

Module 4- Melody, Harmony and Texture

Pitch in music refers to vibrations of sound waves. These vibrations are measured in hertz (cycles per second). Therefore a musical **pitch is a sound produced at a certain number of cycles per second** (Wade, 2013). The faster the vibration, the higher the resulting pitch. Likewise, the slower the rate of vibration, the lower the pitch. Musical tones can be divided into two categories: determinate and indeterminate pitch.

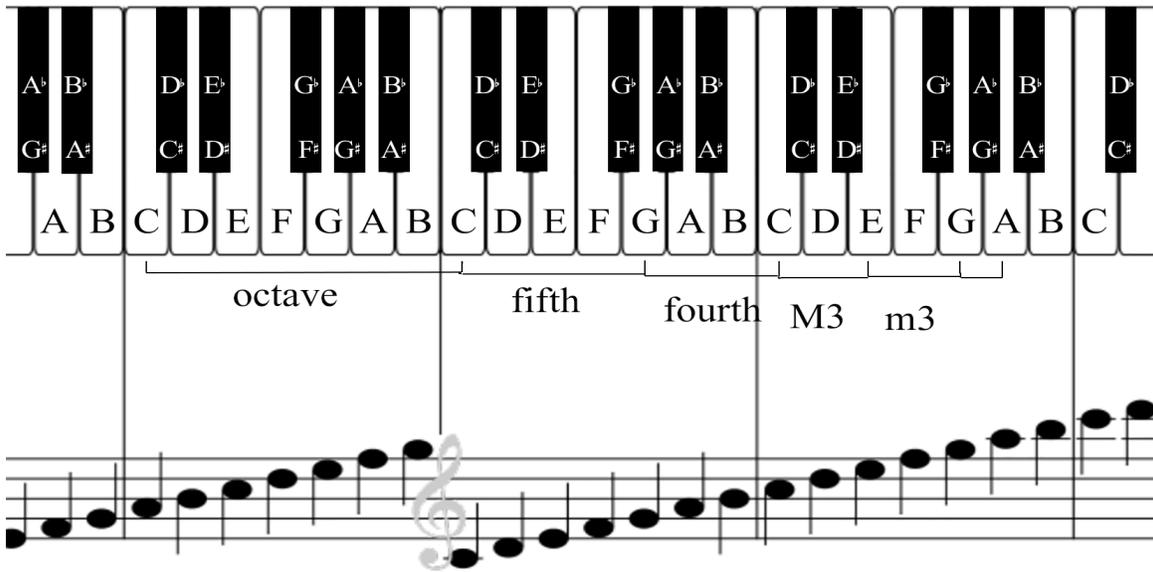
Musical pitches contain a mixture of sound waves. The one that dominates the sound is referred to as the “fundamental” pitch. All of the other waves that are produced by a pitch are referred to (in the music world) as overtones. When a pitch has a set of overtones that allow a fundamental note to dominate the sound it is a determinate pitch. Indeterminate pitch happens when the overtones of a note are not in alignment or there are conflicting fundamentals and therefore no “one” vibration dominates the sound. Another way to think about this concept is to know that instruments that have determinate pitch play notes that are typically given names (letter, number or solfege). Determinate pitch instruments include (but are not limited to): voice, piano, guitar, marimba, woodwinds, brass, chordophones, etc.... Indeterminate pitch instruments are instruments like gamelan gongs, snare drums, cymbals, triangle, etc... These instruments are generally used to keep a rhythm, to accent, or to add color.

When a pitch has a set of overtones that vibrate along with the fundamental in simple ratios (see Figure 2) then it makes a harmonic pitch. Most musical instruments that have determinate pitch are harmonic (chordophones, aerophones, most electrophones). When the overtones of the pitch are mostly inharmonic (not in simple ratios) then the pitch is discernable but the timbre is unique (timpani, mallet percussion, singing bowls, tuned gongs). Figure 2 illustrates the harmonic overtones. The wavelengths pictured also illustrate the possible notes that can be played on fixed length aerophones (bugle, bottle, conch shell, etc).

