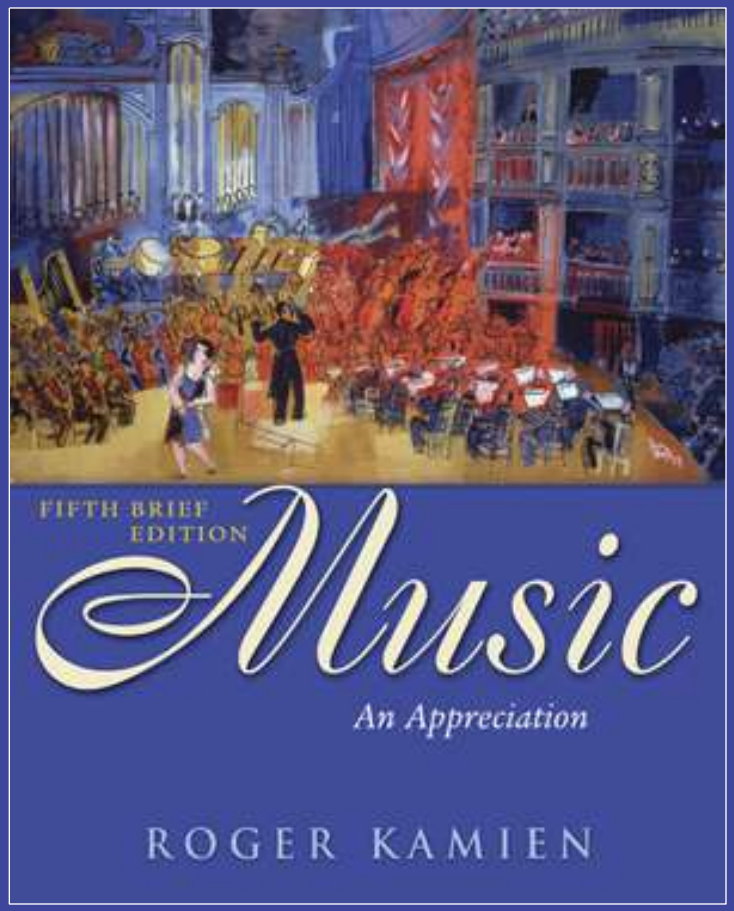

Part I

Elements

Presentation developed by:
Robert Elliott
Tennessee State University

- Music—vital part of human society
  - Provides entertainment, emotional release
- Heard almost everywhere in modern life
  - Recorded music innovation of 20th Century
    - Music “on demand” available to almost anyone

⑩ Informal music making

- Source of pleasure for players and listeners
  - *Amateur:* person who engages in an activity without compensation—for the simple pleasure that the activity brings
    - E.g., sports, visual arts, performing arts

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- Live performance—special excitement
  - Experience affected by emotional state of both performer and audience
- Evaluating music performances
  - Background music vs. alert, active listening
  - Perceptive listening enhances enjoyment
    - Knowledge of musical elements enhances perception

Chapter 1 – Sound: Pitch, Dynamics, and Tone Color

- Our world filled with sounds
  - Sounds can be pleasant or unpleasant
  - Humans able to focus on specific sounds
    - Can ignore sounds that do not interest us

- Sound
  - Begins as result of a vibrating object
  - Transmitted through medium as vibration
  - Perceived by eardrums as vibrations
    - Impulses sent to brain for processing
- Music: organization of sounds in time
- Four main properties of musical sounds:
  - *Pitch*
  - *Dynamics*
  - *Tone color*
  - *Duration*

Pitch: Highness or Lowness of Sound

- Determined by frequency of vibration
  - Fast vibration = high pitch, slow vibration = low pitch
  - Generally, smaller vibrating objects = higher pitches
- In music, definite pitch is a tone
  - Tones have specific frequencies
    - E.g., 440 cycles (vibrations) per second
  - Irregular vibrations create sounds of indefinite pitch

Pitch: Highness or Lowness of Sound

- Interval: difference in pitch between 2 tones
  - Octave: doubling/halving of frequency
    - Tones an octave apart seem to blend together
- Western music divides octave into 12 tones
  - Non-western music may divide into different number
  - Most western music based on scale of 8 tones
- *Range*: distance between voice or instrument's highest & lowest possible pitch

