**Instructor’s Manual**

*Discovering Music*, Third Edition

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Chapter 48: The Eclipse of Modernism: New Frontiers

**LECTURE OUTLINE**

# The Eclipse of Modernism: New Frontiers

## Developments since 1950

### Extension of 12-tone music to non-pitch elements

### Use of electronic media to explore unconventional musical sounds

### Introduction of random choices to produce chance music

### Revival of tonality

### Increase in the number of women composers

### Development of minimalism

### Post-modernism

#### End of WWII – new experimentation in the arts

#### America – experiencing unprecedented growth and prosperity

#### 50s–70s – audiences might hear traditional works alongside compositions meant to capture random everyday sounds and silence

###### Older traditions survived along with radical innovations

#### Technology

###### Introduction of television and the tape recorder

###### Mass audiences easier to reach

###### Potential of computers – boom in the 1980s

# The New Order: Total Serialism

## Schoenberg’s 12-tone system in 1920s

### Dominant force in much of modernist music for the first half of the 20th century

## Next step – composers to serialize or organize other aspects of music: rhythm, dynamics, register

## Olivier Messiaen (1908–1992)

### Late 1940s – began structuring non-pitch elements in music

#### Found inspiration in sources including ancient Greek meters, Hindu rhythmic patterns, Peruvian folk song, birdcalls

####  “Non-retrogradable” rhythmic patterns – same sequence of rhythms forwards and backward

## Pierre Boulez (b. 1925) and Karlheinz Stockhausen (1928-2007)

### Pursued Messiaen’s attempt to control non-pitch elements

### **Total serialism** – serialization of elements, including pitch, rhythm, dynamics, and register complete

#### Strict control in new music marked final milestone in serialism

#### Total serialism ran its course, and composers searched for other alternatives

# New Resources in Sound

## Advancing technologies – new sonic worlds

## 1920 – Russian physicist Léon Thérémin – invented an instrument that used oscillators to generate audible frequencies

### Theremin – two steel wands, one which controlled pitch, and the other volume

#### Player moved hands to disrupt the electrical field around each wand, which would raise and lower pitch and volume

## 1928 – French scientist Maurice Martenot

### *ondes martenot* – keyboard instrument controlling an oscillator that produced sound amplified and projected through a loudspeaker

## 1920s – first appearance of electric organs

## Electronic sounds

### 1940s – French sound laboratory

#### Used phonograph discs and later magnetic tape to record sounds of everyday life

###### **Musique concrète** – “concrete music”; recorded sounds dissected, reassembled, played backwards, accelerated, or otherwise manipulated

## **Electronic music** – composers used generators to produce layers of sounds that could subsequently be combined

### Often started with “white noise” – mixture of full range of audible frequencies

#### Modified by adding reverberation, altering intensity, splicing, or reshaping

#### Final product recorded on tape

#### Advantage – composers could control end product with absolute precision

## *Making Connections: An Early Electronic Studio*

### 1957 – RCA Mark II Sound Synthesizer – installed at Columbia University

### Leading experimental composers worked there to generate examples of electronic music

### Charles Wuorinen’s *Time Ecomium*

#### Won Pulitzer Prize in 1970

### RCA Mark II – filled an entire room with sound synthesizing devices, tone oscillators, primitive music sequencer – all connected and capable of producing a phonograph record

## Edgard Varèse (1883–1965)

### Exploited new musical resources

### Goal was the “liberation of sound”

### Wrote most of his music before WWII – work was most influential after the war

### Arrived in the US in 1915

### Followed no trend – dismissed Schoenberg’s approach

#### Brought unconventional sounds into his modernist scores

#### Used traditional instruments in unusual ways – effort to create “organized noise”

#### Rejected traditional notions of thematic and harmonic development

#### Described his music as colliding sound masses that repelled each other

### Turned to scientific titles

#### *Density 21.5* (1936) – written for a single flute made of platinum, whose density is 21.5

#### *Ionisation* (1931) – for percussion instruments alone, mostly un-pitched, so pitch is eliminated as a structural component

###### 1940s – reportedly, scientists at Los Alamos listened to a recording as they worked on the first atomic bomb

### 1936–1947 – largely withdrew from composition

#### Discouraged by what he could achieve with traditional instruments

#### Electronic sources after the war

### **Listening Map 73** Varèse, *Poème électronique* (1958)

#### *Dèserts* (1954) – first work to combine electronic sounds with an orchestra; first work to bring electronically manipulated sounds into the concert hall

