Some Basics of Harmony for Jazz

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September 2001

Scale Degrees

- Relative pitches in a scale are given names based on their ***ordinal*** position in the **major** scale, e.g. tonic, 2nd, 3rd, 4th, 5th, 6th, 7th, octave, 9th, 10th, 11th, 13th
- Examples:
  - **Key of C**: tonic = C, 2nd = D, 3rd = E, 4th = F, 5th = G, 6th = A, 7th = B, 9th = D
  - **Key of Eb**: tonic = Eb, 2nd = F, 3rd = G, 4th = Ab, 5th = Bb, 6th = C, 7th = Db, 9th = F

Rule of 7

- Note that the pitches repeat an octave higher with 7 added to the scale degree.
- Example: 9th is the same is 2nd, 11th is the same as 4th, 13th is the same as 6th.
- A tone is more-or-less interchangeable with 7+ the tone, although there are some cases where one or the other is preferred.
- Some tones above the octave aren't used very often, e.g. 12th, 14th

OGA (On-Going Activity) #1

(to be learned over a period of time)

- Become able to name, quickly, the pitch for a specified scale degree in any key.
- Examples:
  - 5th of F? C
  - 6th of Bb G
  - 4th of Ab Db
  - 7th of C# C (B# actually, but see next)
- You will need these to help "think on your feet" in jazz soloing.

Enharmonics Issue

- Rather than being strictly formal about the names of pitches, you may think about them as you would think about them on your horn (= instrument), e.g.
  - C-flat = B
  - B-double-flat = A
  - Gb = F#
  - etc.
- Use whatever works the most easily for you.

OGA #1 footnote

- Order of importance of scale degrees:
  - 4th
  - 5th
  - 3rd
  - 7th
  - 6th = 13th
  - 2nd = 9th
- It will become clear why shortly.

OGA #2

- Become able to name the ordinal position for a specified tone in any key.
- This is the "inverse" of OGA #1.
- Examples:
  - G in F? 2nd
  - A in C? 6th
  - E in B? 4th
- Suggestion: Make some flashcards and go over OGA #1 and #2 with a friend.

Numeric Terminogy

- Musical terminology is "overloaded": the same term can sometimes mean more than one thing.
- Example: "third" can mean the ***scale degree*** we just discussed (3rd tone of a major scale), or it can mean the ***interval*** of a third, to be discussed next. These are related, but actually have different meanings.

Intervals

(This discussion is based on an equal-temperament scale.)

- 1 half-step = 1 semi-tone = 1 chromatic interval, e.g. the interval between C and C#
- 1 octave = 12 half-steps
- Intervals of different numbers of half-steps have standard **names**
  - 2 half-steps = "major 2nd" (e.g. between C and D)
  - 1 half-step = "minor 2nd" (e.g. between E and F)

Intervallic Pattern

- (Use this to be able to construct the tones of a scale in any key, even if you don't remember the key signature.)
- W = whole step, H = half-step
- The major scale is:
  - W W H W W W H
  - Example: Gb major = Gb, Ab, Bb, Cb, Db, Eb, F, Gb

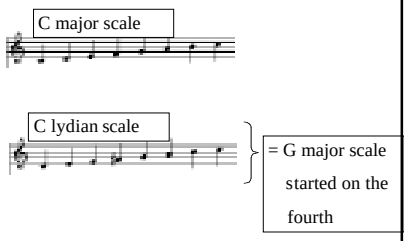
Intervallic Pattern

- The major scale is:
  - W W H W W W H
- Notice that almost every step is W except for two that are H.
- By remembering the position of the H's, we can remember the scale pattern.
- In the major scale, H occurs between 3 and 4, and between 7 and 8.

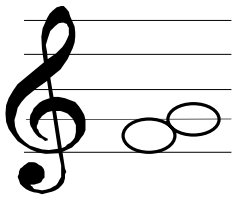
Contrasting Scale Patterns

- The "Lydian" scale (or "mode"), often used in jazz, is:
  - W W W H W W H
- Lydian has a *sound* that is closed to major, but said to be "brighter".
- H occurs between 4 and 5, and between 7 and 8.
- Another mnemonic is that Lydian is *like major*, except that the 4th is *raised* one half step.
- Yet another mnemonic is that the Lydian is like a major scale started on the 4th ordinal tone (rotates the pattern).