Dynamics

- Relative loudness of a sound
  - Related to amplitude of vibration producing sound
  - Changes in dynamics may be sudden or gradual
- *Accent*: tone played louder than tones near it

Dynamics

- Italian terms used to indicate dynamics

pianissimo	*pp*	very soft
piano	*p*	soft
mezzo piano	*mp*	moderately soft
mezzo forte	*mf*	moderately loud
forte	*f*	loud
fortissimo	*ff*	very loud

  - Extremes: *ppp, pppp, fff, ffff*
  - *Crescendo*: gradually louder

  - *Decrescendo (diminuendo)*: gradually softer

Tone Color

- Also called *timbre*: quality of a sound
  - Can be *bright, dark, mellow,* etc.
- Changes in tone color create variety and contrast
- Tone color can add to continuity
  - Specific melodies with specific tone colors
- Composers frequently blend sounds of instruments to create new tone colors
- Modern electronic instruments allow for unlimited number of different tone colors

Listening Outlines, Vocal Music Guides, and the Properties of Sound

- Intended to be read ***while listening*** to the music
- *Listening outlines* & *vocal music guides*:
  - *Listening outline*: points out notable musical sounds
  - *Vocal music guide*: vocal text w/ margin comments
  - *Outlines* & *guides* preceded by music's description
    - *Brief set* CD's accompany this text
    - *Basic* & *supplementary set* are additional instructor discs
- Suggestion: while listening to one passage, look ahead to the next passage's notes

Listening

The Firebird, Scene 2 (1910)

by Igor Stravinsky

Listening Outline: p. 10
Brief set, CD 1:1

Listen for:Crescendo

- Gradual addition of instruments
- Repetition of melody at different pitches
- Sudden dynamic change
- Crescendo to ending

Listening

C-Jam Blues (1942)

by Duke Ellington and His Famous Orchestra

Listening Outline: p. 11

Brief set, CD 1:3

Listen for:Repeated-note melody

- Tone color change as melody moves between instruments
- Improvisation by solo instruments
- Brass instruments using *mutes*
- Full-band at end

Chapter 2—Performing Media: Voices and Instruments

Voices

- Range: based on physical makeup & training
- 2 main groupings:
  - Female
    - Soprano (high)
    - Mezzo Soprano (medium high)
    - Alto (low)
  - Male
    - Tenor (high)
    - Baritone (medium high)
    - Bass (low)
- Vocal methods and styles vary between cultures
  - Vocal methods and styles can vary within a culture
- Instruments frequently accompany vocal music

Musical Instruments

- Mechanism (not a voice) that produces musical sounds

- Western instruments: 6 broad categories
  - String
  - Woodwind
  - Brass
  - Percussion
  - Keyboard
  - Electronic

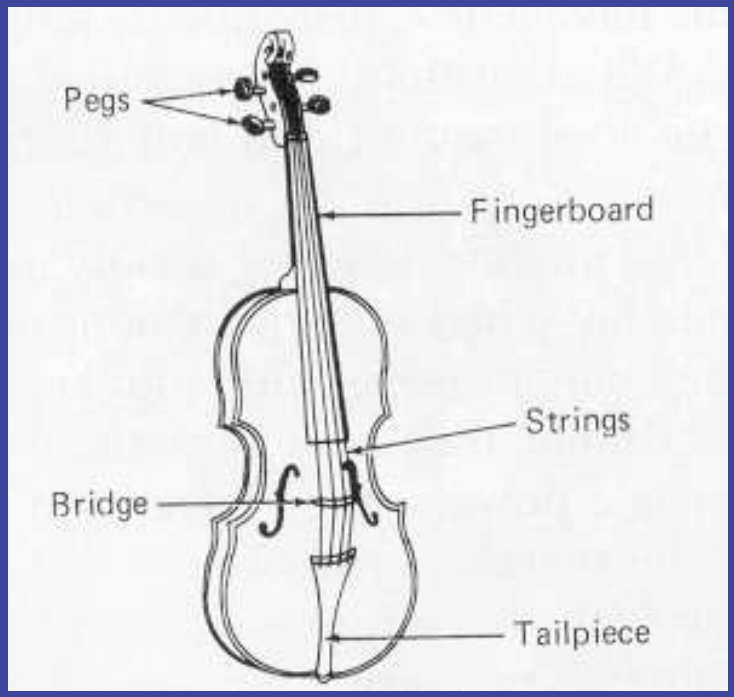
- Frequently made in different sizes (for range)