Tuning

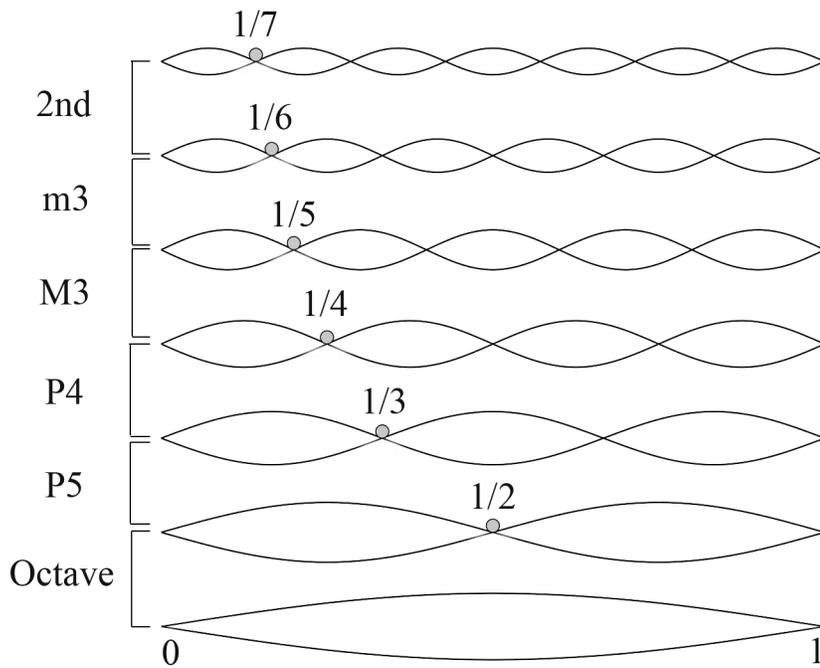
Pythagoras of Samos (of the Pythagorean theorem) described why some musical notes vibrate well together (harmonize) and others do not. We use lengths of string to illustrate his findings. If two strings were physically proportioned in a 2 to 1 ratio (one string is exactly two times the length of the first) and all other factors are equal then the vibrations of musical notes produced by these strings will also exist in a 2 to 1 ratio. For instance: if the long string produced a pitch at 110 hertz then the shorter one would produce a pitch at 220 hertz. This 2 to 1 ratio is so harmonious that we call these two separate notes the same pitch name. The difference between two pitches of the same note name (or 2 to 1 ratio) is called an octave. Simply put and **octave is the interval between two pitches having the same note name**. A musical **interval is the distance between two notes/pitches**. In Figure 1 the distance between any two notes of the same letter name is called an octave.

Figure 1: Piano keyboard with letter note names



This 2/1 octave ratio is also illustrated in Figure 2 in bottom two wavelengths.

Figure 2: Harmonic Partial/Overtone Series



All instruments are not tuned the same or even to the same pitch sets. When instruments are tuned to make the ratios scientifically pure (in the manner of Figure 2) this is called **just intonation**. While the ear prefers pure intervals they are not practical for much Western music. In the Western world most instruments are not tuned to just intonation. Instead, Western instruments are typically tuned to equal temperament. In **equal temperament** the octave is divided into twelve equidistant pitches. When this is done the purity of the scientific ratios is lost. This means that fixed pitch instruments like keyboards and guitars are not completely “in tune” according to **just intonation**. This “impure” tuning is necessary to play music that moves between differing scales/key areas. In Western music some genres of music utilize just intonation. This is primarily the case when instruments do not have fixed pitch (fretless chordophones from the violin family, human voice). Some genres that utilize scientific tuning/just intonation are barbershop harmony, choir music, and string quartets. Some highly produced modern pop and electronic dance music utilize **just intonation**. The computer is now used to produce much music that has “pure” intervals. Indian music also utilizes **just intonation**. Even though there are several fixed pitch and fretted instruments (like the sitar) used in Indian music intonation is not a problem because there is not movement between differing key areas.

In the Western world emphasis is placed on tuning to a standard pitch set. This allows musicians to play their instruments in differing genres and ensembles. The use of the piano in various genres illustrates this. Most American instruments are nowadays tuned to A 440 standard (A 442 in Europe and Asia). This is often referred to as “concert pitch”. In recording studios and music clubs digital tuners are used to help keep instruments in tune. These tuners can be clipped onto instrument, plugged into electrophones or downloaded to smartphones. Prior to the use of electronic tuners tuning forks and pitch pipes were common. Large acoustic ensembles typically tune together before playing music. In orchestras an oboe player plays “concert pitch” (A 440) for each section of instruments to match prior to the conductor “taking the podium.” Most instruments can make slight adjustment to either raise the pitch if it is too low (flat) or lower the pitch if it is too high (sharp). When all of the instruments have matched pitch (are in tune) then the concert begins. The act of playing many instruments causes them to go out of tune. Continual plucking or bowing of strings loosens the tension on them, making them go flat. Temperature and humidity also affect the pitch of many instruments. Brass and woodwind instruments tend to play sharp in hot weather and flat in colder conditions. This affects marching bands, which often perform in extreme weather conditions ranging from the hot sunshine of a late summer football halftime show to the cold air in a holiday parade.