#### *Poème électronique* – watershed 8-minute electronic work created for the Philips Radio Corporation pavilion at the Brussels World’s Fair

#### Pavilion constructed of pre-stressed concrete formed into swooping clusters of hyperbolic paraboloids in the shape of a stomach

#### Two million visitors heard his music broadcast through hundreds of speakers embedded in the walls

#### Composition bombards listener with seemingly random noise – re-hearings reveal plan

#### *Why to Listen*

###### Visitors to pavilion also saw a montage of images as visual counterpoint

###### Challenged and pushed listeners’ expectations

# Further Developments in Electronic Music

## Celebrated the modernity of post-war years, reconnected listeners to their past

## Karlheinz Stockhausen – *Gesang de Jünglinge (Song of Youths)*

### Combined mixtures of electronic sounds with bits of spoken German text

### Composition relates the story of Nebuchadnezzar’s furnace, and the Jews who survive unscathed – Europe recovering from WWII

## Early electronic music – tape compositions

## **Live electronic music** – made possible by equipment that was portable and could be played in “real time”; interaction of live performers and taped elements

## Recent decades – equipment more sophisticated and easier to use

## Chance in Music

### Spontaneity in music – experiments responses to radically new musical philosophy of John Cage

### John Cage (1912–1992)

#### Explored the idea that music should use “any and all sounds that can be heard”

#### Studied composition with Henry Cowell and then sought out Schoenberg, but would not subscribe to 12-tone method

#### Admired work of Marcel Duchamp – altered perceptions of what might constitute visual art with “readymades” – found objects labeled as artworks

#### 1940s – series of works for “prepared piano”

#### Altered piano by attaching various objects to its strings – producing unfamiliar, metallic sounds

###### Could never be sure what sounds would be produced – preparation would vary from performance to performance

#### Studied Eastern philosophy and Zen Buddhism; rejected Western notions of musical order

#### 1950s – began producing works whose components were determined by random sequences drawn from the *I Ching*

#### **Listening Map 74** Cage, *4’33”* (1952)

###### Premiered by pianist David Tudor

###### Tudor did not play the instrument at all bur signified the beginning and ending by closing and opening the keyboard lid

###### Silence filled by random noises of the surroundings, varied with each “performance”

###### Cage captivated by “ambient sounds” – actual sounds that occur around us at all times, many contributed by the audience itself

###### *Why to Listen*

* 1. There is no silence
	2. Inspired by experience Cage had in a heavily sound proofed room; perceived sounds of nervous system and blood circulation

### *Making Connections*: Robert Rauschenberg’s *White Painting*, 1951

#### 4’33” – influenced by American painter Robert Rauschenberg

#### Controversial series of *White Paintings*

#### Canvases painted white and seemingly devoid of content

###### Responded to changes in ambient light, number of visitors

#### Rauschenberg became one of Cage’s greatest collaborators – employed by Merce Cunningham’s dance company

#### Resulted in several classics of modern dance

#### 1950s and 1960s – Cage continued to broaden domain of “music”

#### 1952 – “happening” at Black Mountain College, where Cage was teaching

###### Event in a dining hall, where lines between audience and performers blurred

* 1. “Circus principle” – works where several different actions occurred simultaneously
	2. **Performance art** – a multimedia form of art that can involve music, dramatic, visual, and other elements
	3. Traditional music notation – irrelevant for Cage’s random creations
	4. Turned to graphic designs the performers interpreted themselves
	5. Reduced music to verbal descriptions to suggest general limits
	6. **Chance music** or **aleatoric music** – from *aleae*, Latin for dice; music with chance elements
	7. 1960s – established as an innovative movement

