

Composition

The word “composition” typically has two meanings; the first is an individual work of music (i.e. a *composition*) and the second is the *process* of creating a work of music. A person who creates a work of music is called a composer. Sometimes, the term composition can mean the *structure* of a work of music, or the structure of another creative work, for example the composition of a painting. This entry concentrates on the practice of composing music.

The act of musical composition is the practice of arranging musical material into a final piece. This involves the time-ordering of the material as well as the ordering of simultaneous events. The structure and relationships of the simultaneous events is sometimes called the vertical structure or harmonic structure. The musical material is most typically note events to be played by an instrument, but in modern times it could be groups of notes, it could also be pre-recorded material such as a digital audio file, and sometimes it may be abstract sounds which are to be arranged into a piece of music (see Electronic Music). The act of composition implies prior planning and thought and it is often used to describe well-planned music as opposed to improvised music, however improvisation can be described as instant or spontaneous composition.

Musical composition is a dominant activity in Western musical practice and culture. It is not as dominant in other cultures or musical practices, some of which are dominated by improvisatory practice or traditional music. As such, much of this discussion necessarily concentrates on Western music composition.

History and notation

Typically, a work of music is composed by writing out the note events to be performed, in standard musical notation. Notation allows a piece of music to be played more-or-less the same from one performance to another. Particular notation systems exist for specialized instruments and music, for example graphical notation, but they are far less common than standard notation. Music was composed before musical notation was widely used, but pieces would be performed from memory and transmitted from one person to another by playing and memorizing them, with the obvious difficulty that this has for repeatable performances. Thus, musical composition is intimately linked with musical notation systems, because this is a way to express musical ideas and store them for future performance. Music notation developed in different parts of the world at different times. In Asia there is evidence of music notation from about 2000 BC. Around 850 AD in Europe, Catholic monks began developing musical notation so that their chants could be repeated and eventually performed in other churches. Consequently, in Western Europe, musical notation was initially developed by the Catholic Church to ensure that church services were the same from one place to the next, and so it can be seen as aiding in social control. Musical notation has developed extensively from the early beginnings and now the notation that developed in Western Europe has the precision and flexibility to be dominant worldwide. By using notation systems, not only are repeatable performances possible, but also pitch and rhythmic organization is possible that is more complex than can be easily remembered or imagined. The development of notation systems allowed the practice of composition to develop and for the creation of more complex music than was possible without musical notation. The invention of printing had a major impact on the distribution of musical compositions and therefore on the dissemination of various musical ideas and styles.

There were several eras in Western musical history where the music had common features, and composers often deliberately and systematically created music with these features to accommodate what was acceptable or popular at the time. These are broadly characterized in the table below, along with some of the significant composers of the era, and it briefly illustrates how compositional practice and thinking developed through these years:

Name	Period	Characteristics	Significant Composers
Medieval	500 – 1400	Relatively simple music exists widely. Notated music is dominated by plainsong from the Church. Secular music is abundant with folk songs and popular songs and tunes played by troubadours.	H. von Bingen (1098–1179)
Renaissance	1400 – 1600	Smoother and more balanced polyphony develops, along with ornamental instrumental parts to accompany sacred music and complex counterpoint.	G. P. Palestrina (1525–1594)
Baroque	1600 – 1760	Instrumental music becomes dominant for the first time and counterpoint is the main driving force of much secular and sacred music. The concept of music as a work of art in itself emerges.	G. F. Handel (1685–1759) J. S. Bach (1685–1750)
Classical	1730 – 1820	Most music is of the form of a clear melody with an accompaniment including more advanced harmony than previous periods. The melodies are voice-like, allowing singers to be replaced by instruments. The form of the symphony starts to develop.	F. J. Haydn (1732–1809) W. A. Mozart (1756–1791) L. v. Beethoven (1770–1827)
Romantic	1815 – 1910	Music becomes more emotional, professional orchestras are established and they become much larger and play a larger role in secular culture. Harmony becomes more complex and tends towards chromaticism at the end of the period. The symphony becomes the pinnacle of art music expression. Popular music starts to become more divergent from art music and <i>blues</i> music emerges in America.	F. Chopin (1810–1849) R. Wagner (1813–1883) J. Brahms (1833–1897) G. Mahler (1860–1911) R. Strauss (1864–1949)
Modern	1890 – 1930	A period of enormous changes where fundamental prior concepts of harmony are challenged. 12-tone music develops and rhythm goes beyond metrical pulse to complex rhythms and arrhythmic elements. Blues develops into ragtime and jazz.	A. Schoenberg (1874–1951) B. Bartók (1881–1945)
20 th century	1901 – 2000	Music is revolutionized by technology, radio, recording and electronics. Many composers embrace dissonance, noise, and all sounds as valid musical sounds. Computers and electronic synthesis are used for composition and performance. Technology revolutionized listening, including portable music players and private listening via headphones. Popular music is	I. Stravinski (1882–1971) E. Varèse (1883–1965) J. Cage (1912–1992) I. Xenakis (1922–2001)

		similarly revolutionized by technology, but it remains harmonically and rhythmically less complex than art music, although it becomes increasingly diverse.	G. Ligeti (1923–2006) K. Stockhausen (1928–2007)
21 st century	2001 – present	21 st century art music currently favors multiple styles and a montage approach to composition where composers are free to use any style or styles of music at any time or simultaneously. This can be seen as an outgrowth of postmodernism. Popular music takes on some of these features, it is also slightly more adventurous harmonically and embraces diverse styles.	