In other cultures having a standard pitch is not prioritized. Where the pitch lies can depend on cultural norms. As Cathy Kiroe-Smith states in *Musical Journeys*, 2013, “In many African countries, for example, pitch is more of an approximation than a science and performers will play on instruments regardless of whether they are perfectly in tune with the instruments played by fellow performers or not.” In Indonesia each gamelan ensemble is tuned only in relation to the instruments within. This means that no two gamelan ensembles have the same tuning. Because

of this individual instruments from one gamelan cannot be performed with another gamelan. This was also the case with traditional sikuri pan-pipes where communities would develop their own tuning. Contemporary siku pipes are often tuned to Western pitches. Other traditional instruments that are played alone are often not subjected to standardized tuning. This is true of solo flutes found around the globe. Church organs in Europe are tuned to a variety of concert pitches ranging from A 425 through A 456. Singers can make the adjustments to these pitches with ease while fixed pitch instruments like pianos, keyboard percussion, and fretted chordophones are limited in organs with which they could perform.

Intonation

Having a good sense of **intonation** means that one can recognize if a pitch is produced at the proper frequency. This is a skill that almost all can develop given time and practice. In American culture the term “tone deaf” is often applied incorrectly to one who has yet to develop a good sense of intonation. Tone deafness is a musical disorder called amusia. The opposite of tone deafness is **perfect pitch.** **Perfect pitch** is a rare condition through which someone having it can recognize exact vibrations without a reference. Researchers estimate that perfect pitch occurs in roughly 1 in 10,000 people (Sachs et al. 1995, 621). Instruments with indeterminate (drums) and/or fixed pitch (piano, guitar, computer) do not require development of intonation to the level of other instruments. Development of intonation takes much time and is part of the reason for the separation of string programs from wind, percussion, and choir programs in American schools.

Melody

Melody is a collection of pitches that are played in succession. Melody is often the focal point of the listener when experiencing music. Although there can be abstract melodies, in most genres melodies are a “tune” that is used to identify the piece of music. If you are going to tell someone about a song or piece that you heard you would probably start by singing the melody for them.

When listening to music with an ear for analysis of the melody the first step is to identify the instrument(s) that are performing it. In popular genres the melody is often the set of notes that are performed with lyrics by the human voice. In large ensembles the melody often shifts to differing instruments and timbre groupings. In some cases the melody is sung in harmony (or harmonized). This means that instruments play the melody at differing pitches but similar intervals and rhythms. The result is often chords/ harmony.

The second consideration when listening for melody is whether or not the melody is pre-composed or improvised. **Improvisation** is the process of composing and performing music at the same time. While some music is spontaneous invention (free jazz) most improvisation is the product of much disciplined training and practice (Bakan 2012, 29). Some genres (Jazz, Blues) have sections of melody that are improvised and others that are pre-composed. Another practice that often is improvised onto pre-composed melodies is ornamentation of the melody. Ornaments are cultural “decorations” of the melody in stylized ways by adding small

twists, turns and extra notes to the melody. This is a common practice in Arab, Indian, East Asian, Celtic, and West African traditions.

Scales and Melodic Modes

The third consideration when analyzing melody is to consider what collection of pitches is in the melody. Most often melodies are built upon scales. A **scale or melodic mode** is a series of pitches that are presented in ascending and descending order. Scales are used to build musical pieces. When these scales hold more rules for performance and extra-musical associations they are called modes.

As mentioned above **intervals** are the distance between two musical notes. Some intervals are more important than others. This is because some intervals are more consonant/pleasing to the ear than others. The wavelengths in Figure 2 show a relationship moving upward away from consonance on the bottom. The octave is the most important interval. Next in importance are the “perfect” intervals of a fourth and a fifth. The Major third, the minor third and then Major second follow the perfect intervals. The most dissonant/least important intervals are the minor second and the tritone. In Western practice the octave is divided by twelve equal half-steps or minor seconds (also called semitones). On Figure 1 there are twelve notes between each pitch of the same letter name. When all twelve pitches are played in ascending and descending order it is called the **chromatic scale**. Because the chromatic scale contains only one interval ($\frac{1}{2}$ step) there is not sense of one note being more important than the others. This means that the chromatic scale is often used to express an un-settled or shifting quality.

Diatonic Major and Minor scales

The scales that are used for a majority of Western music are the two forms of the diatonic scale. **Diatonic scales** are seven note scales that contain a series of whole and half steps. Because they have differing intervals there is a home pitch that is the resting pitch or “home” pitch within the scale. This note is called the **tonic**. In the C diatonic scale the note C is the tonic pitch. Diatonic scales can be built on all twelve notes as the tonic. There are two forms of the diatonic scale called diatonic major and diatonic minor. They each consist of a series of whole and half steps as illustrated in Figure 3. One whole step equals two half steps.

