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# Music Theory and Songwriting

The songwriting process can be a tricky thing to write about and even trickier to teach. This is because any creative effort (and any subsequent critique of that effort) is largely opinion-based. A painting can be sold for a million dollars, but the person who created it might have died 50 years earlier without a penny to his or her name. The history of artistic expression is littered with stories such as this, whether it be in the world of art, music, or literature.

That is why I'm not going to write about what makes a song great or explain how to create the catchiest chorus ever written. Instead I want to explore the potential role music theory can play in expanding any songwriter's original ideas. How possessing a solid understanding of theory can push the limits of what is possible in a particular piece. And, most importantly, how it can help maximize the emotional impact on the listener.

## **WHAT IS MUSIC THEORY?**

The term 'Music Theory' can be a bit misleading. It is essentially a language which describes how our western system of music works. For example, we all love certain songs from the moment we hear them. But, whether you play an instrument or not, some can't explain why a song moves them in an emotional way. However, those who are well versed in music theory can identify and articulate the specific qualities that give a song its overall mood and character. This is not to say that people who understand music theory are better equipped to create amazing music, just that they can explain the mechanics of a piece more

so than the average joe.

## **CREATIVITY**

Where does a good idea come from? That's a tough one to answer. But I'll give a somewhat cliché response by saying the best ideas occur when a person is inspired. Inspiration is one of those ephemeral emotions which is like a light bulb going on in your head. The Greeks believed it was the act of breathing in the spirit of the gods which, in turn, gave mortals creative abilities. This ancient belief could still be considered an accurate description of what inspiration means in today's society.

Except where the people of antiquity believed it was the spirit of gods they were inhaling, I believe it is the inhalation of other people's ideas. Let's face it; no artistic work is created in a vacuum. We all have probably felt moments of inspiration when reading a book, watching a movie, or listening to music. Just think about when you've watched a movie for the first time and the ending completely disappointed you! What do you do after the movie? You start talking with your friends about how the ending would've been so much better if they did it 'this way' or 'that way'. It might just be casual conversation amongst you and your friends, but those ideas are creative endeavors that your mind is 'exhaling' after it 'inhaled' a 2-hour long movie. Our reactions (whether positive or negative) towards other ideas seems to be the precursor for true inspiration.

Logically, the next step would be to inhale as much creative work as possible. Of course you should listen to a lot of music but, as mentioned earlier, reading good books, watching good movies, or checking out cool pieces of art can also spark that musical flame. The bigger your internal library is, the better the chances are for inspiration to occur!

Inspiration usually then leads to a main musical idea. This can be a melody, a chord progression, or even a lyric. No amount of theory knowledge can truly explain the initial flare of that creative moment. But once you have your main idea, where do you go from there? How does an idea evolve into an entire song?

## **MUSICAL ARCHITECTURE**

In many ways, this challenge can be compared to architecture. Think of some of the world's modern wonders; The Pyramids, The Roman Colosseum, The Taj Mahal, or The Empire State Building. The visual concept for these structures could be credited to abstract inspiration occurring in the mind of their designers. But how did the architects move beyond the basic designs and actually get these structures built?

The initial rendering of a building is very similar to the initial melody you hear in your head. It is simply a concept. This concept should be dissected, expanded, and improved upon. In architectural terms, the visual idea needs to be reinforced with competent engineering. This means you need people with technical knowledge to engineer and design the internal anatomy and framework of the structure. This will ensure that it can physically withstand the elements and literally stand the test of time. Architects have the responsibility of being both creative and technical, in that they have to maximize the aesthetic appeal of a building while making sure it is structurally sound.

## **APPLYING MUSIC THEORY**

This is where the application of music theory can be very useful. It is simply a way of reinforcing your work with 'competent engineering'. Perhaps a song you wrote needs more layering in a certain section and you want to harmonize two guitar parts. But because you only know how to harmonize by ear, it is not

producing the dramatic effect that you hoped it would. If you had the 'technical knowledge' then you could experiment with different types of harmonization and figure out which one has the biggest impact on that section.

