsichords were developed and built toward the end of the 14th century, and large scale production of the instrument ended around 1800; however, instruments were still being built up to about 1840. While new harpsichord repertoire was not written during the 19th century, the instrument was still being played, especially since fortepianos were cost prohibitive for many. Thankfully, the harpsichord was revived in the mid-20th century, leading to the birth of the instruments available today.

The harpsichord’s action differs significantly from that of the piano: a quill is wedged into a wooden or plastic jack that plucks the steel, iron or brass strings when the key is depressed; harpsichords had anywhere from one to four sets of strings. Unlike the piano, harpsichord action does not produce louder or softer dynamics via finger pressure, but there are ways a player can create the impression of dynamics by adjusting the timing of when notes are played and released. Additionally, combining sets of strings allows the player to create new sound settings and moods, a similar approach to that used by organists.

The term, “harpsichord,” is often used to refer to the greater family of plucked-string keyboards: virginals (possibly the harpsichord’s first form), spinets, and clavicytheria (an upright harpsichord), with regional differences in construction possible as well. Some harpsichords are built with two keyboards, stacked similarly to that of an organ, which are often played simultaneously via a coupling mechanism. The harpsichord appears in the orchestra, accompanying varying combinations of instruments and singers, and as a solo instrument; it was much beloved in its time — and today. Well-known composers for the harpsichord include J.S. Bach, Girolamo Frescobaldi, Domenico Scarlatti, and François Couperin.

The Clavichord

The clavichord’s origins can be traced back to the early 15th century. It became even more popular in the 16th to the 18th centuries, and commonly served as a practice instrument for organists. It also served the
musical needs of private church masses, and some hotels even provided the instrument for guests who wished to practice. It differs from the harpsichord in that each key strikes the transversely-run strings (clavichords are double strung) with a small metal tangent. The sound is very quiet compared to both the harpsichord and fortepiano, and the action gives the player the ability to create and control dynamics, albeit in a smaller range compared to the fortepiano. It can also create a kind of vibrato called *bebung*, initiated by the player through the approach to the key. Most clavichords are limited to one keyboard, though instruments with two keyboards or with pedal are not unheard of.

As to its repertoire, the Bach family reigned supreme and there are great works for the instrument by J.S. Bach and his sons, Carl Philipp Emanuel Bach and Johann Christian Bach. They took advantage of the clavichord’s dynamic range and unique expressiveness, creating works in the 18th century that are truly married to the instrument and its technical demands. At that time, to play the clavichord successfully required one’s technique to be highly refined and nuanced with great levels of control and sensitivity; this gave the player an edge when it came to playing other keyboard instruments as well.

**The Fortepiano**

The first fortepiano action was invented by Bartolomeo Cristofori around 1700, and fitted into his standard harpsichord case, which could then play soft and loud via finger pressure. He called the instrument, *Gravicembalo col piano e forte*. The first models used hammers made of rolled parchment, then models appeared with solid wooden heads (also used in early Stein models), followed by leather-covered wooden heads.

The sound of the early fortepiano is lighter and more transparent than that of the modern piano, admirably bringing Classical-era music to life. The fortepiano developed new qualities of tone and volume as its designs evolved in size, weight and range in response to changes in musical style. It is valuable to hear the music of each composer, from Mozart to Liszt, on the type of instrument available during the time. By about 1880, the fortepiano had evolved into the modern piano, complete with heavy construction, metal frame, and wound and crossed strings under tons of pressure. The earlier models fell out of use; they are now reconstructed by modern builders, as is the harpsichord.
About Early Keyboard Instruments at Reed College

The fortepiano housed at Reed is owned by Portland Baroque Orchestra. The remaining instruments discussed below are part of the Reed Early Keyboard Collection (EKC). To see photos of the Early Keyboard Collection instruments, visit https://www.reed.edu/music/keyboards/index.html

Portland Baroque Orchestra: Fortepiano
This fortepiano was built by Donald Makinnon in London in 1987. It is a Stein/Walter-type fortepiano, since it does not exactly match any particular Stein or Walter model; it is very much of that late 18th-century period and approach to building. Stein and Walter are two celebrated fortepiano builders. Johann (Georg) Andreas Stein (1728–1792), was critical to the development of the design of the “Viennese” fortepiano, for which so much Classical-era piano music was written. Anton Walter (1752–1826), built Mozart’s fortepiano. The PBO instrument has a walnut-veneered case with a range of FF-f”; it is primarily bichord strung with the top fourteen notes having three strings. A right knee lever lifts the dampers and a left knee lift activates a “moderator” stop which pulls a layer of cloth in between the strings and hammers, mellowing the sound.

