7

The Twentieth Century and Beyond

N. Alan Clark and Thomas Heflin

7.1 OBJECTIVES

1. Demonstrate knowledge of historical and cultural contexts of the twentieth century through today

2. Recognize musical movements that occurred during the twentieth century

3. Aurally identify selected music of the twentieth century, making critical judgments about its style and uses

7.2 KEY TERMS

- Aaron Copland
- Alban Berg
- Anton Webern
- Arnold Schoenberg
- atom bomb
- Atonal
- Claude Debussy
- *Elektronische Musik*
- Expressionism
- George Gershwin
- Igor Stravinsky
- Impressionism
- John Williams
- Karlheinz Stockhausen
- Koji Kondo

- Laptop orchestra
- machine gun
- Maurice Ravel
- *Musique Concrète*
- Pierre Schaeffer
- Polytonality
- Primitivism, Neoclassicism
- Serialism
- Steve Reich
- Synthesizer
- telegraph
- telephone
- Thomas Edison
- through-composed
- twelve-tone techniques

7.3 INTRODUCTION AND HISTORICAL CONTEXT: 1900 TO TODAY

Music, like the other arts, does not occur in a vacuum. Changes brought on by advances in science, and inventions resulting from these advances, affected composers, artists, dancers, poets, writers, and many others at the turn of the twentieth century. Inventions from the late Romantic era had a great impact on economic and social life in the twentieth century. These inventions included the light bulb, the telephone, the automobile, and the phonograph. Thomas Edison invented the phonograph in 1877 and patented it in 1878. While researching means to improve the telegraph and telephone, Edison developed a way to record sound on tinfoil-coated cylinders. He would speak into a mouthpiece and the recording needle would indent a groove into the cylinder. The playing needle would then follow the groove, and the audio could be heard through a horn speaker (in the shape of a large cone). Edison improved his invention and formed the Edison Speaking Phonograph Company to market the invention. Edison's phonograph had an especially great influence on the spread of music to larger audiences; he also advertised the device's usefulness for dictation and letter writing, recording books for the blind, recording and archiving family members' voices, music boxes, toys, and clocks that verbally announce the time with prerecorded voices. In 1917, such audio phonograph devices were purchased by the U.S. Army for $60 each and used to make troops feel closer to home during World War I. Listen to this rare audio clip of Edison expressing his thanks to the troops for their service and sacrifice: http://www.americaslibrary.gov/assets/aa/edison/aa_edison_phonograph_3.wav

What defines twentieth-century music? Clearly, the twentieth century was a time of great upheaval in general, including in music. The sense of rapid change and innovation in music and art of this period is a reflection of the dramatic changes taking place in the world at large. On a political level, the twentieth century was one of the bloodiest and most turbulent periods in history. While wars are a constant throughout all of human history, the global nature of twentieth-century politics resulted in conflicts on a scale never before seen; World War II alone is widely regarded as the deadliest conflict in human history in terms of total deaths, partly due to advancements in technology such as machine guns, tanks, and eventually the atom bomb.

It's no surprise that music of this period mirrored the urgency and turmoil in the world at large. For many composers, the raw emotion and sentimentality reflected in the music of the nineteenth century had grown tiresome, and so they began an attempt to push the musical language into new areas. Sometimes, this meant bending long-established musical rules to their very limits, and, in some cases, breaking them altogether. One of the by-products of this urgency was fragmentation. As composers rushed to find new ways of expressing themselves, different musical camps emerged, each with their own unique musical philosophies. We now categorize these musical approaches with fancy terms ending in "-ism,"

such as "primitivism," "minimalism," "impressionism," etc. We will discuss many of these individual movements and techniques as well as address what makes them unique, but before we do this, let's first talk about those things that most (but not all) music of the twentieth century has in common.

7.3.1 Melody

One of the ways in which composers deviated from the music of the nineteenth century was the way in which they constructed melodies. Gone were the singable, sweeping tunes of the Romantic era. In their place rose melodies with angular shapes, wide leaps, and unusual phrase structures. In some cases, melody lost its status as the most prominent feature of music altogether, with pieces that featured texture or rhythm above all else.

7.3.2 Harmony

The most obvious difference between twentieth-century music and what preceded it is the level of harmonic dissonance. This is not a new phenomenon. The entire history of Western music can be viewed in terms of a slowly increasing acceptance of dissonance, from the hollow intervals of the Middle Ages all the way to the lush chords of the nineteenth century. However, in the twentieth century the use of dissonance took off like a rocket ship. Some composers continued to push the tolerance level for dissonance in the context of standard tonal harmony. One example is through the use of **polytonality**, a technique in which two tonal centers are played at the same time. Some composers sought to wash their hands of the rules of the past and invented new systems of musical organization. Often, this resulted in music that lacked a tonal center, music that we now refer to as **atonal**. Some composers such as Igor Stravinsky even tried their hand at more than one style.

7.3.3 Rhythm

In preceding centuries, music was typically relegated to logical, symmetrical phrases that fell squarely into strict meters. That all changed at the dawn of the twentieth century. Igor Stravinsky's *Rite of Spring* famously undermined the audience's expectation of the role of rhythm by abandoning strict meter for rapidly changing time signatures. Instead of the steady familiar time signatures containing three or four beats, Stravinsky peppered in measures containing an odd number of beats such as five or seven. This created a sense of unease in the audience by removing something from the music that they had previously taken for granted: a steady and unwavering sense of meter. In America, the rhythmic innovations of ragtime and jazz influenced both Western art music and popular music from that time on. Especially important was the use of syncopation, which was addressed in the first chapter.

7.3.4 Texture and Timbre

As memorable melodies and traditional harmonies began to break down, some composers looked to new tonal colors through the use of new instruments such as **synthesizers**, instruments that electronically generate a wide variety of sounds. In other cases, traditional instruments were used in nontraditional ways. For example, John Cage famously composed piano pieces that called for objects such as coins and tacks to be placed on the strings to create unique effects.

7.3.5 The Role of Music

Music has had many roles throughout history. The music of Josquin helped enhance worship. The works of Haydn and Mozart reflected the leisurely life of the aristocracy. Opera served as a form of musical escapism in the daring and ambitious works of composers such as Wagner. In the twentieth century, music began to move away from entertainment into the realm of high art. Composers sought to challenge the listener to experience music in new ways and in some cases to reevaluate their fundamental notions of what music is. This sense of revolution was not limited to music; it was also taking place throughout the art world. As we discuss the many "-isms" in music, we will see direct parallels with the visual arts.

7.3.6 Compositional Styles: The "-isms"

Near the beginning of the twentieth century, numerous composers began to rebel against the excessive emotionalism of the later Romantic composers. Two different styles emerged: the Impressionist style led by Claude Debussy and Maurice Ravel, and the atonal Expressionist style led by Arnold Schoenburg. Both styles attempted to move away from the tonal harmonies, scales, and melodies of the previous period. The impressionists chose to use new chords, scales, and colors while the expressionists developed a math-based **twelve-tone** system that attempted to completely destroy tonality.