You could also have a particular chord in your progression that seems to clash with the bass guitar. But, after many attempts to change the chord, you can't seem to find a suitable replacement without sacrificing the melodic content of the song. Well it may not be the chord that is the problem, but how the notes are arranged in that chord (the chord voicing). Maybe you just need to move the root note to a higher octave (invert the chord) and the musical palette will open up for the bass.

Another common roadblock occurs when one tries to play a guitar solo over a section of a song. The player in question might know the Pentatonic and Blues scales but is lost once they're presented with a rhythm progression that clashes with the typical rock or blues sound. Knowing which scales to utilize in a given musical context and (less obvious but more crucial) being aware of the strongest notes within those scales are incredibly valuable skill sets to possess. More times than not, music theory can be a useful tool in resolving the issues in all of these examples.

## **MUSIC THEORY ISN'T 'EVERYTHING'**

Sure, you can also accomplish these things without knowing theory. If you have a great natural ear for music then you may not feel that it's necessary to dissect your ideas into theoretical terms. There's definitely a case to be made for that side of the argument, and many people out there write great music without knowing a lick of theory (I wrote plenty of songs for years before understanding theory). Hypothetically, a problem could arise when you're writing a song and you make a 'mistake' (a wrong

note that clashes with established music theory) which the rational side of your brain tries to correct by altering or discarding the idea altogether. But what if the 'creative' side of your brain loves the mistake and equates it to a 'happy accident' that throws a musical curve ball to potential listeners? In my opinion, you should always let your 'gut' win over in this scenario. A person's creative instincts belong in the driver's seat, while the rules of music theory are best suited for the passenger side. Without this mentality, musical innovation would be largely stagnant.

That being said, it definitely doesn't hurt to be aware of all your musical options before finishing a piece. Do you want to settle for a less than satisfying chord progression because one chord just doesn't sound right? Do you want to compromise on a guitar solo or even completely give up on the idea because you couldn't really understand the musical context of that section? Veering off the 'music theory road' can be a great move for your song, but it might be best to check with your 'passenger' before making a final decision.

## **CONCLUSION**

Music theory is one of those subjects that seems to divide many musicians. Some people are ardent supporters of it while others believe it prevents you from thinking "outside of the box". As with most things in life, the truth is usually somewhere in the middle. You should always try to maintain a balance between your raw ideas and the analytical refinement of those ideas. Just like architects use engineering to reinforce and enhance their visual concepts, musicians can use theory to improve both the foundation and facade of their creative structures.

If you think music theory directly conflicts with creative freedom and is comparable to overanalyzing a beautiful painting or

understanding the physics behind a perfect sunset, then a quote from American scientist Robert Sapolsky might put things in perspective;

*"I love science, and it pains me to think that so many are terrified of the subject or feel that choosing science means you cannot also choose compassion, or the arts, or be awed by nature.*

*Science is not meant to cure us of mystery, but to reinvent and reinvigorate it."*

However, an important aspect of this whole topic to remember is that it is merely a 'theory' and not a 'law'. As much as I like the architecture analogy, it must be emphasized that you can in fact bend, break or ignore the rules altogether and still create a powerful piece of music. This mindset is what paved the way for more advanced jazz theory to be established, and will also help to push music into more progressive directions in the future. Being aware of the basic tenets of music theory can be beneficial, but as Daniel Levitin states in his book *This Is Your Brain On Music*,

*"...the goal of a theory is to convey 'truth for now'-to replace an old truth, while accepting that someday this theory, too, will be replaced by a new 'truth'..."*

So before we embark down this rabbit hole of music theory, remember that these concepts are simply a set of guidelines for what has worked 'so far', and is not a prerequisite or a replacement for good songwriting.



# Scales, Intervals, and Triads

*"Why Do Certain Chords Sound Somber While Others Sound Uplifting And Happy?"*

*"Are Chords And Scales connected?"*

Yes, It's All Connected, And Music Theory Is The System Which Helps Explain How And Why.

**WHAT IS A SCALE?** - There are as many as 88 keys on some pianos, and a typical guitar has 6 strings spanning a fretboard of 22 or more frets. How does someone best navigate this jungle of musical chaos? Well, the first step is to take a deep breath and realize that there are only 12 distinct notes in our western system of music. That's it, just 12. After that, the 88 keys on a piano are simply repeating the same 12 notes over and over again from lower to higher pitches known as octaves, which we'll talk more about later.