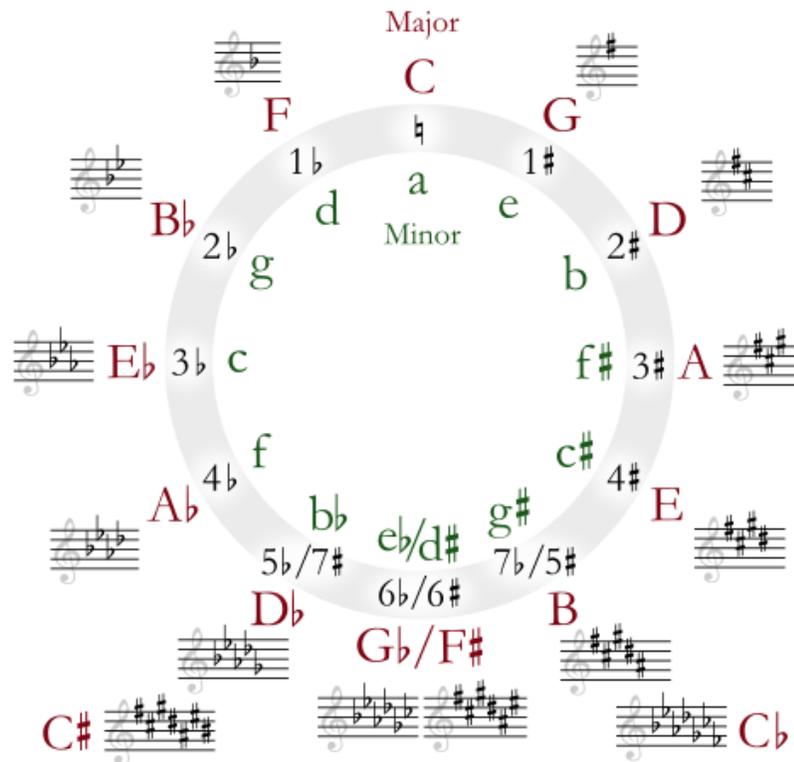
Figure 3: 3 Diatonic Major Scales, 3 Diatonic Minor Scales

Major	Whole	Whole	Half	Whole	Whole	Whole	Half
C major	C	D	E	F	G	A	B C
G major	G	A	B	C	D	E	F# G
F major	F	G	A	Bb	C	D	E F

Minor	Whole	Half	Whole	Whole	Half	Whole	Whole
C minor	C	D	E ^b	F	G	A ^b	B ^b C
G minor	G	A	B ^b	C	D	E ^b	F G
F minor	F	G	A ^b	B ^b	C	D ^b	E ^b F

The melodies of most songs in the Western tradition are built using the notes of the major or minor scales. Generally the notes of the major scale are culturally understood to sound “happy” or “light” while the notes of the minor scale sound “sad” or “down”. If one plays all of the white keys (naturals) of a piano from C to C then it will be a C major scale. C Major is the only major scale that can be played without playing the accidentals (black keys). Likewise the A minor scale is played on all of the naturals from A to A. Figure 4 gives all of the major and minor keys with corresponding key signatures (number of sharps or flats).

Figure 4: The Circle of Fifths



By Just plain Bill (Own work) [GFDL (<http://www.gnu.org/copyleft/fdl.html>) via Wikimedia Commons

There is a hierarchy of pitches in each scale. The most important pitch is the first scale degree and is called *tonic*. The *dominant* pitch is the second most important pitch. It is the fifth diatonic scale degree. *Sub-dominant* is built on the fourth scale degree and is also considered important.

When referring to pitches it is standard now in the west to use letter names. Traditionally most cultures use some system of solfege. **Solfege** uses syllables to name pitches in relation to scales. In the western diatonic major scale the solfege syllables are *do, re, mi, fa, sol, la, ti, do* with the tonic note being *do*. The advantage of learning solfege is that singers can sing the same melody in all keys without adjusting the note names.