Reed Early Keyboard Collection: Late 18th Century French Double Harpsichord
Reed alumna Wendy Robinson donated this instrument, built by Ken Bakeman in 1973 and fully restored by Byron Will in 2002. As was the style in the 17th and 18th centuries, this harpsichord is visually lavish, with a marbled case, cabriole stand, and paintings on the soundboard. The two keyboards (FF-e’’) are tuned at low pitch (a’=415). Starting in 2014, EKC Curator Paul Irvin began bringing its pinning, dampers, stringing, and voicing into closer conformance with the latest research discoveries in historical practices, including the use of phosphorus-iron wire, in order to more accurately reproduce the lush historical sound of this type of instrument.

Reed Early Keyboard Collection: Italian Harpsichord
Owen Daly constructed this harpsichord after one by Sicilian builder Carlo Grimaldi, 1697, with the outer case painted by PBO cellist Lori Presthus. With a keyboard range of GG, AA-d’’’ such instruments were and are very useful for both solo and ensemble playing. To accommodate both period and modern performing styles today, this harpsichord’s two choirs of brass strings can be transposed to play at either low pitch or modern pitch (a’=440). This instrument has also been updated to reflect the latest research discoveries.

Reed Early Keyboard Collection: Italian Virginal
Built and donated to Reed by alumna Chloe Lewis, with painting by Reed alumna Elecia Beebe, this virginal is modeled after various 16th- and 17th-century Italian virginals. It has recently been brought much closer to historical practices in stringing, pinning and voicing, and now has a keyboard range of BB-e’’’, or f’’’, depending on whether it is transposed to play at low pitch or modern pitch position on its single set of brass and iron strings.

Reed Early Keyboard Collection: Fretted Clavichord
The clavichord was the principal practice instrument for keyboard musicians of the 17th and 18th centuries, and the only type of keyboard before the invention of the piano capable of dynamic expression, albeit at a quiet level. Reed’s clavichord, built by Byron Will in 1998, is modeled after one from 1784 by
the German builder Hubert now preserved at the University of Edinburgh. It has a four-and-a-half octave keyboard, C-f’’, playing pairs of brass strings. Its design allows seven pairs of strings to play twelve notes per octave, making it more compact, lighter, and portable than unfretted clavichord designs. Decorative marbled papers were crafted by Bonnie Garrett, founder of the EKC.

**Reed Early Keyboard Collection: Large Unfretted Clavichord**

Built in 2001, modeled after a 1784 Hoffmann antique clavichord. It has a five-octave range, as do most late harpsichords and the early fortepianos. There is one pair of strings for each key which permits overlapping tones for a very wide range of phrasing and expressiveness and a type of vibrato. Beside being useful for playing early Classical composers, this type of clavichord inspired its own repertoire which cannot be fully realized on harpsichords or fortepianos. This clavichord is privately owned and is loaned to Reed for events as needed.

**Reed Early Keyboard Collection: Positiv Organ**

Baroque music often calls for a small moveable instrument for continuo playing, and Reed’s positiv organ built by Bond Organs of Portland in 1998 fills that role splendidly. A gift from alumna Sukey Roth Garcetti, it can be used at either baroque or modern pitch. The instrument has three stops (the bellows is under the bench) and is perfectly suited not only to its continuo role but to solo repertoire not requiring pedal.

**The Reed Early Keyboard Collection Staff**

**Bonnie Garrett** held music teaching and administrative positions at Reed College for over thirty years in addition to sustaining an active performing career as fortepianist and harpsichordist. Instrumental in creating the Reed Early Keyboard Collection as a working laboratory, she also produced the concert series, Bach in High Places and Friday at Four, and arranged numerous musical collaborations with the Cooley Gallery.

**Paul Irvin**, Curator of the Reed Early Keyboard Collection, has built, repaired, and overhauled harpsichords and clavichords for over forty years in the Chicago and Portland regions. He has served in many capacities on various early music nonprofit boards and has written for various early music publications. He has worked extensively to maintain and improve the Reed Early Keyboard Collection.

**Leta Huang** is the early keyboard instructor for Reed College. She holds a Performer’s Certificate in harpsichord from the Eastman School, and has studied harpsichord with Arthur Haas, among others. She has performed across the nation in solo and chamber recitals and is a devoted teacher.

*Notes by Meg Cotner and Paul Irvin, Updated 1/2023*

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