7.3.7 Impressionism

The two major composers associated with the Impressionist movement are Claude Debussy and Maurice Ravel. Both French-born composers were searching for ways to break free from the rules of tonality that had evolved over the previous centuries. **Impressionism** in music, as in art, focused on the creator's impression of an object, concept, or event. The painting labeled Image 7.1, by the French impressionist painter Claude Monet, suggests a church or cathedral, but it is not a clear portrait. It comprises a series of paint daubs that suggest something that we may have seen but that is slightly out of focus.

In the painting labeled Image 7.2, we see how Monet distilled a scene into its most basic elements. The attention to detail of previous centuries is abandoned in favor of broad brushstrokes that are meant to capture the momentary "impres-

sion" of the scene. To Monet, the objects in the scene, such as the trees and boats, are less important than the interplay between light and water. To further emphasize this interplay, Monet pares the color palate of the painting down to draw the focus to the sunlight and the water.

Figure 7.1 | *Rouen Cathedral: The Portal (Sunlight)*
Author | Claude Monet
Source | Met Museum
License | Public Domain

Figure 7.2 | *Impression, soleil levant* (Impression Sunrise)
Author | Claude Monet
Source | Wikimedia Commons
License | Public Domain

Similarly, Impressionist music does not attempt to follow a "program" like some Romantic compositions. It seeks, rather, to suggest an emotion or series of emotions or perceptions.

Listen to the example of Debussy's *La Mer* (The Sea) linked below. Pay particular attention to the way the music seems to rise and fall like the waves in the sea and appears to progress without ever repeating a section. Music that is written this way is said to be "**through-composed**." The majority of impressionist music is written in this manner. Even though such music refrains from following a specific program or story line, *La Mer* as music *suggests* a progression of events throughout the course of a day at sea. Note that Debussy retained the large orchestra first developed by Beethoven and used extensively by Romantic composers. This music, unlike the **Expressionism** we will visit next, is tonal and still uses more traditional scales and chords.

Debussy, *La Mer*

https://www.youtube.com/watch?v=hlR9rDJMEiQ

Impressionist composers also liked using sounds and rhythms that were unfamiliar to most Western European musicians. One of the most famous compositions by Maurice Ravel is entitled *Bolero*. A Bolero is a Spanish dance in three-quarter time, and it provided Ravel with a vehicle through which he could introduce differ-

ent (and exotic, or different sounding) scales and rhythms into the European orchestral mainstream. This composition is also unique in that it was one of the first to use a relatively new family of instruments at the time: the saxophone family. Notice how the underlying rhythmic pattern repeats throughout the entire composition, and how the piece gradually builds in dynamic intensity to the end.

Maurice Ravel, *Bolero*

https://www.youtube.com/watch?v=A2BYkJS8GE0

Unlike composers such as Bach, Ravel was not born into a family of musicians. His father was an engineer, but one who encouraged Ravel's musical talents. After attending the Paris Conservatory as a young man, Ravel drove a munitions truck during World War I. Throughout all this time, he composed compositions of such lushness and creativity that he became one of the most admired composers in France, along with Claude Debussy. His best known works are the aforementioned Bolero, Concerto in D for Piano, La valse, and an orchestral work entitled Daphnes et Chloe.

Daphnis et Chloé was originally conceived as a ballet in one act and three scenes and was loosely based on a Greek drama by the poet Longus. The plot on which the piece is based concerns a love affair between the title characters Daphnis and Chloe. The first two scenes of the ballet depict the abduction and escape of Chloe from a group of pirates. However, it is the third scene that has become so immortalized in the minds of music lovers ever since. "Lever du jour," or "Daybreak," takes place in a sacred grove and depicts the slow build of daybreak from the quiet sounds of a brook to the birdcalls in the distance. As dawn turns to day, a beautiful melody builds to a soaring climax, depicting the awakening of Daphnis and his reunion with Chloe.

After the ballet's premier in June of 1912, the music was reorganized into two suites, the second of which features the music of "Daybreak." Listen to the recording below and try to imagine the pastel colors of daybreak slowly giving way to the bright light of day.

LISTENING GUIDE
For audio, go to: https://www.youtube.com/watch?v=tPuzMJNz9c8
Composer: Maurice Ravel
Composition: *Daphnis and Chloe, Suite No. 2: "Lever du jour"*
Date: 1913
Genre: Orchestral Suite
Form: Through-composed
Performing Forces: orchestra/chorus

Timing	Performing Forces, Melody, and Texture
0:00	Murmuring figures depicting a brook. Woodwinds, strings and harps, with more instruments entering periodically. Languid and flowing. Tonal, with ambiguous key centers and lush harmony typical of much Impressionistic music.
0:52	Sweeping melody reaches first climax, and then dies down slowly. Strings over murmuring accompaniment.
1:09	Strings and clarinet enter with song-like melody. Melody over murmuring strings.
1:30	Flute enters with dance-like melody. Melody over murmuring strings
1:48	Clarinet states a contrasting melody. Melody over murmuring strings.
2:13	Chorus enters while strings continue melody. Melody over murmuring strings and "Ah" of chorus.
2:53	Melody rises to a climax and then slowly diminishes. Full Orchestra and Chorus.
3:13	Sweeping melody enters in strings to a new climactic moment. Full Orchestra.
3:19	Motif starts in low strings and then rises through the orchestra. Full Orchestra.
4:05	Chorus enters for a final climactic moment, then slowly dies away. Full Orchestra and Chorus.
4:34	Oboe enters with repeating melody.
4:58	Clarinet takes over repeating melody and the piece slows to a stop. As the piece comes to an end, the texture becomes more Spartan with fewer instruments.

7.4 EXPRESSIONISM AND SERIALISM

While the Impressionist composers attempted to move further away from romantic forms and romantic harmony, some Expressionist composers succeeded in completely eliminating harmony and tonal melody (melody based on a particular key) from their music. The resultant sounds were often not very melodically and harmonically pleasant to hear and, as a result, the Expressionist style of music did not (and still does not) appeal to the majority of audiences.

The name of this style period can be confusing for some. The Expressionist period was not a time when composers sought to express themselves emotionally in a romantic, beautiful, or programmatic way. Due to the nature of the sounds

produced by the system of composition described below, **Expressionism** seems more appropriate for evoking more extreme, and sometimes even harsh, emotions. Using this experimental style of writing, composers such as Arnold Schoenberg (1874-1951) attempted to intentionally eliminate what we call tonality; music that is based on scales and the progression (movement) of chords from one to another.

In Edward Munch's famous painting, *The Scream* (Image 7.3), we see an excellent example of the parallel movement of expressionism taking place in the visual arts. Expressionists looked inward, specifically to the anxiety they felt towards the outside world. This was in stark contrast to the impressionists, who looked to the beauty of nature for inspiration. Expressionist paintings relied instead on stark colors and harsh swirling brushstrokes to convey the artist's reaction to the ugliness of the modern world.