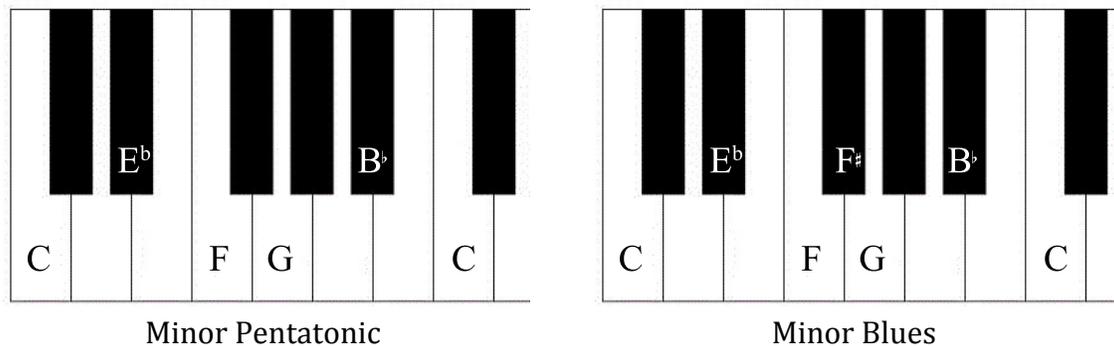
Pentatonic Scale

The pentatonic scale is a scale that has been used by many cultures. The pentatonic scale has five notes. The minor form of this scale has a minor 3rd, whole step, whole step, minor 3rd, whole step. This scale can be played on all of the black keys of a piano starting and ending on E-flat. The major form of this scale contains the notes of a major diatonic scale without the fourth and the seventh scale degrees. In differing forms the pentatonic scale is utilized as a primary scale in much sub-Saharan African music, far-East Asian music, and Gamelan music from Indonesia. The gamelan systems of tuning pelog and slendro utilize pentatonic scales that have nothing to do with the Western division of the octave.

Blues Scale

The most common blues scale is a minor pentatonic scale with an added note. This scale can be played over any chord in a “blues chord progression”. This makes it essential to both the blues and jazz genres. See figure 5.

Figure 5: C Minor Pentatonic and C Blues Scales



Melodic Modes of Southwest Asia, South Central Asia, North Africa

In many Middle Eastern cultures there is an aesthetic emphasis placed on the presentation of words. This is evidenced by the poetic legacy the region. This can also be heard in the melodic presentation of poetry. Singers use ornamentation and embellishment to add to the emotional content and meaning in performance. Melody is a primary element in music from this part of the world. Traditional music has no harmony and sometimes, as is the case with recitation of the Qur'an, has no steady background pulse. The expression of the emotions in a melody is a highly developed skill.

Instead of dividing the octave into 12 semitones, Middle Eastern music has 24 microtones to choose from. This allows for more nuanced melodic variation than in the Western musical world. It also causes much music from this tradition to sound “out of tune” from a Western perspective. These microtones (or quartertones) exist between the notes of a piano and other Western instruments. Therefore much Middle Eastern music cannot be represented or recreated using Western instruments and notation. For instance: The notes of Maqam Rast melodic

mode and the C major scale can be seen in Figure 6. Note that a piano cannot produce the quarter flat E and B.

The term for the scales of the Arabic, Persian, Jewish, and Turkish musical world is maqam. Maqam are not simply scales like in the west. Instead they are melodic modes that have extra musical/emotional associations. Like Western scales maqam usually divide the octave into seven notes (heptonic). Unlike in the Western musical world, maqam are not thought of as one grouping of seven but instead they are most often two four-note tetrachords that are stacked on top of each other. The lowest note in the lower tetrachord is an octave below the highest note in the upper tetrachord. The most important note (tonic) is the first note of the lower tetrachord and the second most important note (dominant) is the first note of the upper tetrachord. In any one piece there may be a variety of tetrachords used for differing sections. Each tetrachord has its own expressive qualities and extra-musical associations. Categories of maqam are based upon their lower tetrachords (regardless of the variety of upper tetrachords). The Figure 6 shows two of the more common maqam using western letter names with the tetrachords.

Figure 6: Maqam rast and Maqam hijaz

Maqam rast in C

C	D	E _(microtone flat)	F	G	A	B _(microtone flat)	C
Lower tetrachord				Upper tetrachord			

Maqam hijaz in D

D	E-flat	F-sharp	G	A	B-flat	C	D
Lower tetrachord				Upper tetrachord			

Indian Raga

In India the set of pitches from which a piece is conceived is known as a **raga**. There are many Hindustani (north Indian) and Carnatic (South Indian) ragas. Each of them dictates both the notes that performers will choose for the melody and also rules for how the performer will perform these notes. Most ragas contain seven ascending pitches with a differing seven descending pitches within an octave. Like music from the Arabic world extra-musical associations, microtones and ornamentations are important components of the performance of ragas. Specific ragas are associated with times of the day and seasons of the year. In addition to having a “road map” for improvisation each raga also has a repertoire of pre-composed melodies that are passed down orally through the tradition. Aside from these small “compositions” no two performances of a raga will be exactly alike.