# Women and Contemporary Music

## Growing number of women composers

## Lili Boulanger (1893–1918)

### French child prodigy

### First woman to win the Prix de Rome

### Uses whole-tone scales and modes

### Elder sister, Nadia – conductor and composer whose many students included Aaron Copland

## Ethyl Smyth (1858–1944)

### Composed operas

### Helped lead the suffragette movement in England

### Studied in Germany; met Clara Schumann and Brahms

### *The Wreckers* (1909) – opera about Cornish pirates who plundered shipwrecks

### Composed anthem for suffragettes – “March of the Women”

### Went deaf by 1928, turned to writing

## Ruth Crawford Seeger (1901–1953)

### Among the most modern of the 1920s and 1930s

### String Quartet (1931) – viewed as a masterpiece

#### One of the first 20th century compositions to extend Schoenberg’s 12-tone system to non-pitch elements

### Turned attention to collecting American folksongs with husband Charles Seeger

#### Stepson – Pete Seeger

## Florence Price (1887–1953)

### African American

### Wrote four symphonies

### Hundreds of other works – many unpublished

### Worked as a theatre organist during silent film era

### Symphony in E minor (1933) – premiered by Chicago Symphony

#### First Black composer to have a symphonic work performed by a major American orchestra

### Work is tonal and tied to classical traditions

#### Reflects African American heritage through spirituals and *juba* (African American round dance)

## Joan Tower (b. 1938)

### Grammy-Award winning American composer

### Member of the Da Capo Chamber Players – devoted themselves to contemporary music

### Composer in residence for St. Louis Symphony

### Professor at Bard College

### *Fanfares for an Uncommon Woman* – five-part series composed between 1987 and 1993

### *Made in America* (2004) – played by 65 community orchestras in all 50 states

## Ellen Taaffe Zwilich (b. 1939)

### 1983 – first woman to win the Pulitzer Prize in music for her Symphony No. 1

### First Composer’s Chair at Carnegie Hall – 1995–1999

### Works

#### Chamber compositions

#### Concertos for brass and wind instruments

#### Symphonies

### Early style – modernist, atonal idiom

### 1980s – turned efforts towards music that could communicate in a forceful, direct way

#### Began integrating references to tonality and classical forms

#### Labeled a neo-romantic

### **Listening Map 75** Zwilich, *Concerto grosso* (1985), First Movement

#### Commissioned to celebrate the 300th anniversary of the birth of Handel

#### Five movements, concerto is based on a violin sonata by Handel

#### Symmetrical scheme – two outer movements, and the second and 4th are paired

#### Third slow movement – expressive core of the work

#### Instrumentation – 1 flute, 2 oboes, 1 bassoon, 2 horns, strings, and harpsichords

#### Stately opening

#### *Why to Listen*

###### Decided turn against the high modernism of the 1960s and 1970s – re-exploring connections to the past

###### Triads and non-triadic harmonies

# Postmodernism

## Late 20th century composers – quotations from earlier works into their music, reaffirming validity of tonal music

## Composers: Luciano Berio, George Crumb, Krysztof Penderecki, George Rochberg

## **Postmodernism** – movement originating in the 1960s and 1970s that reacted against high modernism

## **Minimalism** – developed in the 1960s in the visual arts, and then pursued by composers; scraps of material such as a short motive, triad, or turn of phrase, repeated with a regular pulse to build up an entire composition

## Terry Riley’s *In C* (1964) – one of the earliest examples

### Consists of 53 short motives repeated as often as the performers wish

### Each performer decides when to move to the next motive

## *Making Connections*: Minimalism in the Visual Arts

### 1960s and 1970s – painters and sculptors embraced a reductive, simple style of art that avoided dramatic gestures or suggestions of emotional content

### Simple geometric shapes and planes of color replaced more involved displays of abstract expressionism

### Frank Stella – *Die Fahne hoch!* (1959)

## Philip Glass (b. 1937)

### Studied with Nadia Boulanger

### Absorbed intricate rhythmic patterns of Indian music into his work

### *Einstein on the Beach* (1976) – created with theatrical director Robert Wilson

#### Extravagant opera in four acts set off by five shorter sections

#### Essential image of the work – accelerating train, captured in repetitive shifting patterns

### *Satyagraha* (1980)

### *Appomattox* (2007)

## Steve Reich (b. 1936)

### Investigated the rhythms of African drumming

### Has written compositions for multiple numbers of a single instrument

### **Phasing** – several instruments play the same material that gradually moves out of phase, producing hypnotic, free blends of sound