Tuning and temperament

Western music, and some others, since the early 17th century is played in what is called “equal temperament”, where the octave is divided into 12 equal logarithmic parts as 12 equal frequency *ratios* (see entry on Tuning and temperament). This has had a significant impact on composition because it allowed a more sophisticated harmony to be developed, and much of the concern of composition is with harmony. Many other composers, such as Harry Partch in the early 20th century, have developed or used microtonal tuning systems where there are more than 12 notes to the octave. This offers composers more options for harmony and melodic expression. Many non-western musical traditions also use unique tuning systems that are different to equal temperament.

Forms

Music was probably created and performed in very ancient times to accompany other activities such as dancing, working, ceremonial occasions, religious or ritualistic activity and so on, rather than as an end in itself. Sometimes music may have been performed to imitate natural sounds (such as birdsong) or was potentially inspired by them.

Various styles of music were developed in early Western culture, from sacred music for the church, diverse cultural traditions, secular music for dances, entertainment, celebrations and important occasions, particularly for royalty and the nobility. Composers managed to write for all of these occasions, and some composers created pieces for diverse purposes simultaneously.

Creating music for such different purposes led to different *forms* of music; sacred music might have one form for the purpose of illustrating or glorifying a sacred text, requiring it to be a specific length and in a particular arrangement, and a secular piece for a dance might need to be at a particular speed and have a certain duration with a specific arrangement of rhythmic accents. Thus many forms of music have evolved over the years, from small dance forms to sacred pieces to major and longer works that are more expressions of art or entertainment.

Many composers today are most concerned with the concept of *form*. Form describes the structure of a piece of music, how the material is organized and arranged, and for some composers this is a central concern in their music. Sometimes a piece of music is *through composed*, or composed in a linear fashion without significant pre-planning or restriction. However, many forms of music were dictated by the function of the music, for example a

Mass for a religious ceremony or music for a type of dance. Music developed other forms, such as A–B–A (*ternary* form) where there is a first part, A, followed by a related but different part B, and then A is repeated. Ternary form was popular in the 17th and 18th centuries. *Sonata* form, which became widespread in the classical period, is another way of structuring music and it is more complex than many earlier forms. Sonata form dominated art music organization until the 20th century. Many symphonies are in sonata form, and the individual movements are also often in sonata form. Much popular music, from the time of troubadours to modern times, is in ternary form (e.g. A-B-A-B-A) with verse-chorus structure.

From the beginning decades of the 20th century, there were great social upheavals and changes, from world wars to scientific and technological developments that changed people's outlook on life. The arts responded to this with a sense of greater freedom and experimentation. This led to many composers using non-standard forms as a way to structure a piece of music; these include using scientific ideas and non-musical ideas such as random processes, processes or structures based on science and nature, and so on. This allowed form to be expressed using new concepts such as density and shape transformations. In the field of electronic music, the form of a piece is expressed through timbral changes rather than melodic and harmonic changes.

Form in popular music has not changed greatly from that played by the troubadours in medieval times. Many of the lyric themes today are the same as then (love, freedom, war and so on), and the pieces are dominated by the lyrical content. Popular music, being largely commercial in nature since the beginning of the 20th century and thus influenced by the development of the recording and publishing industries, has also been greatly influenced by technological developments. Recordings started out being about three minutes in length because that was all that was practical with the technology at the start of the 20th century. Popular music today is still based on 3-minute songs, even though there is no longer a technical limitation to the length of a recording.

Composition and music theory

Theory has been related and applied to music since ancient times. Initially, theory was used to develop tuning systems and later it developed to explain why some things sound pleasant. It is important to note that, by-and-large, music theory comes after a composition is made. A composer will create a piece of music to sound good or to be compelling in some way, and a music theorist will come later and create or use theory to explain it. Musical analysis post-dates the musical creation. Thus, composition is *more* than the application of standard music theory, composition is an *expansive* and creative process that often pushes, or even breaks, boundaries or conventions to advance the art of music. Music theory is necessarily a *reductive* practice, finding common elements and relations with a piece or between pieces of music. Occasionally, a theory might precede composition, such as the development of 12-tone theory and compositions in the second Viennese school of the early 20th century. Experiments in the 20th century where music theory is applied to data to create new works of music have been less than compelling in their results. This is evident in the early works of Hiller and Isaacson who tried applying music theory rules to create music with computers in the late 1950s, where they quickly recognized the “average” nature of the results and explored controlled randomness to overcome this.