Much Indian “classical” music is based on a long improvisation of melody on the given raga and rhythmic tala being performed. In Hindustani culture a common ensemble performing a raga would consist of a sitar, a tambura, and tabla. In Carnatic traditions the ensemble would also be a trio but the common instrumentation would include a vina, tambura, and mrdangam. In each of these ensembles the main chordophone instrument performs the raga (sitar, vina) while

the drums and drones accompany. In the Carnatic tradition the human voice plays a more prominent role in the music. When the voice sings a raga it usually uses a solfege system called sargam in which the singer uses the following syllables: sa, ra/ri, ga, ma, pa, dha, da/ni, sa. Like in other examples of scales there is a hierarchy of notes with sa acting as the equivalent of the Western tonic. To someone not familiar with the practice or the language it might appear that the singer is speaking words with meaning. That is not the case, the syllables simply indicate pitch height.

Analyzing melody:

1. What instrument is performing the melody?
2. Is the melody pre-composed or is it improvised? Is it ornamented?
3. What scale or melodic mode serves as the foundation for the melody?
4. Describe the range, direction, and motion of the melody.

Harmony

Melody is a collection of pitches played in succession. **Harmony is a collection of pitches played at the same time.** The rules and aesthetics that determine the proper use of harmony differ between cultures. For example, the ways that harmony is used within Japanese Gagaku differs from the ways that it is utilized in Western music. Some cultures do not utilize harmony as an element of music. Some examples of music that does not traditionally utilize harmony include Indonesian Gamelan, Indian Classical, Arabic and Persian, Native American, and Aboriginal Australian genres. Harmony has been utilized and developed as an element in Japanese Gagaku, Sub-Saharan African, and Western styles including European art music, and Western popular genres.

Western harmony largely functions on a basis known as tonality. Tonality is a concept that recognizes the tonic note of a diatonic scale as the most important “home” or “central” pitch from which the music begins and ends. When considering harmony, the tonal center (tonic) is a chord built on the first scale degree. Some music shifts tonal centers within the piece. When the music shifts from one diatonic key area to another it is called a modulation. Most modulations are imperceptible to the untrained listener. Modulations between major and minor keys can sometimes be discernable to the untrained ear. In the recitative *Quand je vous aimerai?* from the opera *Carmen* there is a modulation from f minor to F Major just before the end. This sets up a modulation from F Major to d minor for the start of the aria: *L'amour est un oiseau rebelle (Habanera)*. The *Habanera* also modulates from d minor to D Major. These key areas dictate the notes chosen for both the melody and the harmony.

A chord is generally defined as three or more pitches sounding simultaneously. The tonic chord is built by playing the first, third, and fifth note of the scale simultaneously. If the tonality of a piece is C major then the tonic chord contains the notes C, E, and G (See Figure 7).

Figure 7: Tonic, Sub-dominant, and Dominants in C diatonic-major

Scale degree	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	Octave
C major scale	C	D	E	F	G	A	B	C
Tonic chord "C maj"	C		E		G			
Sub-dominant chord "F maj"				F		A		C
Dominant chord "G maj"		D			G		B	

Because the tonic chord is the "home chord", in tonal music it is the central harmony. The dominant and sub-dominant chords are also very important and are built on the fifth and fourth notes of a diatonic scale.

Major and minor diatonic chords are considered to be consonant chords. **Consonance** is represented by intervals or chords that sound relatively stable and free of tension. The opposite of consonance is dissonance. **Dissonance** is represented by intervals or chords that sound tense and unstable. Western functional harmony utilizes the principal that the music will start with consonant harmonies, move to more dissonant harmonies and in the end offer relaxation/relief by returning to consonance. The movement between consonance and dissonance provides motion to depth to the music. In tonal music (music with functional harmony) this movement happens between chords. Aesthetics that determine what is consonant and what is dissonant differ from culture to culture and from generation to generation. An interesting example of this is in traditional choral singing from Bulgaria. In this culture seconds are considered to be consonant. In contemporary American pop these intervals (and chords built using them) are considered to be dissonant.