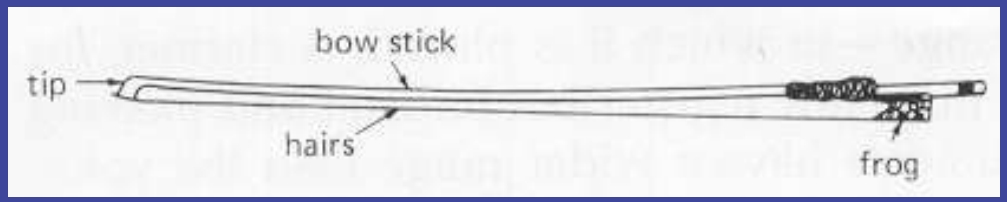
Musical Instruments

- Tone color varies by *register*
  - *Register* is portion of range where instrument is playing
- Use and makeup of instruments varies by culture
- Only a fraction of all instruments ever invented are in use today
- Groups frequently led by *conductor* using *baton*

String Instruments

- Sound produced by vibrating a tight cable
  - Longer string = lower pitch
- Orchestral instruments
  - Violin
  - Viola
  - Cello (violoncello)
  - Bass (double bass)
- Symphonic music uses *bow*





String Instruments

- *Stopping* string reduces vibrating length
- Common playing techniques
  - Pizzicato
  - Double stop
  - Vibrato
  - Mute
  - Tremolo
  - Harmonics
- Some string instruments not played with bow
  - Guitar & harp use *plectrum* (small wedge—pick)

Woodwind Instruments

- Traditionally, woodwinds made of wood
  - In 20th Century, metal & plastic became common
  - The longer the tube, the lower the pitch
    - Covering holes along instrument serves to lengthen the tube
- Main orchestral woodwinds and ranges:

Flute Family	Clarinet Family	Oboe Family	Bassoon Family
Piccolo			
Flute	*Clarinet*	*Oboe*	
		English horn	
	Bass clarinet		*Bassoon*
			Contrabassoon

Woodwind Instruments

- Woodwinds—single note instruments
- Sound produced by blowing—player's breath
  - "Whistle mouthpiece"
  - Single reed
  - Double reed
- Saxophone—single reed instrument common in jazz music

Brass Instruments

- Orchestral brasses (in order of range):
  - *Trumpet*
  - *French horn*
  - *Trombone*
  - *Tuba*

- *Cornet, baritone horn,* & *euphonium* used mainly in concert and marching bands

Brass Instruments

- Sound produce by blowing into mouthpiece
  - Vibration of player's lips produces sound
  - Sound exits through flared end called the *bell*
  - Pitch changed in 2 ways:
    - Pressure of player's lips (together or against mouthpiece)
    - Lengthening the instrument via slide or valves
      - Trombone uses sliding tubes
      - Others use valves connected to additional tubing
      - Generally, the longer the tube, the lower the pitch
- Tone color is altered by inserting *mute* into bell
- Brass provides power and emphasis in music

Percussion Instruments

- Sound (generally) produced by striking, shaking, or rubbing the instrument
  - Instruments of *definite pitch* produce tones

Percussion Instruments

- Instruments of *indefinite pitch* produce noise-like sounds

Definite Pitch	Indefinite Pitch
Timpani (kettledrums)	*Snare drum (side drum)*
Glockenspiel	*Bass drum*
Xylophone	*Tambourine*
Celesta	*Triangle*
Chimes	*Cymbals*
	Gong (tam-tam)

- Membranes, plates, or bars vibrate

Percussion Instruments

- Percussionists must play many instruments
- Percussion traditionally emphasizes rhythm
  - 20th Century music—greater use of percussion
  - Complexity of African & Asian percussion music often surpasses percussion of Western music

Keyboard Instruments

- Use piano-type keyboard for control
  - Capable of several notes at once
- Best known:
  - Piano
    - Created ~1700 & refined through ~1850
    - Sound created when felt hammer strikes tight string
    - Pedals affect sound
    - 88 keys
  - Harpsichord
    - Important ~1500 through ~1775
    - Sound produced by small wedges plucking string