Abstract Expressionism took this concept to a greater extreme, by abandoning shape altogether for pure abstraction. This style is typified by the works of the American painter Jackson Pollock (see Image 7.4).

Figure 7.3 | *The Scream*
Author | Edvard Munch
Source | Wikimedia Commons
License | Public Domain

Many of the early works of Austrian-born Arnold Schoenberg (1874-1951) exemplified an expressionistic musical style. He is most famous for his experiments with atonality, that is, music without a tonal center. His music was highly dissonant and sounded quite radical when compared to earlier music, which utilized dissonance only as a means to eventually return to the stasis of consonance. However, Schoenberg saw dissonance not as a means to an end, but as the end itself. His music invited the listener to revel in various levels of dissonance, and many listeners were never able to adjust.

Born in Austria, and of Jewish descent, Schoenberg was already composing by the age of nine. While in his teens, he studied composition with the Austrian composer and conductor Alexander Zemlinsky. In 1901 he moved to Berlin where he was befriended and mentored by the German composer Richard Strauss. Three years later in 1903, Schoenberg returned to Austria and began a long association with the renowned composer Gustav Mahler who became one of his strongest supporters.
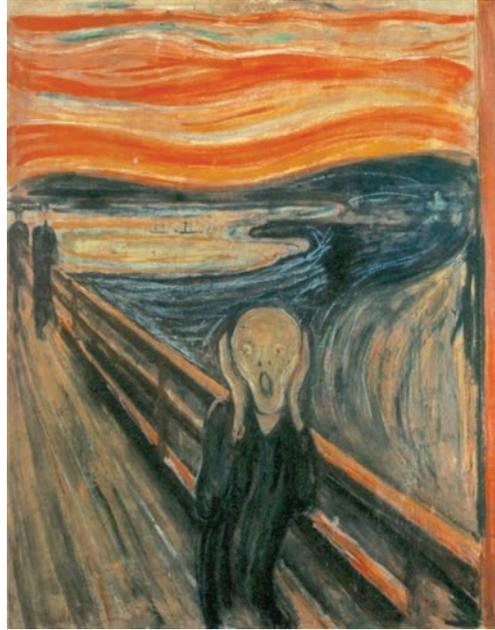

Figure 7.4 | *No. 5*
Author | Jackson Pollock
Source | Wikipedia
License | Fair Use

In 1909, Schoenberg composed the first complete work that completely did away with tonality. This piano composition was one of three that together are listed as his Opus 11 and was the first piece we now refer to as being completely atonal (without tonality). Schoenberg's most-important atonal compositions include: Five Orchestral Pieces (1909), Pierrot Lunaire (1912), Die Jakobsleiter (Jacob's Ladder - begun in 1917 but never finished), Die glückliche Hand (The Lucky Hand - 1924), and Erwartung (Expectation - 1924) for soprano and orchestra.

Schoenberg famously developed a system whereby the twelve notes of the chromatic scale were randomly organized into scale units that he called the **twelve-tone** row. These rows could then be further "serialized" (organized in random fashion) by a number of different techniques. This idea of assigning values to musical information is called **serialism**. In 1921 Schoenberg composed his Piano Suite opus 25, the first composition written using the 12-tone method. Each 12-tone composition is built from a series of 12 different pitches that may be arranged in a number of different ways. The original row may be played forward, backwards (retrograde), upside down (inverted), and backwards and inverted (retrograde inversion). All of the melodies and harmonies in a 12-tone piece must be derived in some way from the original row or from fragments of the original row.

In 1925 Schoenberg was hired by the Prussian Academy of Arts in Berlin to teach composition, and he would most likely have continued his career as teacher and composer in Europe were it not for the rise of the Nazi party and their subsequent persecution of European Jews. In 1933 he was released from the Academy and moved first to Paris and then to Boston. In 1934 he settled in California and held teaching positions first at the University of Southern California (1935-36) and then the University of Central Los Angeles (1936-44).

After immigrating to the United States, Schoenberg reconnected with the Jewish faith he had abandoned as a young man. The sadness he felt because of the personal accounts of the horrible treatment experienced by so many Jews during World War II led to his composition of A Survivor from Warsaw, which was composed for orchestra, male chorus, and narrator. The piece was completed in September 1947 and the entire piece is built on a twelve-tone row. This important work is Schoenberg's dramatization of a tragic story he heard from surviving Polish Jews who were victims of Nazi atrocities during World War II. Schoenberg created a story about a number of Jews who survived the war by living in the sewers of Warsaw. Interestingly, among Schoenberg's many and very specific performance instructions is the request that the narrator not attempt to sing his part throughout the performance.

LISTENING GUIDE
For audio, go to: https://www.youtube.com/watch?v=rGWai0SEpUQ
Composer: Arnold Schoenberg
Composition: *A Survivor from Warsaw*

Date: 1947	

Genre: 12-tone composition for small orchestra, male chorus, and narrator

Form: through-composed

Nature of Text: Narration of Germans' treatment of Jews in Warsaw during WWII

Performing Forces: orchestra, male chorus, and narrator

Timing	Performing Forces, Melody, and Texture
0:35	Trumpet introductory fanfare built from 12-tone row. Trumpets, snare drum, clarinets. Irregular rhythmic figures built from 12-tone row. 12-tone chordal structures built from 12-tone row.
0:46	Celli (cellos) enter with rhythmic motif. Brief medodic motifs move between celli, woodwinds, trumpets, and strings. Rhythms are derived from the 12-tone row and are irregular. 12-tone based chordal structures continue throughout piece.
1:06	Xylophone added.
1:16	Clarinet added. Clarinet completes instrumental introduction.
1:21	Narrator enters. Instrumentation and dynamics are altered to match rise and fall of phrases in narration.
1:57	French Horn enters.
2:19	Narration. Narration much more intense and trumpet fanfare underscores this change.
3:09	Narration. Bass drum begins a steady pulse with snare drum and xylophone irregular rhythms as drama in narration increases.
3:19	Narration switches to German. Narrator begins to shout in German.
3:38	Narration switches back to English. Strings play tremolo in background.
4:05	Narration becomes more introspective. Strings become more lyrical to underscore change in story.
4:20	Orchestra. Orchestra interlude decreases the intensity of the moment.
4:38	Narrator returns.

6:01	Narration. As narrator says "faster and faster" the music begins to accelerate as well.
6:19	Male chorus. Men begin to sing the Jewish prayer Shema Yisroel accompanied by strings. Brass and woodwinds are used as interjections throughout this section.
7:41	Brass join chorus. Intensity in Chorus and Orchestra build.
7:52	Brass continue as chorus ends. Brass and strings build to big climactic moment and conclude piece at 8:01.