So we've been able to break through this jungle a bit and have carved out a very general path. This 12 note path is called the chromatic scale. A scale is basically a set path which guides us through the 12 note system in different and interesting ways. All other scales fall under the umbrella of the chromatic scale. If you were to pick the open E string and then play each successive fret all the way up to the 12th fret then you have played the chromatic scale. But as you'll notice, it sounds pretty bad. We have to carve out more specific paths through this jungle in order to manifest better sounding note arrangements.

The most important and well known path (the main tourist destination in this jungle) is the Major Scale. So this is where "my

take" on music theory begins...

**INTERVALS** - This is a simple numbering system which helps to identify the unique pattern of a scale. Like any system, all of the different scales found in western music have to be compared back to one common reference point in order for the system to make sense. This reference point is the Major Scale.

**MAJOR SCALE INTERVALS** - I'm sure you've heard the classic example of a vocalist singing "do, re, mi, fa, sol, la, ti, do". Well what a vocalist is actually singing is every note of the Major Scale. It is a happy sounding scale made up of 7 notes which is best resolved when the 1st note is played again at the end of the sequence in a higher pitch (the octave I mentioned earlier). This is why you hear the singer saying "do" at both the beginning and the end of the phrase. All of the seven notes (plus the octave) in the major scale are simply numbered 1, 2, 3, 4, 5, 6, 7, and 8 is the octave (OCT = 8). It is important to note that you'll rarely (if ever) see the number 8 being notated in a musical context because the term 'octave' is more widely used.

**MINOR SCALE INTERVALS** - Another popular scale is the Minor Scale. It can be thought of as the yin to the major scale's yang. If the major scale's mood is described as 'happy' then the minor scale is 'sad'. In fact, this is the basic terminology used to describe the mood of most music. If a piece is made up of a major progression then it generally has an optimistic character to it, while a minor progression is indicative of a more somber vibe. So what differentiates the two?

The Minor Scale's interval formula is 1, 2, b3, 4, 5, b6, b7, 8. You might be asking, "what's the deal with the 'b3', 'b6', and 'b7'?" This is simply a way of showing that the 3rd, 6th, and 7th notes in the Minor Scale are different from the Major Scale. The other

notes are the same. Any scale that has intervals which differ from the major scale are labeled appropriately by a flat (b) or a sharp (#). In the case of the Minor Scale, the differing intervals are all flat (b), meaning each note is played 1 semi-tone lower than their original position (assuming the two scales are being played in parallel positions, meaning they both start from the same root or fret). When you see b3, you're literally just playing 1 fret lower from the natural 3rd note in the Major Scale. If you see a #4 in a scale formula, then you play 1 fret higher than the natural 4th note in the Major Scale.

**THE TONAL CENTER** - An important part of all this is understanding the concept of a root note. This is the tonal center for any particular piece of music. If you play through the major scale starting on the 5th fret of the low E string then you've played the scale in the key of A ('A' being the root). Why? For starters, the 5th fret on the low E string of a standard tuned guitar is the note of 'A' (just in case you didn't know). More importantly, that 'A' note is now the focal point of resolution for the entire scale (the "1" in the interval formula). If a vocalist started singing "do, re, mi, fa, sol, la, ti..." and then stopped abruptly before they sang the second "do" then the sequence would sound incomplete to our ears. There would be a feeling of tension. This is best resolved when the vocalist finishes the scale by returning to the root note. There is almost a gravitational pull back to the tonal center of the scale. Now, in some scenarios, there can be a difference between what the key is versus what the tonal center is in a certain piece. However, we will steer clear of those other scenarios for now to avoid further confusion.

The intervalic system is applied irrespective of what particular notes you're playing or what specific key you're in at any given time. For example, if we play the major scale starting from the 3rd fret of the low E string then we're in the key of G major. In

this key, the note of F# is the 7th note (the last note) in the scale. But if we jump to the key of D major then F# is now the 3rd note in the major scale. What does matter, and what stays consistent, is the distance from the root note. If you took a piece of measuring tape and measured a 6 inch distance on your kitchen wall and then also measured a 6 inch distance on your bathroom wall, what conclusions can be made? The surface of the walls will look different, but the distance measured is still 6 inches, no matter what. Similarly, you could imagine the key of G major being your kitchen wall and D major being the bathroom wall. The notes (or the surface of the walls) will be different, but the distance of 6 inches (distance between the root and any given interval) will remain constant.