Keyboard Instruments

- Pipe Organ
  - Most prominent ~1600 to ~1750
  - Wide range of pitch, dynamics, & tone color
  - Sound produced by air being directed to *pipes*
    - Pipe sets of various materials produce different tone color
    - Pipe sets put into play by using knobs called stops
- Accordion
  - Air bellows drives reeds controlled by keyboard & buttons

Electronic Instruments

- Produce or amplify sound using electronics
  - Invented ~1904, significant impact only after 1950
  - Modern technology blurs lines between instrument types, recording, computer, and hybrid devices
- *Tape studio*: main electronic tool of 1950's
- *Synthesizers* came into use in 1960's
  - Huge machines first built in mid-1950's
  - *Analog synthesis* dominated until ~1980
  - *Digital (FM) synthesis* came to forefront in 1980's
    - *Effects devices* were integrated into digital synthesizers
  - *Sampling* technology advanced in 1990's

Electronic Instruments

- *MIDI* (1983) allowed connection of devices
- Small computers developed in 1970's & 80's
- Modern composers connect these devices, use software, and write new types of music

Listening

Young Person's Guide to the Orchestra, Op. 34 (1946)

by Benjamin Britten

Listening Outline: p. 30

Brief set, CD 1:11

Listen for:Main theme followed by variations

Tone colors of instruments and families

Contrast of dynamics, speed, & tone color

Chapter 3—Rhythm

- Rhythm: flow of music (events) through time

Beat

- Recurrent pulsation
  - Divides music into equal units of time

Meter

- Grouping of beats
  - Groups of beats called *measures*
- *Downbeat*: first and strongest beat in measure
- Types of meter:
  - *Duple*
  - *Triple*
  - *Quadruple*
  - Other meters

Accent and Syncopation

- *Accent*: emphasis placed on beat/note
- *Syncopation*: emphasis on unexpected note/beat

Tempo

- The speed of the beat, the pace
  - Associated with emotional effect
- Tempo indicated at beginning of piece
  - As with dynamics, Italian terms are used

Term	Meaning
largo	very slow, broad
grave	very slow, solemn
adagio	slow
andante	moderately slow, a walking pace
moderato	moderate
allegretto	moderately fast
allegro	fast
vivace	lively
presto	very fast
prestissimo	as fast as possible

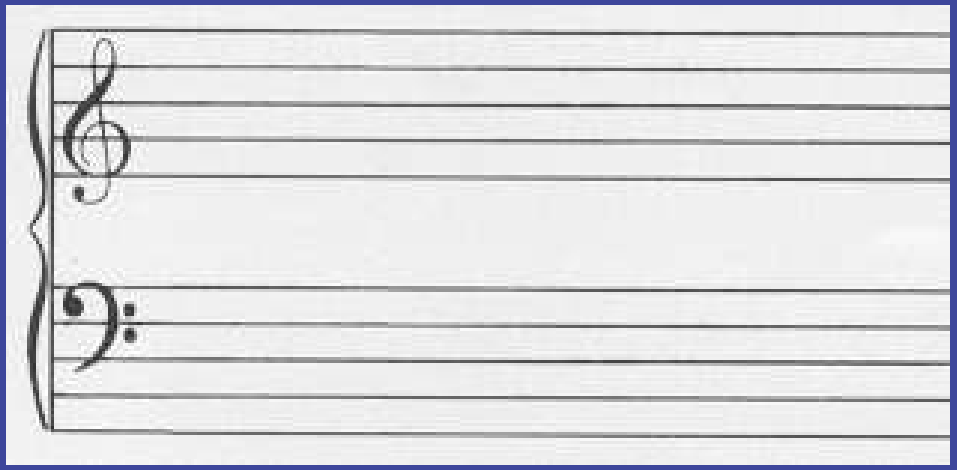
  - *Molto, non troppo, accelerando, ritardando*
- *Metronome*—indicates exact tempo

Chapter 4—Music Notation

- Written music stores information
  - Allows absent (or even dead) composers to communicate their ideas to others