Schoenberg's ideas were further developed by his two famous students, Alban Berg and Anton Webern. Together, the three came to be known as the Second Viennese School, in reference to the first Viennese School, which consisted of Hadyn, Mozart, and Beethoven. Born in Vienna, Alban Berg began studying with Schoenberg at the age of 19 and soon became known for his unique compositional style, which fused post-romantic concepts with Schoenberg's cutting edge twelve-tone techniques. Heavily influenced by Richard Wagner, Berg held on to techniques such as the leitmotif and sought to couch his harmonic ideas in tried-and-true forms such as the sonata and fugue. Although he composed many famous pieces, such as his Violin Concerto and his unfinished opera Lulu, he initially made his fame with Wozzeck, an opera based on the drama Woyzeck by German playright Georg Buchner. Berg served during World War I, and much of Wozzeck was composed in 1917, during a period of leave from the Austro-Hungarian Army. The opera consists of three acts, each with five scenes organized around the variations of a musical idea, such as the variations of a theme, a chord, or a rhythmic pattern. Berg himself adapted the libretto from Buchner's original play.

The story of the opera centers on the title character Wozzeck. Like the main character in many romantic operas, he is a tragic figure. However, whereas the operas of the nineteenth century often depicted gods and mythical figures, the story of Wozzeck is couched in a sense of realism and addresses the type of societal problems that Berg may himself have encountered during World War I, problems such as apathy and human cruelty. The character of Wozzeck is that of a pitiful and unremarkable soldier who is tormented by his captain and used for and subjected to medical experiments by a sadistic doctor. Wozzeck, who is often given to hallucinations, eventually goes mad and kills his love interest, Marie, who has been unfaithful. The opera ends after Wozzeck drowns trying to clean the murder weapon in a pond and wading out too far.

Listen to the recording below of act 3, scene 2, the scene in which Wozzeck kills Marie. The scene features a variation on a single note, namely B.

LISTENING GUIDE

For audio, go to:
   https://www.youtube.com/watch?v=7o2knK1mop0

Composer: Alban Berg

Composition: *Wozzeck*

Date: 1924

Genre: Opera

Form: variation on a single note

Nature of Text: Wozzeck and Marie walk by a pond. Wozzeck stabs Marie in throat with a knife.

Performing Forces: orchestra, singers

Timing	Performing Forces, Melody, and Texture	Text and Form
0:00	Instrumental introduction evoking a low, and ominous feeling. Orchestra.	
0:24	Wozzeck and Marie enter. Marie wishes to leave. A syrupy melody in the strings reflects Wozzeck's pleas to Marie to sit down.	Marie: Dort links geht's in die Stadt. 's ist noch weit. Komm schneller! Wozzeck: Du Sollst dableiben, Marie. Kom, setz' Dich. Marie: Abe rich muss fort.
0:45	Marie leaps up, saying, "I must go!" and low ominous notes play underneath as Wozzeck lures her back.	Wozzeck: Komm. Bist weit gegangen, Marie. Sollst Dir die Fusse nicht mehr wund laufen. 's ist still hier! Und so dunkel. – Weisst noch, Marie, wi lang' es jetzt ist, dass wir uns kennen? Marie: Zu Pfingsten drei Jahre. Wozzeck: Und was meinst, wie lang' es noch dauern wird? Marie: Ich muss fort. Wozzeck: Furchst Dich, Marie? Und bist doch fromm! Und gut! Und true!

2:06	A sweet melody in the strings evokes the line by Wozzeck "What sweet lips you have, Marie."	Wozzeck: Was Du fur susse Lippen hast, Marie! Den Himmel gab' ich drum und die Seligkeit, wenn ich Dich noch of so kussen durft! Abe rich darf nicht! Was zitterst?
2:57	Wozzeck says, "Those who are cold shiver no more. You will not shiver in the morning dew," fortelling Marie's death. She asks what he means and the music ceases creating a tense silence.	Marie: Der Nachttau fallt. Wozzeck: Wer kalt ist, den friert nicht meher! Dich wird beim Morgentau nicht frieren. Marie: Was sagst Du da? Wozzeck: nix.
3:40	The music begins to build as Wozzeck prepares to kill Marie.	Marie: Wie der Mond rot aufgeht! Wozzeck: Wie ein blutig Eisen! Marie: Was zitterst? Was Willst?
4:07	The music echoes Wozzeck word by word as he says, "No one, Marie! If not me, then no one!" After the act is done, the orchestra dies down to a single note and Wozzeck exclaims, "Dead!"	Wozzeck: Ich nicht, Marie! Und kein Andrer auch nicht! Marie: Hilfe! Wozzeck: Tot!
5:00	Orchestra Orchestral interlude	

7.5 PRIMITIVISM IN MUSIC

The brilliant Igor Stravinsky (1882-1971) was truly a cosmopolitan figure, having lived and composed in Russia, France, Switzerland, and the United States. His music influenced numerous composers, including the famed French composition teacher Nadia Boulanger. Stravinsky caused quite a stir when the ballet entitled *The Rite of Spring* premiered in Paris in 1913. He composed the music for a ballet that was choreographed by Sergei Diaghilev, and it was so new and different that it nearly caused a riot in the audience. The orchestral version (without the dancing) has become one of the most admired compositions of the twentieth century.

Stravinsky's use of "primitive" sounding rhythms to depict several pagan ritual scenes makes the term "**primitivism**" seem appropriate. Use the listening guide below to follow Stravinsky's *The Rite of Spring*.

LISTENING GUIDE	
For audio, go to: https://www.youtube.com/watch?v=s7pV2cXoqxs	
Composer: Igor Stravinsky	
Composition: *Rite of Spring*, Sacrificial Dance	
Date: 1913	
Genre: Ballet music	
Form: Specific passages accompany changes in choreography	
Performing Forces: Full orchestra	

Timing	Performing Forces, Melody, and Texture
0:00	Flute repeated pattern based on scale tones. Wind and soft plucked stringed accompaniment. Steady slower pulse in accompaniment.
0:22	Muted trumpets state theme. Wind and plucked stringed accompaniment continues.
0:45	Violins enter softly. Wind and plucked stringed accompaniment continues.
0:56	Loud French horn entrance on fanfare-like part. French horn, bass drum, strings.
1:09	Oboe melody alternates with orchestra. Oboe, strings, brass, bassoons.
1:40	Restatement of loud French horn entrance. French horn, bass drum, cymbals, strings.
1:57	Low flute. English horn, flute, clarinet, bass clarinet, muted brass, drum.
2:45	Strings. String section with percussion. Short, hard notes, irregular rhythms.
3:16	Strings. Winds and soft plucked stringed accompaniment.
3:28	Trombones. Winds and soft plucked stringed accompaniment. Triplet trombone fanfare over plucked string parts. Muted trumpets and strings answer.