Lydian vs. Major



Major Second Interval

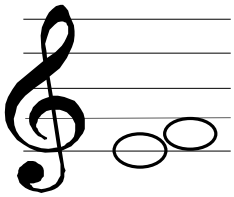


Interval of **two** half-steps:

e.g. F-G

W

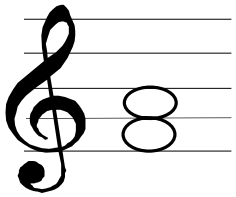
Minor Second Interval



Interval of **one** half-step:

e.g. E-F

Major Third Interval

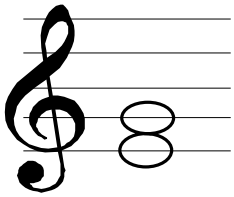


Interval of **four** half-steps:

e.g. F-G, G-A

W + W

Minor Third Interval

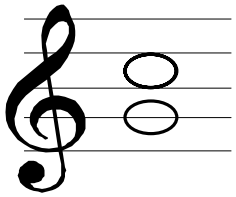


Interval of **three** half-steps:

e.g. , E-F, F-G

H + W

Perfect Fourth Interval

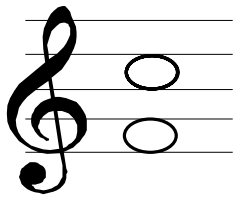


Interval of **five** half-steps:

G-A, A-B, B-C

i.e. W+W+H

Perfect Fifth Interval

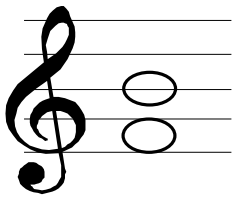


Interval of **seven** half-steps:

F-G, G-A, A-B, B-C

i.e. W+W+W+H

Tritone Interval



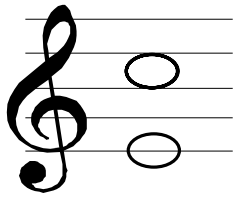
Interval of **six** half-steps, or **three** whole steps:

F-G, G-A, A-B

i.e. W+W+W

Also called "augmented fourth" and "diminished fifth".

Augmented Fifth Interval



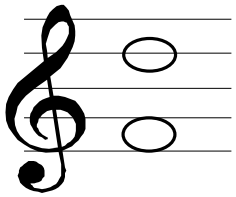
Interval of **eight** half-steps:

E-F, F-G, G-A, A-B, B-C

i.e. H+W+W+W+H

Also called "minor sixth".

Major Sixth Interval

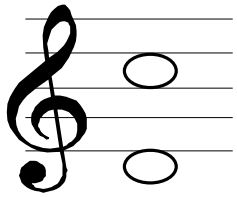


Interval of **nine** half-steps:

F-G, G-A, A-B, B-C, C-D

i.e. W+W+W+H+W

Minor Seventh Interval



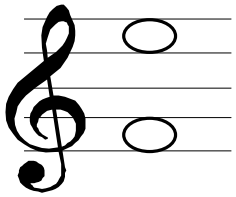
Interval of **ten** half-steps:

D-E, E-F, F-G, G-A, A-B, B-C

i.e. W+H+W+W+H+W

= Octave - whole-step

Major Seventh Interval



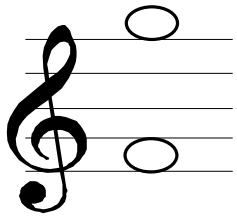
Interval of **11** half-steps:

F-G, G-A, A-B, B-C, C-D, D-E

i.e. W+W+W+H+W+W

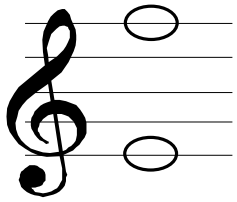
= Octave - half-step

Major Ninth Interval



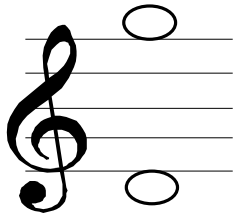
Octave + Major 2nd

Minor Ninth Interval



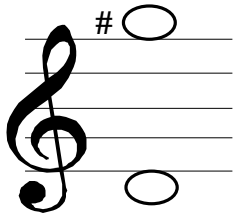
Octave + Minor 2nd

Eleventh Interval



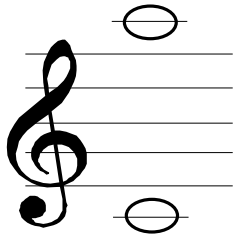
Octave + Perfect Fourth

Raised Eleventh Interval



Octave + Augmented Fourth

Thirteenth Interval



Octave + Major Sixth

OGA #3

- Get acquainted with the **sound** of as many different intervals as possible.
- Be able to recognize them when played sequentially and when played simultaneously.
- Learn to recognize intervals you hear in familiar songs and associate them with their name.