Notating Pitch

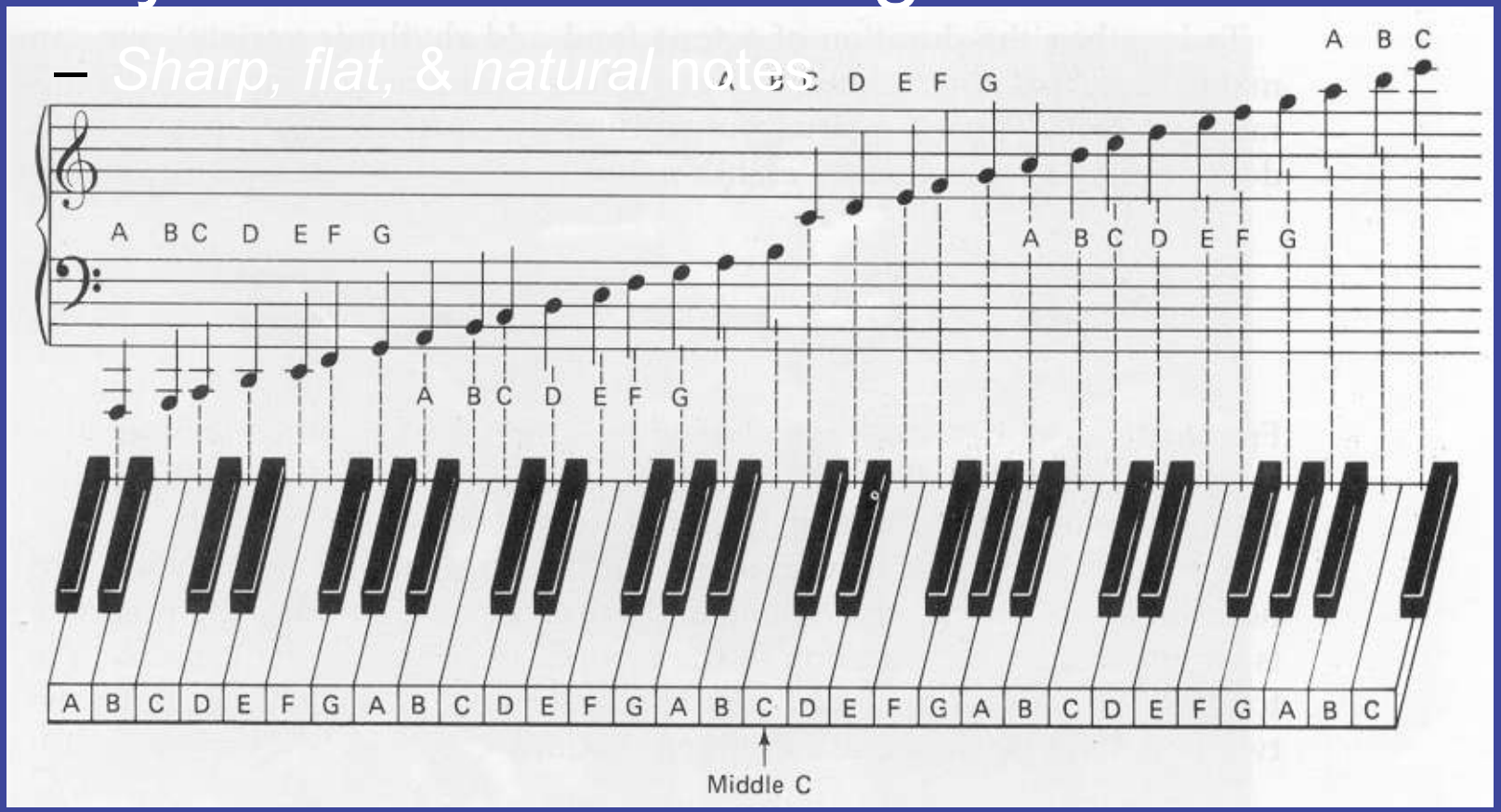
- Letter names for *notes*: A B C D E F G
- *Staff*
- Clef signs
  - Treble
  - Bass
- Grand staff