3:45	Strings. Plucked stringed accompaniment becomes immediately loud.
3:50	Trumpet fanfare. Plucked stringed accompaniment remains loud.
3:59	French horns join fanfare section. Plucked stringed accompaniment remains loud.
4:06	Plucked stringed accompaniment becomes the melody.
4:17	Winds and soft plucked stringed accompaniment.
4:31	Violins. Scale patterns become very fast and loud.
4:40	Silence.
4:41	Strings and percussion. Restatement of section at 2:50.
5:09	Brass and percussion. Brass and percussion. Percussion faster and louder.
5:43	Horn riffs up to high notes. Add high clarinet.
5:49	Silence.
5:50	Strings and percussion. Restatement of section at 2:50 and 4:41.
5:55	Full orchestra. Multiple loud fanfare-like parts in many sections. Piece builds.
6:19	Strings. Similar to 2:50, 4:41, 5:50 but more intense.
6:59	Brass. Full orchestra. Rhythmic figure carries intensity of the dance to end.

7.6 NEOCLASSICISM

In the decades between World War I and World War II, many composers in the Western world began to write in a style we now call **Neoclassicism**. When composing in a neoclassic manner, composers attempted to infuse many of the characteristics of the classic period into their music, incorporating concepts like balance (of form and phrase), economy of material, emotional restraint, and clarity in design. They also returned to popular classical forms like the Fugue, the Concerto Grosso, and the Symphony.

Numerous well-known composers incorporated neoclassic techniques and philosophy into their compositions. Stravinsky was among them, and his ballet

entitled *Pulcinella* (1920) is an early example of neoclassical style. It was based on music that Stravinsky originally thought was written by the Baroque composer Giovanni Pergolesi. Music historians later deduced that the compositions were actually written by contemporaries of Pergolesi and not by Pergolesi himself. Stravinsky borrowed specific themes from these earlier works and combined them with more modern harmonies and rhythms. Listen to how in some sections the music closely approximates the style and sounds of Baroque composers, while in other sections it sounds much more aggressive, primitive, and modern.

Stravinsky, *Pulcinella*

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

One composer who was able to combine elements of neo-Classicism with the traditions of his homeland was Béla Bartók (1881 – 1945). Bartok was born in Nagyszentmiklós, Hungary and was an important figure in the music of the early twentieth century. A noted composer, teacher, pianist, and ethnomusicologist, he was appointed to a position in the Royal Academy of Music in Budapest in 1907 and worked there until 1934. Along with his friend and colleague Zoltán Kodály, Bartók enthusiastically researched and sought out the music of Hungarian peasants, and both composers transcribed the music they found for piano, as well as using it as inspiration for their own original compositions.

In addition to Hungarian folk music, Bartók's style was also influenced by the Romantic music of Strauss and the Hungarian composer Franz Liszt. He was also influenced by Debussy's impressionism and the more modern music of Igor Stravinsky and Arnold Schoenberg. As a result of all of these influences, his music was often quite rhythmic, and it incorporated both tonal and chromatic (moving by half-steps) elements. Bartók composed numerous piano works, six string quartets, and an opera titled *Duke Bluebeard's Castle*, as well as a ballet entitled *The Wooden Prince* (1916), and a pantomime entitled *The Miraculous Mandarin* (1919). His string quartets and his *Concerto for Orchestra* have become part of the standard repertoire of professional performing groups around the world.

LISTENING GUIDE
For audio, go to: https://www.youtube.com/watch?v=bLtEnXinTbU
Composer: Béla Bartók
Composition: Concerto for Orchestra – Movement Five "Finale"
Date: 1944
Genre: Orchestral composition featuring all of the different sections of the orchestra
Form: Concerto in five movements – this is the fifth movement only

Performing Forces: Full Orchestra	
Timing	Performing Forces, Melody, and Texture
26:12	Chord tones. French horns. Tonal scales.
26:20	Violins. Strings and timpani. Fast scale patterns. Tonal scales.
26:38	Violins. Adds flute background figures. Fast scale patterns. Tonal scales.
26:40	Violins. Adds muted brass background figures. Fast scale patterns.
26:49	Violins. Adds full brass and woodwind fanfare like accompaniment. Violin scales and others playing chords.
26:55	Oboes. Brief interlude figure.
26:57	Celli. Scale patterns.
26:58	Violas. Scale patterns.
27:01	Violins. Very fast and high scale patterns.
27:14	Adds brass chords and figures from other strings. Strings and brass. Rhythm changes to include triplets.
27:25	Adds trombones and tuba on low note accents. Strings and brass.
27:33	Flutes and oboes. Begins section featuring different woodwinds.
27:36	Clarinet.
27:44	Oboe.
27:47	Woodwinds and violins. Section featuring alternation between fast string scale figures and fast woodwind scale figures.

28:01	Strings. Adds timpani.
28:05	Trombones.
28:15	Strings.
28:18	Bassoon. Section featuring bassoons, then clarinet, then oboe, then flute. Sections follow one another playing similar material.
28:30	Flute and adds bass clarinet. Lyrical section with flute melody and clarinet accompaniment.
28:42	Bassoon.
28:47	Violins. Oboes in background.
28:52	Violins. Clarinet in background.
28:56	Violins. Adds French Horn.
29:02	Oboe. Clarinet in background.
29:10	Violins. Tempo speeds up.
29:14	Trumpet. Fanfare begins. Rhythmic fanfare figures. Fanfare outlines minor sounding tonality.
29:25	Trumpet. Fanfare continues. Rhythmic fanfare figures. Fanfare outlines minor sounding tonality.
29:32	Trumpets. Adds French Horns to background. Fanfare continues.
29:43	Adds flute. Fanfare continues.
29:53	Rhythm changes.
30:02	Tympani and harp. Harp begins simple background beat pattern. Rhythm changes.
30:07	Violins.

30:14	Violas. Violas state a new melody - Woodwinds in background.
30:25	Violins take over the melody. Woodwinds in background.
30:40	Celli take over the melody. Violins and woodwinds in background.
30:56	String section. New section begins.
31:05	Oboes. Woodwinds and strings.
31:30	Oboe states new fragment of a theme.
31:35	Horn repeats fragment.
31:41	Woodwinds pass fragment around. Woodwinds and strings.
31:49	Strings. String section and woodwinds. New, faster and more intense rhythms.
32:06	Timpani enters.
32:09	Strings. Strings restate fast scale figures from earlier in movement. Fast scale figures.
32:25	Brass and strings alternate. Full orchestra with timpani. Fanfare rhythm.
32:34	Brass. Brass feature.
32:44	Strings. Strings begin to restate scale figures.
32:55	Strings. String parts get slower and softer. Rhythm slows.
33:04	Strings. Soft string interlude. Slower more relaxed.
33:31	Woodwinds. Woodwinds play quiet interlude section.
33:54	Bassoon followed by other woodwinds. Woodwinds build to final brass fanfare – strings in background.

34:12	Brass enters softly with fanfare figures and builds. Brass and strings. Complexity increases with dynamic increase.
34:29	Woodwinds join brass. Continues to build.
34:47	Brass. Big brass fanfare with fast string patterns in background. Slower but stronger brass, fast strings.
35:05	Strings and brass alternate. Strings alternate with loud brass fanfare figures to end. Faster, more aggressive rhythms.