An alternative analogy could be that of a football team traveling from city to city during their season. The distance from end zone to end zone (the interval formula) is always the same, but the particular stadium (the tonal center) of where the game is being played may change.

**WHAT IS A CHORD?** - Just like we carved specific paths (scales) out of the 12 note musical system, we can go a step further and find even more interesting patterns within scales. There seems to be a very harmonious relationship between the 1st, 3rd, and 5th notes of any given scale which are the foundation for all chords. This foundation is known as a triad.

**TRIAD** - This is the most basic Chord you'll find (and the most common when it comes to Pop/Acoustic/Rock music). Even when you're strumming basic [open chords](#) (E Major for example) across all 6 strings on the guitar, there's only 3 notes (Triad = 3) at play. The reason it seems like more is because there are multiple octaves of those same 3 notes being played simultaneously.

**TRIAD FORMULAS** - Just like there is a major and minor scale which describes 'happy' and 'sad' moods of music, there is also a major and minor triad. Additionally, there is also a diminished triad and an augmented triad. The diminished triad is, essentially, a minor triad with the 5th note lowered by a half step (or 1 fret down) which gives it a tense and somewhat 'classical' sounding characteristic. Conversely, the augmented triad is a major triad with the 5th note raised by a half step (or 1 fret up) which has an almost mystical sound that is utilized in classical as well as jazz music. So now we can look at each type of Triad and identify them by their interval formula.

MAJOR TRIAD = 1, 3, 5

AUGMENTED TRIAD = 1, 3, #5

MINOR TRIAD = 1, b3, 5

DIMINISHED TRIAD = 1, b3, b5

**CHORD PROGRESSIONS** - A chord progression is the process of traveling from note to note within a given scale, but instead of single notes, you're building a chord off of each note you play in that scale.

Just like there is a set formula with scale intervals, there's also a set formula with building chords within a scale. This is called the chord scale. It is simply the 'chord version' of a particular scale.

**MAJOR CHORD SCALE** - How do you know when to play a Minor, Major, Augmented or Diminished chord in any given chord progression that you're learning or writing on your own? Sometimes you can do it by ear, but if you're stuck, you can always refer to the chord scale. The chord scale formula for the Major Scale is below:

|                              |           |
|------------------------------|-----------|
| 1st chord = Major chord      | (1,3,5)   |
| 2nd chord = Minor chord      | (1,b3,5)  |
| 3rd chord = Minor chord      | (1,b3,5)  |
| 4th chord = Major chord      | (1,3,5)   |
| 5th chord = Major chord      | (1,3,5)   |
| 6th chord = Minor chord      | (1,b3,5)  |
| 7th chord = Diminished chord | (1,b3,b5) |

You may have noticed by now that the 3rd note in any scale is CRUCIAL in determining the mood or quality of a triad. If the 3rd note is natural to the Major Scale then that triad is 'Major' in nature. If the 3rd is flat (b) it is 'Minor'. To the ear, the 3rd interval has a very strong characteristic and is the most obvious sign that a triad is 'happy' or 'sad' sounding. The other intervals have their own characteristics but the 3rd is what really defines the 'sound' of a scale or chord.

MINOR CHORD SCALE - Here is the chord scale formula for a natural minor progression.

1st chord = Minor Chord           (1,b3,5)

2nd chord= Diminished Chord   (1,b3,b5)

3rd chord = Major Chord           (1,3,5)

4th chord = Minor Chord           (1,b3,5)

5th chord = Minor Chord           (1,b3,5)

6th chord = Major Chord           (1,3,5)

7th chord = Major Chord           (1,3,5)

**POWER CHORDS** - The 5th interval is a very stable sounding note (because it's the same in both the Major and Minor scales). This is why Power Chords are one of the first things beginners learn to play, because they only contain the 1st and 5th notes of a scale. Power chords aren't triads, they're what is known as dyads (2). So if you're using all power chords in a song then you don't even have to worry about the chord scale formula. The only exception to this is the fact that the diminished chord occurs on the 7th triad in a major progression and the 2nd triad in a minor progression. So in these two instances, a power chord wouldn't sound very stable, and your best bet is to play either the

diminished triad or a diminished power chord (1,b5). However, some still feel comfortable playing a standard (1,5) power chord in these two instances which is simply a matter of taste and all depends on what sounds best to your ears.