Notating Pitch

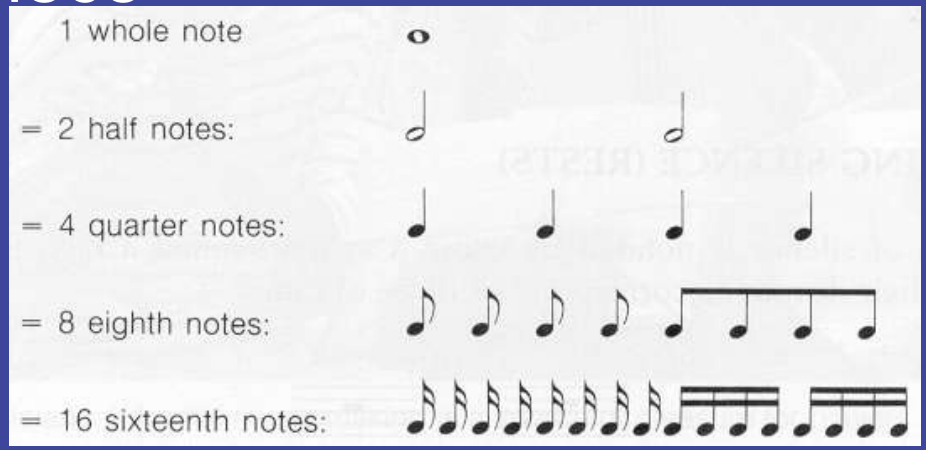
Keyboard note naming with notation

– *Sharp, flat, & natural notes*



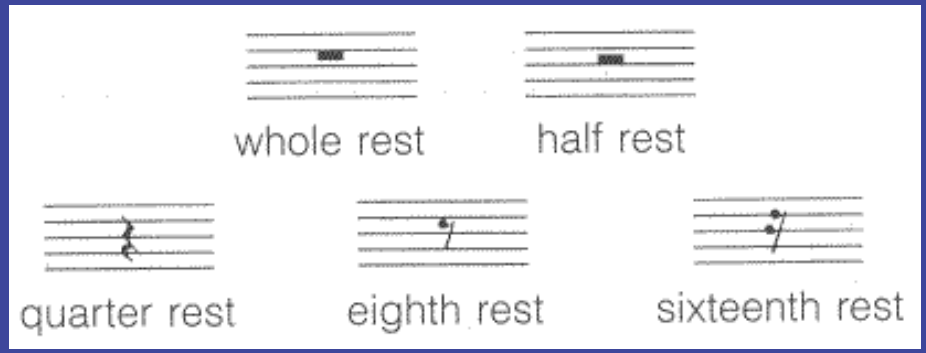
Notating Rhythm

- Music notation indicates length of tone in relation to other tones in the piece
  - How note looks indicates duration
    - *Note head & stem*
    - *Flag*
    - *Beam*
    - *Dotted note*
    - *Tie*



Notating Silence

- *Rests* indicate notated silence



Notating Meter

- *Time signature* indicates the meter of a piece of music
  - Appears at beginning of piece
    - Appears again later if meter changes
  - Written as two numbers, one above other

$\frac{2}{4}$ $\frac{3}{2}$

    - Top number: how many beats in measure
    - Bottom number: what type note counts 1 beat
  - Common & cut time, duple & triple meter

The Score

- Includes music for every instrument
  - Can include 20+ lines of music at once
    - See example p. 39

Chapter 5—Melody

- A series of single notes that add up to a recognizable whole
- Begins, moves, ends
- Tension & release
- *Stepwise* vs. *leap* motion
- *Climax*

- *Legato* vs. *staccato*
- Made of *phrases* (parts)

- *Sequence* within melodies

- *Cadence*: Complete vs. Incomplete

- *Theme*: melody used as starting point and evolving throughout an extended piece of music

Chapter 6—Harmony

- The way chords are constructed and how they follow each other

- *Chord*: 3 or more tones sounded at once
  - Chord is simultaneous tones
  - Melody is series of individual tones

- *Progression*: how chords follow each other

Consonance and Dissonance

- Stable, restful chords—*consonant*
- Unstable, tense chords—*dissonant*
  - Degree of dissonance—more & less dissonant
- *Resolution*—movement away from dissonance