7.7 MINIMALISM

Minimalism is a movement that began in New York during the 1960s, and it stands in stark contrast to much of the music of the early twentieth century. Minimalists composers sought to distill music down to its fundamental elements. Minimalist pieces were highly consonant (unlike the atonal music of earlier composers) and often relied on the familiar sounds of triads. Instead of featuring rhythmic complexity, minimalist composers established a steady meter. And, unlike twelve-tone music, which avoided repetition at all costs, minimalist composers made repetition the very focus of their music. Change was introduced very slowly through small variations of repeated patterns, and, in many cases, these changes were almost imperceptible to the listener. Arguably the most famous two composers of the minimalistic style were Stephen Reich (b.1936) and Philip Glass (b.1937). Glass composed pieces for small ensembles comprised of wind instruments, voices, or organ, while Reich's music often featured various percussion instruments.

But minimalism wasn't confined to the realm of music. In Barnett Newman's (1905-1970) painting (Image 7.5) *Voice of Fire* (1967), we see that many of these same concepts of simplification applied to the visual arts. Minimalist painters such as Newman created starkly simple artwork consisting of basic shapes, straight lines, and primary colors. This was a departure from the abstract expressionists such as Jackson Pollack in the same way that Steve Reich's compositions were a departure from the complexity of Arnold Schoenberg's music.
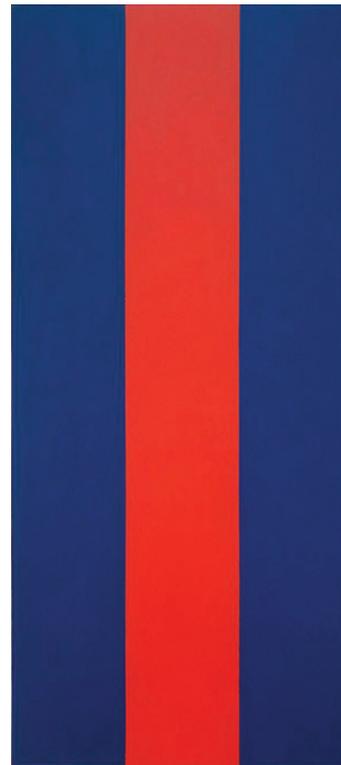

Figure 7.5 | *Voice of Fire*
Author | Barnett Newman
Source | Wikimedia Commons
License | Public Domain

Steve Reich's *Music for 18 Musicians* is a composition featuring eleven related sections performed by an unorthodox ensemble consisting of mallet instruments, women's voices, woodwinds, and percussion. Section VII below is constructed of a steady six-beat rhythmic pattern that is established at the beginning of the piece. Over this unfaltering rhythmic pattern, various instruments enter with their own repeated melodic motifs. The only real changes in the piece take place in very slow variations of rhythmic density, overall texture, and instrumental range. All of the melodic patterns in the piece fit neatly into a simple three-chord pattern, which is also repeated throughout the piece. Most minimalistic pieces follow this template of slow variations over a simple pattern. This repetition results in music with a hypnotic quality, but also with just enough change to hold the listener's interest.

LISTENING GUIDE	
For audio, go to: https://www.youtube.com/watch?v=3hML1TuDcRI	
Composer: Steve Reich	
Composition: Music for 18 Musicians	
Date: 1976	
Genre: Minimalist Composition comprising eleven sections	
Performing Forces: orchestra	
Timing	**Performing Forces, Melody, and Texture**
0:00	Six-beat motif repeated by marimbas, mallet percussion, pianos and shaker. Steady meter is established throughout the piece. Only the texture changes. Single tonic minor chord.
0:20	Strings, woodwinds and voices enter with repeated motif, creating a more dense texture. Mallet percussion, pianos, shaker, strings, women's voices and clarinets.
0:40	Vibraphone enters, voice, woodwind and string parts begin to change, rising and becoming more dense. Underlying three-chord motif is established and repeated.
3:05	Piece has reached its apex. From here the string, voice, and woodwind melody slowly descends and becomes less rhythmically dense.
3:40	Piece returns to original texture of mallet instruments. mallet percussion, pianos, and shaker with simple closing melody played by vibraphone. Returns to single minor chord.

7.8 THE AMERICAN STYLE

As we will see in a later chapter, jazz is a uniquely American style. American orchestral composers were becoming aware of jazz in the early twentieth century, and George Gershwin (1898-1937) was no exception. Gershwin was a brilliant talent who dropped out of school at the age of fifteen to begin a professional career playing piano in New York's "Tin Pan Alley." After several years of success as a performer and composer, he was asked by the famous band leader Paul Whiteman to compose a work that would help raise people's perceptions of jazz as an art form. The resulting work, *Rhapsody in Blue,* combines the American blues style with the European symphonic tradition into a brilliant composition for piano and orchestra. Listen to how beautifully Gershwin combines these elements via the link below.

Gershwin, *Rhapsody in Blue* (1924)

https://www.youtube.com/watch?v=BxowOVIdnR0

In addition to *Rhapsody in Blue*, George Gershwin is also known for his opera, "Porgy and Bess." Although not a true opera in the strict sense of the term (Gershwin dubbed it a "folk opera"), the piece is considered one of the great American operatic works of the century. The story is set in a tenement in Charleston, South Carolina. Based on DuBose Heyward's novel *Porgy*, the opera incorporated classically trained black singers to depict the tragic love story between the two main title characters. Gershwin based the music for the opera on elements of folk music, referring to southern black musical style such as the blues and spirituals. Drawing on the nineteenth century opera tradition, Gershwin made use of leitmotifs to represent people or places. Near the beginning of the opera, we hear the famous aria "Summertime," which depicts the hot, hazy atmosphere in which the story is set.

George Gershwin – "Summertime"

https://www.youtube.com/watch?v=O7-Qa92Rzbk

Like Gershwin, American born Aaron Copland (1900-1990) was instrumental in helping to define a distinct American sound by combining his European musical training with jazz and folk elements. As an early twentieth-century composer, Copland was active during the Great Depression, writing music for the new genre of radio, the phonograph, and motion pictures. *El Salon Mexico (1935), Fanfare for the Common Man (1942)*, and *Appalachian Spring* (1944) are three of Copland's most famous works. He won a Pulitzer Prize for his music for the ballet *Appalachian Spring* and was also an Oscar-winning film composer. *Appalachian Spring* is a ballet depicting a pioneer wedding celebration in a newly-built farmhouse in Pennsylvania. It includes the now well-known Shaker song *Simple Gifts*.

Copland, *Appalachian Spring* (1944)

https://www.youtube.com/watch?v=ZNHWcHEMy-Q

Copland's unique style evokes images of the landscape of the west, as we can hear in his score for the ballet *Rodeo* (1942) linked below.