### *Music for18 Musicians* (1974)

#### Extended phasing techniques to larger ensemble

### 1980s – move to compositions with extra-musical content

### *Different Trains* (1988) – for string quartet and electronic tape

### *WTC 9/11* – string quartet and tape

#### String quartet combined with taped recordings of air traffic controllers, firefighters, and residents who responded to the horrific terrorist attack on the World Trade Center

## John Adams (b. 1947)

### Reacted against the drudgery of “chasing” 12-tone rows in serial compositions

### Embraced minimalist techniques early in his works

### **Postminimalism** – style that employs some techniques of minimalism, but seeks other alternatives to questions of musical form and structure

#### Scores include lush, expressive melodies

###### *Nixon in China* (1987)

###### *Dr. Atomic* (2005)

###### *On the Transmigration of the Souls* (2002) – received a Pulitzer Prize

### **Listening Map 76** Adams, *Short Ride on a Fast Machine* (1986)

#### Commissioned by the Pittsburgh Symphony

#### Scored for large orchestra with expanded percussion and keyboard synthesizers

###### Launched by the regular pulse of a woodblock

#### Work unfolds as series of crescendos

#### *Why to Listen*

###### Idea of theme developed toward some goal – Adams’s composition is the delayed emergence of trumpet theme at the end

###### Music is about time

## The Future Beckons

### Classical music struggles to find a new identity

### **Polystylism** – mixture of different styles and approaches in composition, used to describe music of the 1990s and beyond

### Catch-all term until the next revolution in classical tradition is recognized

# Into the Twenty-First Century

## Orchestras struggling to balance budgets

## Recording industry continues to be transformed

## Sofia Gubaidulina (b. 1931)

### Russian composer; studied at Moscow Conservatory

### 1979 – reprimanded for writing music too experimental to be acceptable to the Soviet State

### Music influenced by Christian mysticism

### Often based on mathematical sequences – translated into rhythmic durations or metronome markings

#### Made detailed study of numerology in music of J.S. Bach

### Moved to Germany in 1992, now resides in Hamburg

### **Listening Map 77** Gubaidulina, Violin Concerto No. 2 *(In tempus praesens)* (2007)

#### Half an hour, divided into five sections

#### Pits violinist (represents individual and wisdom) against orchestra (represents society)

#### Music alternates between soloist and orchestra

###### Soloist – higher register

###### Orchestra – lower registers

#### Brief silence

#### *Why to Listen*

###### Could be interpreted as autobiographical commentary about early experiences in the Soviet Union

###### Struggle between individual and society

###### Prominent spiritual element in the music

## Caroline Shaw

### American composer; self-described as a “musician who composes”

### 2013 – awarded the Pulitzer Prize in music

### Blends Western and Non-Western techniques

### **Listening Map 78** Shaw, “The Orangery,” from *Plan and Elevation: The Grounds of Dumbarton Oaks* (2015)

#### Just under two minutes

#### Composed for string quartet

#### Free variations over ground bass

#### *Why to Listen*

###### Reminds listener of continuum of music history

###### Reanimates old and new in fresh combinations

###### Intends to create a narrative about physical space

### The Future

#### Difficult to predict the future of classical music

#### Music is becoming increasingly international

**DISCUSSION QUESTIONS**

1. How did technological advances influence composition in the second half of the twentieth century?
2. What is total serialism and how was it used?
3. What is chance music? How does it affect subsequent performances of a work?
4. Compare and contrast the contributions of women composers in the nineteenth and twentieth centuries.
5. What is minimalism? Which composers contributed to music in this style?

**SUGGESTED ACTIVITIES**

1. Play a video of a theremin and of an *ondes martenot*. How are these instruments different from the more traditional instruments studied before?
2. Play a recording of Varèse’s *Poème électronique*. Show students photos of the architecture from the Philips Pavilion from the Brussels World’s Fair and ask students to make connections between the images and the music.
3. Have students “perform” Cage’s “*4’33”* in their own living or studying space and record what they hear. In class or in an online forum, ask the students to describe the ambient sounds they heard. If they had not read the chapter and known about the ambient sounds, what might the experience have been like?
4. Play Seeger’s *Concerto grosso* (1985), First Movement. How does this work reflect use of tonal and modern atonal language?
5. Teach members of the class (or invite music majors to perform) Reich’s *Clapping Music (1972)*. Have the class experience phasing and then discuss how the technique makes the unique rhythms of this piece possible.