A defining feature of Western Art music is the development of harmony starting in the Medieval style period. In a broad sense tonal music has a peak in purely diatonic music (using notes of major and minor diatonic scales) in the Classical style period. In the Romantic period composers stretched the possibilities of tonal music by adding dramatic dissonances and far reaching harmonies to the traditional tonal foundations that were established during the previous periods. By the Twentieth century many composers believed that traditional tonality was exhausted and old-fashioned. The result of this was that the Twentieth century style period in Western Art music saw a normalization of dissonance. Much music from the period explored the possibilities of sonorities that existed outside the rules of functional harmony/tonality. This is a defining feature of this period of music. When listening to it one may be surprised by the lack of comfort (or the oddness) felt within many works. This is often a direct result of the normalization of traditional dissonances. When music denies the rules of tonality by not having a central tonality it is referred to as **atonal** music. Learning the musical theory behind functional harmony and atonal practice takes many "classically" trained Western musicians years of classes, lessons, practice and study to master.

Western popular and folk genres generally utilize simple harmonies that are diatonic and functionally tonal. Most music within these genres contains a repetitive sequence of movement between several diatonic chords. This is commonly known as a chord progression. These chord progressions often contain

only three or four chords. In major diatonic keys the chords of Tonic (built on scale degree 1), Sub-dominant (scale degree 4) and Dominant (scale degree 5) are often used to build songs. In vocal groups there is often one singer who leads by singing the melody while the others harmonize that melody by combining voices to sing chords. In popular bands instruments that can play chords (guitar, piano) often play the chords/harmony while singers provide the melody.

Traditional Mexican corridos are often sung over a two-chord progression that alternates between only the tonic and dominant chords. Figure 8 shows the chords along with the lyrics of the first verse of *El Corrido de Gregorio Cortez* as performed by Ramón Ayala. A two-chord progression between tonic and dominant allows the musician to start and finish with consonance represented by the tonic chord and move to a more “dissonant” area represented by the dominant chord. In this piece the harmony is the chords played on the guitar while the voices are the melody. Another interesting aspect of the melody is that it is sung in harmony by two singers who sing a third apart.

Figure 8: *El Corrido de Gregorio Cortez* melody with chords

The addition of the sub-dominant chord (IV) to the tonic and dominant expands the harmonic possibilities of a chord progression. These three chords are the harmonic foundation of many pop songs. It is interesting to note that each of these chords lies next to each other on the circle of 5ths (See figure 4). When asking guitarists what the first chords are that they learned they often reply with three adjacent chords on the circle of 5ths: (F,C,G) or (G,D,A). The tonic, dominant, and sub-dominant chords are used to build “three chord” songs. Examples of three chord songs using tonic dominant and sub-dominant can be seen by following this link:

The **blues chord progression** is a specific sequence of the tonic, dominant, and sub-dominant chords that serves as the harmony for the blues genre. According to Steve Valdez in his book *A History of Rock Music*, 4th edition the basic blues structure was inspired by chords used in basic church hymns from Great Britain, Scotland and Ireland. African (American) slaves assimilated them into their own music and created “the blues”. In the 1910s and 1920s the blues chord progression began to codify into the twelve-bar blues progression. In this progression the tonic

chord (I) is the harmonic foundation of the first four bars. It is followed by a two bar harmony of the sub-dominant (IV) chord. After returning to tonic (I) for two bars it then moves to dominant (V) for two bars and ends with two more bars of tonic (I). Each “bar” or measure has four beats with a backbeat emphasis on 2 and 4. The full progression is illustrated in Figure 9. To modern musicians “playing the blues” often means playing a piece that utilized the 12 bar-blues progression. The blues and pentatonic scales can be used to improvise melodies over the harmony of the blues progression.

Figure 9: 12-Bar Blues Progression

Bar 1 Tonic (chord)= I > > 1 2 3 4	Bar 2 Tonic = I > > 1 2 3 4	Bar 3 Tonic = I > > 1 2 3 4	Bar 4 Tonic = I > > 1 2 3 4
Bar 5 Sub-Dominant= IV > > 1 2 3 4	Bar 6 Sub-Dominant= IV > > 1 2 3 4	Bar 7 Tonic = I > > 1 2 3 4	Bar 8 Tonic = I > > 1 2 3 4
Bar 9 Dominant= V > > 1 2 3 4	Bar 10 Dominant= V > > 1 2 3 4	Bar 11 Tonic = I > > 1 2 3 4	Bar 12 Tonic = I > > 1 2 3 4

By adding more chords to the traditional three songwriters build more complex chord progressions. In much music the chord added is a minor chord built on the sixth scale degree (sub-mediante/vi). Many pop hits from the 1950s and 60s used the “doo wop” progression of tonic, sub-mediante, sub-dominant, dominant (I-vi-IV-V) to create a “hit” sound. More recently the tonic, dominant, sub-mediante, sub-dominant (I-V-vi-IV) progression has been used to create many hits. There are many online videos in which musicians demonstrate this concept by playing the same chord progression while moving through many popular melodies.