Aaron Copland, *Rodeo* (1942)

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

One of the ways in which Copeland was able to capture the sense of vastness of the American landscape was through his use of certain harmonic intervals, that is, two notes played together, which sound "hollow" or "open." These intervals, which are called "perfect 4ths" and "perfect 5ths," have been used since medieval times, and were named so due to their simple harmonic ratios. The result is music that sounds vast and expansive. Perhaps the best example of this technique is found in Copland's famous *Fanfare for the Common Man*.

While fanfares are typically associated with heralding the arrival of royalty, Copland wanted to create a fanfare that celebrated the lives of everyday people during a trying time in American history. The piece was premiered by the Cincinnati Symphony Orchestra on March 12, 1943 at the height of World War II. To this day, no other piece stirs up patriotic emotions like *Fanfare for the Common Man*. It has been used in countless movies, television shows, and even military recruitment ads. The piece came to define Copland's uniquely American compositional style and remains one of the most popular patriotic pieces in the American repertoire.

LISTENING GUIDE	
For audio, go to: https://www.youtube.com/watch?v=FLMVB0B1_Ts	
Composer: Aaron Copland	
Composition: *Fanfare for the Common Man*	
Date: 1942	
Genre: Fanfare	
Performing Forces: brass and percussion sections of symphony orchestra	
Timing	**Performing Forces, Melody, and Texture**
0:00	Opening crash heralds introduction by bass drum and timpani that slowly dies down. Slow and deliberate.
0:31	Slow fanfare theme enters. The melody itself is comprised of many perfect 4ths and perfect 5th intervals which convey a sense of openness. Unison trumpets. Slow tempo. No harmonic accompaniment creates a sense of starkness.

1:05	After brief notes from the percussion section, French horns enter, moving a perfect 5th below the trumpets. Trumpets and French horns, with periodic hits from the percussion Built primarily on perfect 4ths and 5ths.
1:46	Repeat of material from the introduction. Percussion.
1:48	Clarinet states a contrasting melody. Melody over murmuring strings.
1:59	Low brass enters with the main theme and is imitated by the horns and trumpets. Full brass and percussion.
3:01	Melody is restated at ½ speed (augmentation) and ends on climactic chord. Full brass and percussion.

7.9 THE LATE TWENTIETH CENTURY

Modern electronic inventions continue to change and shape our lives. Music has not been immune to these changes. Computers, synthesizers, and massive sound systems have become common throughout the western world. In this unit, we will touch on some of the important trends that started in the 1940s and 1950s and continue to the present. We will also look at an important genre, movie music!

7.9.1 Musique Concrète

Musique concrète (a French term meaning "concrete music") is a type of electro-acoustic music that uses both electronically produced sounds (like synthesizers) and recorded natural sounds (like instruments, voices, and sounds from nature). Pierre Schaeffer (in the 1940s) was a leader in developing this technique. Unlike traditional composers, composers of *musique concrète* are not restricted to using rhythm, melody, harmony, instrumentation, form, and other musical elements. The video linked below offers an excellent narrative on *musique concrète*.

Musique concrète

https://www.youtube.com/watch?v=c4ea0sBrw6M

Below is a link to one of Pierre Schaeffer's *musique concrète* compositions.

Pierre Schaeffer, *Études de bruits* (1948)

https://www.youtube.com/watch?v=CTf0yE15zzI

7.9.2 Elektronische Musik

Elektronische Musik (German term meaning "electronic music") is composed by manipulating only electronically-produced sounds (not recorded sounds.) Like Expressionism, both *musique concrète* and *elektronische Musik* did not last long as popular techniques. Karlheinz Stockhausen was a leader in the creation of *elektronische Musik*.

The link below is to an example of *elektronische Musik*.

Stockhausen: *Kontakte* (electronic version complete)

https://www.youtube.com/watch?v=-vjofqA2SNY

7.9.3 Laptop Orchestras

With the development of laptop computers, a new wave of interest has sprung up world-wide in electronic music of all types. Musicians can now easily link laptops together to form ensembles; they can also link laptops in other locations, even around the globe. Software is being developed that allows for all types of *musique concrète* and *elektronische musik* compositions and combinations. The Princeton Laptop Orchestra is a leader in this area of experimental composition and performance.

Princeton laptop orchestra

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

7.9.4 Film Music

Although modern audiences may no longer visit the local symphony or opera house on a regular basis, they do visit the local movie theater. In this way, symphonic music lives on in our everyday lives in the form of music for film, as well as for television shows, commercials, and video games.

More than any other form of media in the twentieth century, film has made an indelible mark on our culture. The first known public exhibition of film with accompanying sound took place in Paris in 1900, but not until the 1920s did talking pictures, or "talkies," become commercially viable. Inevitably, part of the magic of film is due to its marriage with music. After opera, film music was the next step in the evolution of music for drama. In fact, film music follows many of the same rules established by the nineteenth-century opera and before, such as the use of overtures, leitmotifs, and incidental music. Many of the most famous themes in the history of film are known throughout the world in the same way that an aria from a famous opera would have been known to the mass audiences of the previous century. For example, who of us cannot sing the theme from *Star Wars*?

Unlike the music of forward-thinking twentieth-century composers such as Schoenberg and Webern, music for film is not designed to push musical boundaries; instead, it draws on compositional devices from across the vast history of Western music. Music for a film depicting a love story might rely on sweeping

melodies reminiscent of Wagner or Tchaikovsky. A science fiction movie might draw on dense note clusters and unconventional synthesized sounds to evoke the strangeness of encountering beings from another world. A documentary might feature music that is emotionally detached, such as the twentieth-century minimalistic style of Phillip Glass. It all depends on what style best complements the visuals.

The following example is one of the most famous melodies in cinema history, the main theme from *Star Wars*, composed by John Williams. Because *Star Wars* tells a story in a galaxy far, far away, its music should logically sound futuristic, but director George Lucas opted for an entirely different approach. He asked the film's John Williams to compose something romantic in nature so as to ground the characters of this strange universe in something emotionally familiar. Williams achieved this goal by creating a musical landscape deeply rooted in the style of Wagner, especially in his use of heroic themes and leitmotifs. Listen to the example below and pay special note to the sense of adventure it evokes.

LISTENING GUIDE

For audio, go to:
    https://www.youtube.com/watch?v=_DoZQPqeJkk

Composer: John Williams

Composition: Star Wars Main Title

Date: 1977

Genre: Motion Picture Soundtrack

Performing Forces: orchestra

Timing	Performing Forces, Melody, and Texture
0:00	Opening Fanfare: Use of perfect fourths to evoke heroism. Orchestral: trumpets and brass. Triplet figures create a sense of excitement. Opens on a loud tonic chord to convey strength.
0:08	Main Theme. High brass alternating with strings. Heroic march. Strong tonal center.
1:11	Transition to space battle music as Imperial Star Destroyer looms over a smaller ship. Ascending strings followed by lone flute solo and stabbing brass notes Floating time followed by jarring triplet figures. Moves towards dissonance to create sense of impending danger.