The Triad

- Simplest, most basic chord
  - Made up of three notes
    - Notated on 3 adjacent lines or spaces
- Triad built on 1st scale note called *tonic*
  - Most stable, restful chord
    - Pieces usually begin & end on this chord
- Triad built on 5th scale note: *dominant*
  - Most unstable, tense chord
    - Dominant to tonic movement feels conclusive

Broken Chords (*Arpeggios*)

- Chord tones sounded in series

Listening

Prelude in E minor for Piano, Op. 28, No. 4 (1839)

by Frederic Chopin

Listening Outline: p. 46
Brief set, CD 1:36

Performance Profile:
Roger Kamien-piano

Listen for performer's *interpretation* of tempo and dynamic indications in music

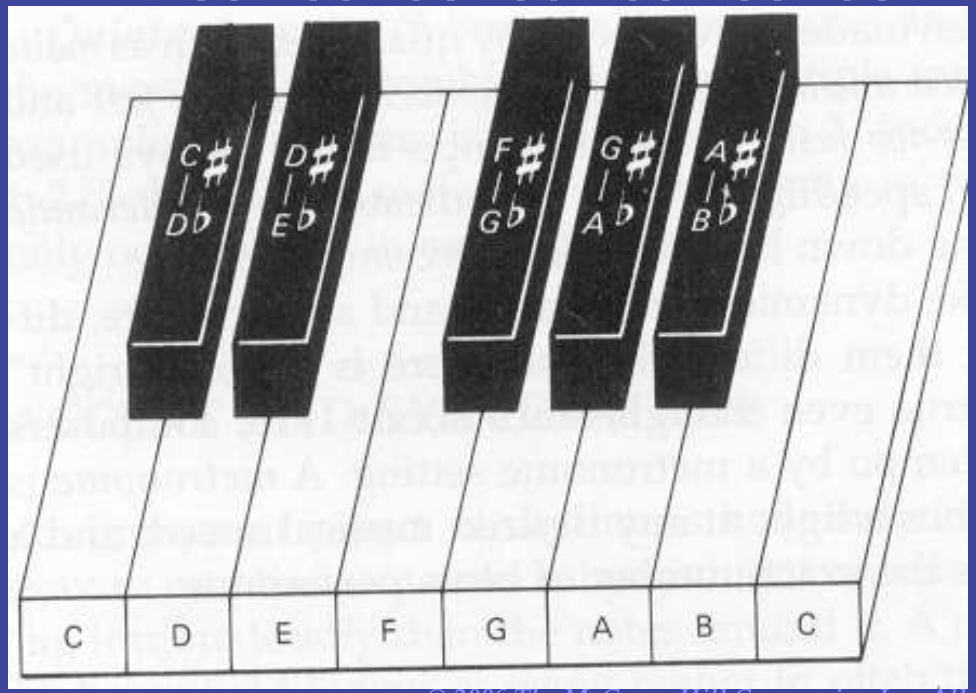
Listen for:Pulsating chords & monotonous melody
Dissonant chords underlying melody
- Climax with faster rhythm & crescendo
- Near end, dissonant chord, silence,resolution at cadence

