Music is an evolving art

Our species has made music for tens of thousands of years.

Music may have given *Homo sapiens* an evolutionary advantage: easily remembered songs preserve and transmit accumulating cultural knowledge long before written languages arose. [1]

40,000 year old bone flute, found in southern Germany in 2008. [1]
Nothing but written fragments...

...remain for music that predates early Christian liturgical music. [2]

This 2\textsuperscript{nd} century papyrus fragment includes musical notation.

Second century AD papyrus thought to be a fragment from a collection of songs which included musical notation. [3]

http://classics.uc.edu/music/yale/sound-i-09.html
A chronology

The development of classical music is often discussed in terms of six different periods. The use of polyphony and large-scale structure became increasingly complex; musical instruments evolved too.

- Medieval (5th century AD – c. 1400)
- Renaissance (c. 1400 – 1600)
- Baroque (c. 1600 – 1750)
- Classical (c. 1750 – 1820)
- Romantic (c. 1820 – 1900)
- Modern (c. 1900 – present) [9]

Sometimes (not always) the boundaries between periods are indistinct.
The Church supported the musical arts

Gregorian chant is a monophonic (single melody, no harmony) liturgical form that probably dates from the eighth century. [5] Musical notation (different from modern notation) allowed the Church to disseminate Gregorian chants throughout medieval Christendom.

Anon: Puer Natus Est Nobis, Benedictine monks of Santo Domingo De Silos, Castile, Spain

16th century Gregorian chant manuscript. [4]
Early harmony: organum

Early polyphony used “two melodic lines simultaneously at parallel intervals, usually at the fourth, fifth, or octave.

The resulting hollow-sounding music was called organum and very slowly developed over the next hundred years.

By the eleventh century, one, two (and much later, even three) added melodic lines were no longer moving in parallel motion, but contrary to each other, sometimes even crossing.” [9]

We are more accustomed to the sound of triads.
Evolution of the orchestration

Baroque orchestral pieces were conducted from the keyboard, with the conductor playing a harpsichord. These were *not* concerti, in which a solo instrument plays “against” the rest of the orchestra.

As new orchestration techniques developed, the use of a harpsichord as an anchor for the music subsided.

Mid 18th century: “Much of our modern performance practice can be traced to the orchestra at the court of the Elector Palatine, Prince Karl Theodor, at Mannheim.” [2, 15]

• the orchestra was large, compared to other orchestras of the time
• its musicians were better trained, and played with greater precision
• a variety of new features—loud-soft dynamics, for example—were part of the orchestra’s style of play.

Mannheim is in central Germany, about 300 miles east of Paris.
Hearing the music, back then

Remember: there was no widely-deployed technology available to record/replay music until late in the 19th century. [14]

People heard music in Church, saw it performed in live concerts, and (if they could afford to), played it themselves.

Royal families could patronize the arts by supporting composers; churches could hire composers to write religious music to be included in services.
The Baroque period (c. 1600 – 1750)

Some of the composers:

• Claudio Monteverdi, 1567 – 1643. Lived in Venice, Italy; his 1607 opera *L’Orfeo* is “widely acknowledged as the first great work in the history of the genre.” [18]

• Antonio Vivaldi, 1678 – 1741. His most famous composition is probably *The Four Seasons*, comprising four of the twelve Opus 8 concerti.

• Johann Sebastian Bach, 1685 – 1750. He didn’t do opera, but was the champion of everything else during the Baroque era. Bach was enormously prolific.

Bach’s *Brandenburg Concerto no. 3*, BWV 1048 (1721) [19]
The Classical period (c. 1750 – 1820)

New forms of composition, including: the symphony and string quartet. The works are more layered, more complex. Some of the composers:

- Franz Joseph Haydn, 1732 – 1809. Vienna; he is “rightly regarded as the father of both the symphony and the string quartet.” [18]

- Wolfgang Amadeus Mozart, 1756 – 1791. “Music’s supremely gifted creator, whose achievements mark a zenith of Western culture.” [18] Also, “the only composer in history to have written undisputed masterworks in virtually every musical genre of his age.” [23]

- Ludwig van Beethoven, 1770 – 1827. “The most important and influential musician in history.” [18] His revolutionary works forced the transition from the Classical to the Romantic period; he composed works in the style of both periods.
The Romantic period (c. 1820 – 1900)

Dramatic changes to the form of the symphony and the string quartet. A few of the composers (in addition to Beethoven):

• Johannes Brahms, 1833 – 1897. I think: Brahms makes immediate, powerful emotional statements in the opening notes of his orchestral and chamber works.