Inversions

- The inversion of an interval is the interval with the upper note dropped an octave.
- Since an octave is 12 half-steps:
  half-steps in inversion
  = 12 - half-steps in interval
- Knowing inversions can be helpful in remembering important things about intervals.

Inversion Facts

Interval	Inversion
Perfect Fifth	Perfect Fourth
Major Third	Minor Sixth
Minor Third	Major Sixth
Minor Second	Major Seventh
Major Second	Minor Seventh
Tritone	Tritone

If A is the inversion of B, then B is the inversion of A.

Circle of Fifth
(aka Circle of Fourths)

- By repeatedly descending by a fifth, or ascending by a fourth:
  - You arrive back at the starting point.
  - You cover all tones in the chromatic scale.
- C F Bb Eb Ab Db Gb B E A D G C
  C# F#
- This has to be memorized eventually.

OGA #4

- Memorize the circle of fifths.

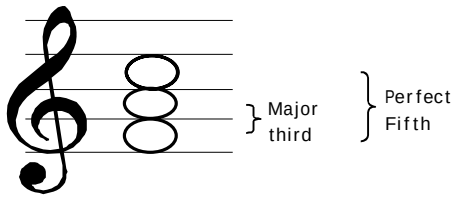
Chords

- Chords are sets of tones.
- Chords provide a *guide* for the improvised melody line.
- Chords are named based on the **intervals** found within them, or on their position with respect to certain scales.

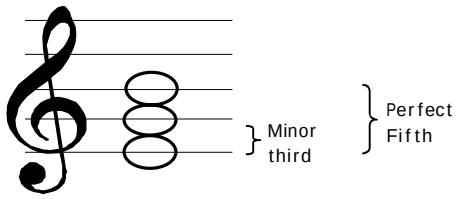
Triads

- Three-note chords are called “triads”.
- Triads aren’t used too much by themselves in modern jazz, but are important because they may be remembered as parts of or bases for more complex chords.

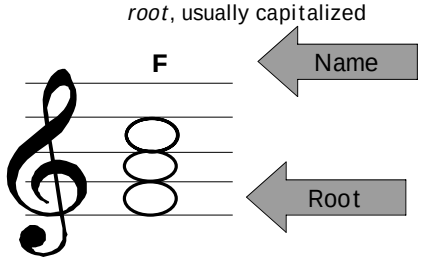
Major Triad



Minor Triad

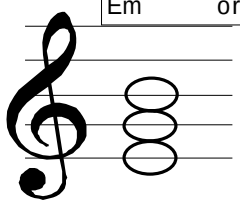


A Major Triad is **named** by the name of the *root*, usually capitalized



A minor triad is designated by the name of the *root*, followed by lower-case "m" or "-".

Em or E-

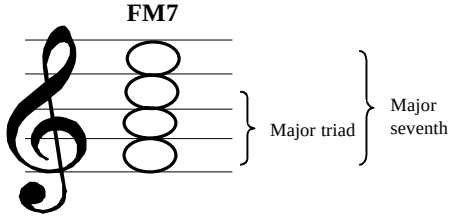


OGA #5

- Learn to distinguish between major and minor triads by ear.
- Learn to play all 12 major and minor triads on your instrument *and* on the piano.

Major Seventh Chords

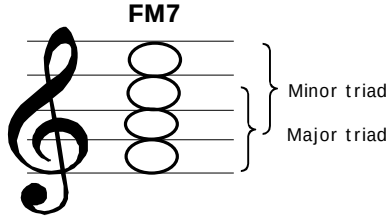
FM7



Instead of FM7, we also commonly see Fmaj7, and FΔ.

Note that this chord "contains" both a major and a minor triad.

FM7



Major Seventh Chord Family

- An **upper-case note name by itself** is a chord of major character, but *usually* is interpreted as a *major seventh chord*, or one of its variants:
  - *major ninth*
  - *major six-nine*
- The word ***major*** is very important here. Simply *seventh* chord means something else (a dominant seventh chord, discussed later).