2:03	Battle Music: Melody spells out a diminished chord, evoking conflict. Low brass takes over melody. Faster march creates a sense of urgency. Minor key depicts danger.
2:14	Main theme returns. Melody switches to the French horns. Heroic march. Returns to major key.
3:19	Leia's Theme. Sweeping romantic melody in strings. Slow moving tempo. Lush romantic chords.
4:06	Main Theme returns.
4:39	Battle Theme returns.
5:17	Closing Section (Coronation Theme). Full Orchestra. Slow and majestic. Ends on a strong tonic chord.

We talked about leitmotifs in our chapter on nineteenth-century music. The music of *Star Wars* relies heavily on this technique, and most of its characters have their own unique themes, which appear in different forms throughout the movies. Perhaps the most famous of these leitmotifs is the "Force Theme." The link below is a compilation of the various uses of this theme throughout the trilogy.

https://www.youtube.com/watch?v=QrbAg3zkpg4

7.9.5 Music for New Media

Although the movies continue to flourish in the twenty-first century, new technologies bring new media, and, with it, new music. One of the fastest growing examples of new media comes in the form of video games. The music of the first commercially-available video games of the 1970s was rudimentary at best. Fast-forward to the twenty-first century, and video games feature complex and original musical backdrops which complement incredibly realistic graphics and game play. These games require a cinematic style of music that can adapt to the actions of the player.

Listen to the example below from the original for the Nintendo Entertainment System. Early video game music is not unlike the music of the Renaissance in that it was limited to polyphony between a small number of voices. The original NES system put significant restraints on composers, as it was only possible to sound three to four notes simultaneously, and a great deal of effort was put into getting as rich a sound as possible within these constraints. Listen below to the two ver-

sions of the main Zelda theme (called the "Overworld Theme"). Conceived by acclaimed video game composer Koji Kondo, it is one of the most famous video game themes of all time. This theme has been featured in almost all of the Legend of Zelda games. Notice how the composer uses imitative polyphony to create the illusion of a full texture. Notice also the piece's similarity to Ravel's *Bolero,* which we heard earlier in this chapter. Kondo originally planned to use his own arrangement of Ravel's *Bolero* as the main theme for the game. However, in the end he chose to write instead an original piece with similar characteristics. Notice that both are built on a steady repeated percussive pattern.

LISTENING GUIDE

For audio, go to:
  https://www.youtube.com/watch?v=lpEzYEoV9qY

Composer: Koji Kondo

Composition: *The Legend of Zelda (Overworld Theme)*

Date: 1986

Genre: Video Game Music

Performing Forces: orchestra

Timing	Performing Forces, Melody, and Texture
0:00	Introduction. Synthesized sounds. Heroic march implied by rudimentary percussion sounds. Basic chord structure implied through limited polyphony.
0:07	Main Theme. Synthesized sounds. Heroic march. Imitative polyphony creates a sense of full texture.

The second version of the theme is a testament to the advances made in the technological capabilities of video game music. An updated arrangement of the theme from Nintendo's 2011 release, *The Legend of Zelda: Skyward Sword*, it features the "Overworld Theme" in the game's credits sequence. If you didn't know this music belonged to a video game, you could imagine it as a soundtrack to a blockbuster adventure movie.

LISTENING GUIDE

For audio, go to:
  https://www.youtube.com/watch?v=5h2x18CtgZQ

Composer: Koji Kondo

Composition:	*The Legend of Zelda (Overworld Theme)*
Date: 1986 (2011 arrangement)	
Genre: Video Game Music	
Performing Forces: orchestra	

Timing	Performing Forces, Melody, and Texture
0:00	Introduction. Orchestral: Strings with brass hits. Heroic march. Rising chords create sense of anticipation.
0:14	Main Theme. Trumpets take melody followed by strings. Heroic march.

7.10 CHAPTER SUMMARY

In this chapter we examined the Impressionist style of music and its two main composers, Ravel and Debussy. We also looked at a new approach to harmony and composition developed by Schoenberg, Berg, and others that became known as Expressionism. We then briefly touched on the style called primitivism and the music of Igor Stravinsky and examined the Neoclassicism of Stravinsky and others. We saw how the minimalist composers sought to create music from its most fundamental rhythmic and melodic elements, returning to the consonant sounds of triads and the strict application of steady meter. We then discovered the uniquely American, yet contrasting styles of Aaron Copland and George Gershwin—Copland creating an American symphonic style and Gershwin creating a style which incorporated jazz music. We learned that *musique concrète* was a combination of recorded and electronic sounds and that the German composer Karlheinz Stockhausen was the leader in *elektronische Musik*. We saw that the Princeton University Laptop Orchestra is an important leader in laptop computer ensembles. Finally, we looked at music for motion pictures and at one of the most recent developments in electronic and digital entertainment: music for video games.

7.11 GLOSSARY

Atonal – Music that seeks to avoid both the traditional rules of harmony and the use of chords or scales that provide a tonal center

Chromaticism – a style of composition which uses notes that are not a part of the predominant scale of a composition or one of its sections.

Elektronische Musik - (German term meaning "electronic music") Music composed by manipulating only electronically-produced sounds (not recorded sounds.)

Expressionism – Style of composition where composers intentionally use atonality. Arnold Schoenberg devised a system of composing using twelve tones. His students Alban Berg and Anton Webern composed extensively in this twelve-tone style.

Impressionism – music composed based on the composer's impression of an object, concept, or event. This style included the use of chromaticism, whole-tone scales and chords, exotic scales, new chord progressions, and more complex rhythms

Laptop orchestra – an ensemble formed by linking laptop computers and speakers together to generate live and/or recorded performances using both synthesized and pre-recorded sounds

Musique Concrète – a type of electro-acoustic music that uses both electronically produced sounds (like synthesizers) and recorded natural sounds (like instruments, voices, and sounds from nature)

Neoclassicism – A musical movement that arose in the twentieth century as a reaction against romanticism and which sought to recapture classical ideals like symmetry, order, and restraint. Stravinsky's music for the ballet Pulcinella (1920) is a major early neoclassical composition.

Polytonality – a compositional technique where two or more instruments or voices in different keys (tonal centers) perform together at the same time

Primitivism – A musical movement that arose as a reaction against musical impressionism and which focused on the use of strong rhythmic pulse, distinct musical ideas, and a tonality based on one central tone as a unifying factor instead of a central key or chord progression.

Serialism – composing music using a series of values assigned to musical elements such as pitch, duration, dynamics, and instrumentation. Arnold Schoenberg's 12-tone technique is one of the most important examples of serialism.

Synthesizers - instruments that electronically generate a wide variety of sounds. They can also modify electronic or naturally produced recorded sounds

Through-Composed – Music that progresses without ever repeating a section

Twelve-tone Technique - Compositional technique developed by Arnold Schoenberg that derives musical elements such as pitch, duration, dynamics, and instrumentation from a randomly produced series of the twelve tones of the chromatic scale (the 12-tone row)