• Fryderyk Franciszek Chopin, 1810 – 1849. “Polish-born pianist and composer of matchless genius in the realm of keyboard music.” [18] I think: the Nocturnes are heartbreakingly beautiful.

• Felix Mendelssohn, 1809 – 1847. Boy genius: he wrote his Overture to *A Midsummer Night’s Dream* at the age of 17.

Brahms’ *Symphony no. 4*, 4th movement, op. 98 (1885)
Twentieth century

The twentieth century was a time of global war, genocide, and environmental destruction. It was also the century in which political freedom and human rights became the norm in most of Europe. The music of that/this century is complex, sometimes dissonant, unsettled, forceful.

There is an impressive range of styles; I do not know if they all have names.

- Impressionism: Claude Debussy, 1862 – 1918; Maurice Ravel, 1875 – 1937.
- Sergey Prokofiev, 1891 – 1953; Dmitri Shostakovich, 1906 – 1975, both Russian.
Instruments have evolved...

...as has the music written for them.

The clavichord, is a 14\textsuperscript{th} century forerunner of the modern piano. It is too quiet for performance in anything other than a small setting.

The strings run left-to-right, and are struck by metal blades called \textit{tangents}.

Here's a 1977 version.

Clavichord demo

https://www.youtube.com/watch?v=9WuVVE2t-Vk
Harpsichords

Baroque keyboard musicians played Harpsichords. The keys cause the instrument’s strings to be plucked by a plectrum; only limited volume control is possible. The piano was invented later.
Harpsichords date from ~1600

Strings are plucked by a plectrum whenever the performer presses a key. Volume control is largely absent; harpsichords were used primarily to accompany other performers, rather than as solo instruments.

From https://en.wikipedia.org/wiki/Harpsichord
Harpsichord (with two keyboards) in action

https://www.youtube.com/watch?v=GMPIMUuE7yI
**Forte piano: ~1700**

Interior generally made of wood, without the metal frame of modern pianos.

Early fortepiano keyboards spanned four octaves; this increased to six by the end of Beethoven’s life in 1827. (Beethoven’s piano works were actually written for fortepiano.)

The performer can vary the volume of individual notes; the tone is a little different from that of a modern piano.

“Forte piano” is Italian for “Loud soft.”

https://en.wikipedia.org/wiki/Forte_piano

Forte piano by Johann Andreas Stein (Augsburg, 1775) - Berlin, Musikinstrumentenmuseum
Fortepiano demo

https://www.youtube.com/watch?v=BHSOAThYQUM

(start around 2:45)
Modern piano: ~1825

“piano” is short for “pianoforte.”

Interior uses a steel frame to hold the strings, and transfer vibrations to the sound board.

Most keyboards span 7½ octaves and comprise 88 keys.

The 19th century saw lots of technical innovations in the design and construction of the instruments.

The key and hammer mechanism is complicated!
Piano keyboard

7 ½ octaves, 88 keys spanning A1 – C8. “Middle C” is C4.

A4 pitch (frequency) is 440 Hz.

http://www.sciencebuddies.org/Files/3681/5/Music_img023.jpg
It’s progress, not just change

The newer instruments were more nimble and gave musicians greater control, richer tone, and increased range.

Modern Steinway concert grand piano [16]
Charlotte Mattax Moersch

Today’s guest speaker:

• Professor of Harpsichord and Chair of the Harpsichord/Organ Division

• BA: Yale
MM: Juilliard
DMA: Stanford

Rapid Baroque: A Five-Minute History ©2016 George Gollin
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[22] [http://upload.wikimedia.org/wikipedia/commons/6/6a/Johann_Sebastian_Bach.jpg](http://upload.wikimedia.org/wikipedia/commons/6/6a/Johann_Sebastian_Bach.jpg), visited February 20, 2011.


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