The Sound of a Major Seventh Chord

- This chord has a very stable sound.
- It also has a somewhat "cool" sound.
- It usually occurs at the beginning or end of a phrase, and often signals that the corresponding key is established.

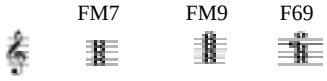
Songs with lots of Major Seventh Chords

- "Forest Flower" by Charles Lloyd opens with 4 major seventh chords in a row: A, G, C, Bb
- "All the Things You Are", a standard, has 6 major seventh chords (that's half the 12 that are possible).
- "Summer in Central Park" by Horace Silver has 6 major seventh chords: F, Db, Gb, D, A, Ab
- "Majority" in the book consists of 4 major seventh chords: Bb, Ab, Eb, Db.

Sixth and Ninth

- The sixth and ninth "go along for the ride".
- They can be somewhat freely added to or removed from a *major seventh chord* in most cases.
- Usually the seventh and ninth are sounded (major ninth chord), but the sixth and ninth are often used without the seventh (major six-nine chord)

Major Seventh Family



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OGA #6

- For each additional chord type that is introduced, learn to play the chord on the piano, in as many keys as possible.

OGA #7

- For each chord type that is introduced, learn to recognize a chord of that quality when it is played or implied in the music to which you are listening or playing.

Chords, Melody, and Scales

- The chord indicates notes that can be emphasized in the melody.
- Moreover, a chord often *implies* a scale that indicates *additional* notes that can be used in the melody. (Sometimes there is a choice of several scales.)
- Because chords and scales are linked in this way, we call the combination a *chord/scale*.

Scale for the Major Seventh Chord and "avoid" tone

- A common scale choice for the major seventh is the corresponding major scale, e.g. F major scale for F major seventh chord.
- The **fourth** degree of the scale in the case of the major scale is called an "avoid tone", meaning that it should not end a phrase as as if it were a stable tone.
- It is ok to use avoid-tones in passing.

The raised 4th

- The raised 4th can often be used where the fourth is an avoid tone.
- In other words, this would actually be suggesting the Lydian scale, which can be a better scale choice for a major seventh chord in some cases.
- The composer can indicate this intent by designating the chord as a Maj7#4 or Maj7#11, but this might not appear in older music.

More on Tone Avoidance

- The *root* of the major scale should also be avoided by the soloist as a long held tone, as it will likely conflict with the major seventh being played by the comping instrument.
- The root can also be fairly boring in the melody.
- Certain *chromatic* tones should be similarly avoided, as they imply different chords and even different keys.

Goal Tones (Shelton Berg)

- The tones to be emphasized when playing over a major chord/scale are, in order of preference (use your judgement):
  - 3rd and major seventh
  - fifth and root
  - sixth and ninth
  - The raised fourth can be used with discretion (Lydian sound).
  - The raised fifth can be used in passing ("major bebop scale").

Tone Imagery for Major Scale (Use what works for you)

- Root and fifth have a "basic" sound.
- Third, major seventh, raised fourth, and raised fifth have a "cool" sound.
- Sixth and ninth have a "pastel" sound.
- Fourth and flatted ninth are avoided, except in passing.
- (Flatted seventh, third, and ninth have a "bluesy" sound, but if you emphasize them, you aren't really playing a major chord).

Chord Voicing

- On a comping instrument, the tones are not always played in order, e.g. 1-3-5-7-9.
- Repeatedly doing this can give an un-cool or un-refined sound.
- For example, a major seventh chord will often be played 1-7-3-5, where the 3 and 5 are an octave up.
- Such choices are called chord ***voicing***.

Voice Leading

- When several different chords are played in a sequence, the voicings of the chords is often chosen so that there is little movement in the upper (non-bass) positions.
- This is called "**voice leading**".
- Voice leading allows the listener to enjoy certain expected chord resolutions.
- More on this topic later.

Muddy vs. Thin Voicings

- If tones, other than the bass, are voiced too low on the piano, a "muddy" sound results.
- If tones are voice too high, a "thin" sound results.
- A good rule is that the lowest note in the voicing, aside from the bass, should be in the octave below middle C and the highest note should be in the octave above.

Voicings

- There will be more on voicings in a separate document.