As the age of European colonialism gives way to the internet revolution Western musical influences can be found in cultures across the globe. This often manifests through the addition of harmony into popular and traditional genres. Harmony can now be heard within Bollywood, K-pop, J-pop, and Arabic popular music. Sometimes it is used in traditional Western ways while often it is simply used as a newer aesthetic preference that is not bound to Western traditions.

Analyzing harmony:

1. Is there harmony within the music?
2. If so, what instrument(s) are playing the harmonic part?
3. What scale or melodic mode serves as the foundation for the harmony?

4. Is the harmony a repetitive chord progression? If so, what is the chord progression?

Musical Texture

Music theorists often utilize texture as an element of music that helps guide understanding of the complex differences between the many genres of Western Art Music that were created over the past millennium. Musical **texture is how melody and harmony are combined within a piece of music**. Because texture is only concerned with these two elements it is not often used to analyze music from cultures that do not utilize harmony. It is important to understand that purely rhythmic (drumming) parts are not considered when analyzing the texture of a piece of music.

There are three primary musical textures:

Monophony- Monophonic music contains one melody with no harmonic accompaniment. Musical works that have only one melodic instrument performing are often monophonic. Monophonic texture can also occur when many instruments are playing the same melody at the same time. Gregorian chant is an example of a monophonic genre. Music of the shakuhachi and Native American flutes is mostly monophonic. When people gather to sing *Happy Birthday* they strive for a monophonic texture. When a piece of music contains one melody with an accompanying drone (*Raga Jog*) the drone is often not considered and therefore the texture may be called monophonic.

Homophony- Homophonic music contains one melody and harmonic accompaniment. This is the most commonly heard texture in Western Art music and contemporary popular music. The harmony is often played on an instrument that can perform more than one note at the same time. Instruments like the piano and the guitar are used in modern pop music to play the chords while singers often perform the melody. Despite the complex timbres, melodies, and rhythms of Western Art music the most common texture is homophony. When choirs and vocal groups sing four-part harmony (chords) in which all of the voices move in unison rhythm the resulting texture is homophony. The upper voice in these cases is the melody while the other voices are the harmonic accompaniment. This music is sometimes referred to as being homorhythmic.

Polyphony- Polyphonic music contains two or more differing melodies happening simultaneously. There is much polyphonic music from both the Renaissance and Baroque style periods in Western Art music. In Classical, Romantic, and Twentieth Century styles smaller polyphonic sections of large works offer contrast to the largely homophonic textures. Polyphony is complex or “thick” sounding. It is not often heard in popular music. Polyphonic music may or may not have harmonic accompaniment.

The fourth texture is one that also contains one melody but has variations on the melody. **Heterophony**- Heterophonic music contains two or more voices playing variations of one melody at the same time. This is a common texture of some folk traditions in which melodies are previously known to the listeners (*Amazing Grace*) and each performer wants to add their own style to the performance.

Analyzing texture:

1. Does the music have one or more melodies?
2. Does the music have harmony?
3. Did you disregard drones and drums?
4. What is the texture? Does it change within the piece?

Reference List:

- Bakan, Michael B. 2012. *World Music: Traditions and Transformations*. 2nd ed. New York: McGraw-Hill.
- Kilroe-Smith, Catherine. 2013. *Musical Journeys*. Dubuque, IA: Kendall Hunt.
- Kubic, Gehard. 1994. *Theory of African Music*, Volume I. London: University of Chicago Press.
- Paredes, Américo. 1958. *With His Pistol in His Hand: A Border Ballad and It's Hero*. Austin, TX: University of Texas Press.
- Sacks, Oliver, G. Schlaug, L. Jancke, Y. Huang and H. Steinmetz. 1995. Musical Ability. *Science* 268, (5211 May): 621-22.
- Wade, Bonnie C. 2013. *Thinking Musically: Experiencing Music, Expressing Culture*. 3rd ed. New York: Oxford University Press.
- Wikimedia Commons. "Harmonic Partial on Strings.svg." Last modified July 8, 2008. Accessed Oct. 31, 2016. https://commons.wikimedia.org/wiki/File:Harmonic_partials_on_strings.svg.
- Worland, Randy. "Demonstrating the Effect of Air Temperature on Wind Instrument Tuning." Presented at the 161st Acoustical Society of America Meeting, May 26, 2011. Accessed Nov. 5, 2016. <http://acoustics.org/pressroom/httpdocs/161st/Worland.html>
- Valdez, Stephen. 2006. *A History of Rock Music*. 4th ed. Dubuque, Iowa: Kendall/Hunt.