Chapter 7—Key

- Centering of a melody or harmony around a central note

The Major Scale

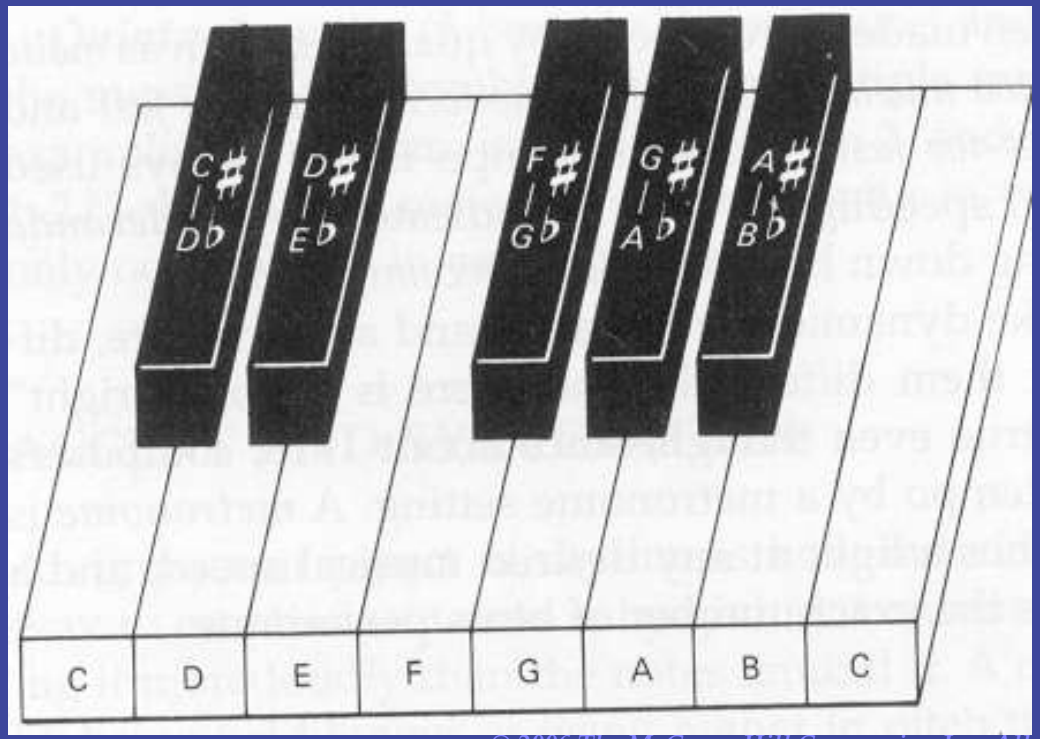
- *Whole step*, *half step*
- Formula: W W H W W W H
  - Bright, happy sound



The Minor Scale

- Whole steps and half steps occur in another predetermined order

- Formula: W H W W H W W
  - Dark, sad sound



The Key Signature

- Pieces of music using major scales—major key
- Pieces of music using minor scales—minor key
- Number of sharps or flats played determines scale and key
  - Also determines key signature
    - Key signature notated at beginning of piece between clef sign and time signature

The Chromatic Scale

- Utilizes all 12 notes within the octave
  - Includes both black and white piano keys
  - This scale does not define a key

Modulation: Change of Key

- Provides contrast within longer piece
- Modulation like temporary shift in gravity
  - New tone and key becomes “home”

Tonic Key

- The main key of a piece
  - Modulations away usually return to the tonic key
  - Return to tonic creates feeling of conclusion
    - Return to tonic usually occurs near end of piece

Chapter 8—Musical Texture

- Layering of sound, how layers relate

Monophonic Texture

- Single, unaccompanied melody
  - Literally "one sound" (*solo* or *unison*)

Polyphonic Texture

- 2 or more equally important melodies sounding simultaneously (*counterpoint* and *imitation*)

Homophonic Texture

- One melody with chordal accompaniment

Changes of Texture

- Within a piece, creates variety and contrast

Listening

Farandole from *L'Arlesienne*

Suite No. 2 (1879)

by Georges Bizet

Listening Outline: page 52

Brief Set, CD 1:37

Note contrasting textures

Chapter 9—Musical Form

- Organization of musical elements in time

Techniques that Create Musical Form

- *Repetition*—restating musical ideas
- *Contrast*—avoiding monotony with new ideas
- *Variation*—reworking ideas to keep them new

Types of Musical Form

- Ternary
  - Simple A B A
  - Subdivided aba cdc aba

Listening

Dance of the Reed Pipes
from *Nutcracker* Suite (1892)
by Peter Ilyich Tchaikovsky

Listening Outline: p. 56
Brief Set, CD 1:42

Note ternary form

Types of Musical Form

- Binary
  - A B
  - A A B
  - A B B
  - A A B B

Listening

Contradance No. 7 in Eb Major

from Twelve Contradances for Orchestra (1892)

by Ludwig van Beethoven

Listening Outline: p. 57

Brief Set, CD 1:45

Note binary form: A A B B

Chapter 10—Musical Style

- Based upon time period and the continuous development of music as an art form
- Western art music can be divided into:
  - Middle Ages—450-1450
  - Renaissance—1450-1600
  - Baroque—1600-1750
  - Classical—1750-1820
  - Romantic—1820-1900
  - 20th Century to 1945
  - 1945 to present
- Music of each these periods reflects the society that supported it