Composition techniques

Composition techniques and theories are different from music theory in that they are designed to aid in the *creation* of a work of music and not necessarily concerned with the *understanding* of the piece. It is possible to say that each composer uses a unique technique, but there are also techniques unique to each style of music that composers utilize. For example, in the baroque era there were stylistic elements such as counterpoint and ornamentation, and composers would use techniques to create works with these features.

Much composition technique usually concerns creating melodies and harmonies. Often melodies have a relationship to the voice, although purely instrumental music is not limited in this way. Harmonic elements may have strong determinants due to the form being composed (for example a baroque mass or an early 20th century blues), or they may be freer depending on the music being composed.

More modern composition techniques developed initially soon after the turn of the 20th century. Arnold Schoenberg identified that the arc of harmonic development in Western music had been leading to more chromatic music. Schoenberg reasoned that if music was becoming more chromatic, the way to make it absolutely chromatic was to use all 12 notes of the diatonic scale and not to reuse a note until all of the other 11 had been used. This was known as 12-tone music and some significant pieces were written in this technique. When the composer chooses the order of the 12 notes (called the tone row), they can also use the reverse order, called the retrograde, they can also use the inversion and the retrograde inversion of the row. This developed into *serialism*, a strict discipline that attempts to similarly order other musical elements such as note duration, dynamics, timbre and so on. Serialism was the dominant compositional technique of the mid 20th century, espoused by many composers such as Anton Webern, Alban Berg, Karlheinz Stockhausen, Pierre Boulez, Luigi Nono, and Milton Babbitt, and this is sometimes called the second Viennese school. However, much of the music from this period was criticized for not appealing to a wide enough audience and that composers had alienated their audience. Some composers such as Pärt, Stravinsky and Cage used serialism much more selectively or only in part of a composition, as did some jazz composers such as Bill Evans.

Randomness became a feature of the work of many 20th century composers. The benefits of using randomness were quickly appreciated; new material could be created that was beyond the imagination of the composer, and the composer could select the best parts. Some composers, such as John Cage, embraced randomness and used it in a particularly pure fashion without intervention, often so that one performance of a work could bear only a passing resemblance to another performance of the same work. In contrast, Iannis Xenakis used randomness in a highly controlled way, say in some details of the work.

There were other composers of the 20th century who embraced what became called *minimalism*, where a piece of music was stripped to its essential elements and often used repeating motifs and ostinato rhythms, often taking cues from non-western musical practice. This is sometimes seen as a reaction to serialism and randomness, and their complexity and difficulty for an average audience.

One of the strongest techniques to emerge in the 20th century was *algorithmic composition*, where composers used formal methods or processes to generate musical material, often from other data. Lejaren Hiller, Iannis Xenakis and Gottfried Michael Koenig are all prime examples of algorithmic composers. Hiller experimented with using a computer to

generate musical material based on various models at the end of the 1950s. When Hiller used standard music theory as the basis for generating material, he noticed that it gave him an average result; music theory usually being an averaging of other compositions. Hiller created the most successful music using conditional probabilities called Markov chains and tightly controlled randomness. Xenakis, uniquely, was an architect as well as a composer and he used formal methods to describe building techniques and the structure of music. By building mathematical models and using them to create compelling compositions, Xenakis validated his approach, which used a range of techniques from controlled randomness, mathematical processes, natural processes (such as the movement of molecules in a gas) and so on. Xenakis was often more concerned with the *macro* control (form or structure) of a composition or an element of a musical work; for example, by shaping the pitch contours or event densities, and letting the process determine the details such as individual note pitches and durations. Koenig was a serial composer and he took another approach embracing algorithmic techniques. By building simple abstractions that generalized his compositional practice as computer programs, Koenig developed systems that he could use to create musical material essentially in his own style.

With the developments in audio technology in the early 20th century, there was a development of electronic music using sound itself, recorded or synthesized, as the fundamental element, and pieces created using montage techniques, initially by editing tape but later using a digital audio workstation. For electronic music, composition technique could involve sound synthesis, recording and editing sounds, and working with technology. This was extended via computer music, which unified the synthesis of sound with compositional structures, making it the great musical adventure of the 20th century.

At the later part of the 20th century and the beginning of the 21st century, composers have embraced multiple styles and techniques to deliver the musical result they are seeking. Many styles exist simultaneously, from neo-romanticism to minimalism, post-modernism, new modernism and complexity. Composers today routinely use whatever technique is suitable for the element of a composition that they are working on. Some contemporary composers, such as Roger Reynolds and Clarence Barlow, explicitly attempt to align their compositional structures with the perceptual capabilities, experiences, and aesthetic interests of listeners. Such an approach implies that composition can be guided by an understanding of perception and cognition – a controversial idea proposed by music theorist Fred Lerdahl in the mid 1980s. Complete stylistic freedom marks the beginning of the 21st century with composers seeking to find meaningful ways to create and present music.

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See Also:

Computer Music, Electronic Music, Tuning and Temperament

Further Reading:

Griffiths, P. (2011) *Modern Music and After 3rd edition*. Oxford University Press, New York.

Cox, C. & Warner, D. eds. (2004) *Audio Culture: Readings in Modern Music*. The Continuum International Publishing Group, New York.