**COMPOUND INTERVALS** - This topic goes a little beyond the introductory level of music theory, but I wanted to address it anyway. Mainly because you'll eventually hear of complicated sounding chords like 9th, 11th, or 13th chords. When you hear this you might think, "I thought the basic system of intervals goes up to the number 8 and just repeats again. What's with the 13th chord? I thought all of western music contained just 12 notes? Is there an extra note that I'm not aware of?"

Well, no. There is not a 'mysterious 13th note' floating around somewhere in the musical landscape. This is merely a case of semantics and the idea that chord construction should follow a consistent set of guidelines.

As I mentioned earlier, the function of a triad is to stack the 1st, 3rd, and 5th notes of a scale on top of each other which are then played simultaneously to produce a chord. The main thing you will notice is that the 2nd and 4th notes in a given scale are skipped in the triad formula. The reason for this is that notes need a certain amount of separation in order to avoid a 'clashing' effect.

If you played the 1st, 2nd, 3rd, 4th, and 5th notes of the major scale, you won't hear a great sounding chord. This may seem counterintuitive because, after all, you're playing all the notes of the major scale, right? But, if too many notes are played simultaneously within the same pitch radius then things start to get muddy real fast. There's only so much frequency information our ears can handle, and if you're playing 4 or 5 low pitched



notes at the same time, your ears won't like it.

This is where octaves can play a helpful role in offering even more separation between notes in order to build more complex chords. Just like the 8th note in the major scale is the octave (or higher pitch version) of the root note, the 9th note is the octave of the 2nd note. If you want to add the 2nd note to a major triad then try adding the higher pitch version of that 2nd note (the 9th) and you'll realize it has a much more pleasing sound to our ears (this would be an 'Add 9' chord).

For the sake of consistency, notes added to the original triad are done so by continuing the concept of stacking odd numbered intervals. So there are 7th chords (1,3,5,7) which do not include a compound interval (because the 7th note is still unique within the first octave of the scale). However, any additional note that is 'stacked' after the 7th is usually referred to by applying this 'odd number' terminology (when discussing chord construction).

Therefore, the 9th note is the same as the 2nd note, except an octave higher. The 11th note is the same as the 4th note, and the 13th note is the same as the 6th note.

The "7 & 7 rule" (as I like to call it) can be applied to remember these intervals. Basically, any interval above 7 in all commonly found scales can be subtracted by 7 to ascertain the actual interval ( $9-7=2$ ,  $11-7=4$ ,  $13-7=6$ )

This is a quick explanation of what compound intervals are and how they're applied to chord construction. Just remember, there are no actual 9th, 11th, or 13th notes apart from the original 7 notes found in most scales.

# Circle of 5ths, Modes, and Extended Chords

*"I've heard some musicians refer to a concept known as the Circle of 5ths (or even the Circle of 4ths)...what is it and how is it applied?"*

*"What exactly are modes?"*

*"I know what major and minor chords are, but what are Sus, Dominant, and 7th chords all about?"*

**DEEPER CONNECTIONS** - At this point you should realize that nothing in music (scales, chords, etc.) can function in isolation. All concepts of music theory are connected together in order to form a logical and coherent system. We can take this a step further and explore the relationships between the 12 notes of western music. The names for each of the 12 musical notes (starting with 'A') are as follows:

A, A#, B, C, C#, D, D#, E, F, F#, G, G# (# = sharp)

Remember, if you play each note in consecutive order, then you have run through the chromatic scale. But the chromatic scale is a bit too random and unpleasant sounding to make any strong connections between these 12 notes. So, as with the intervallic system, we will enlist the help of the major scale.

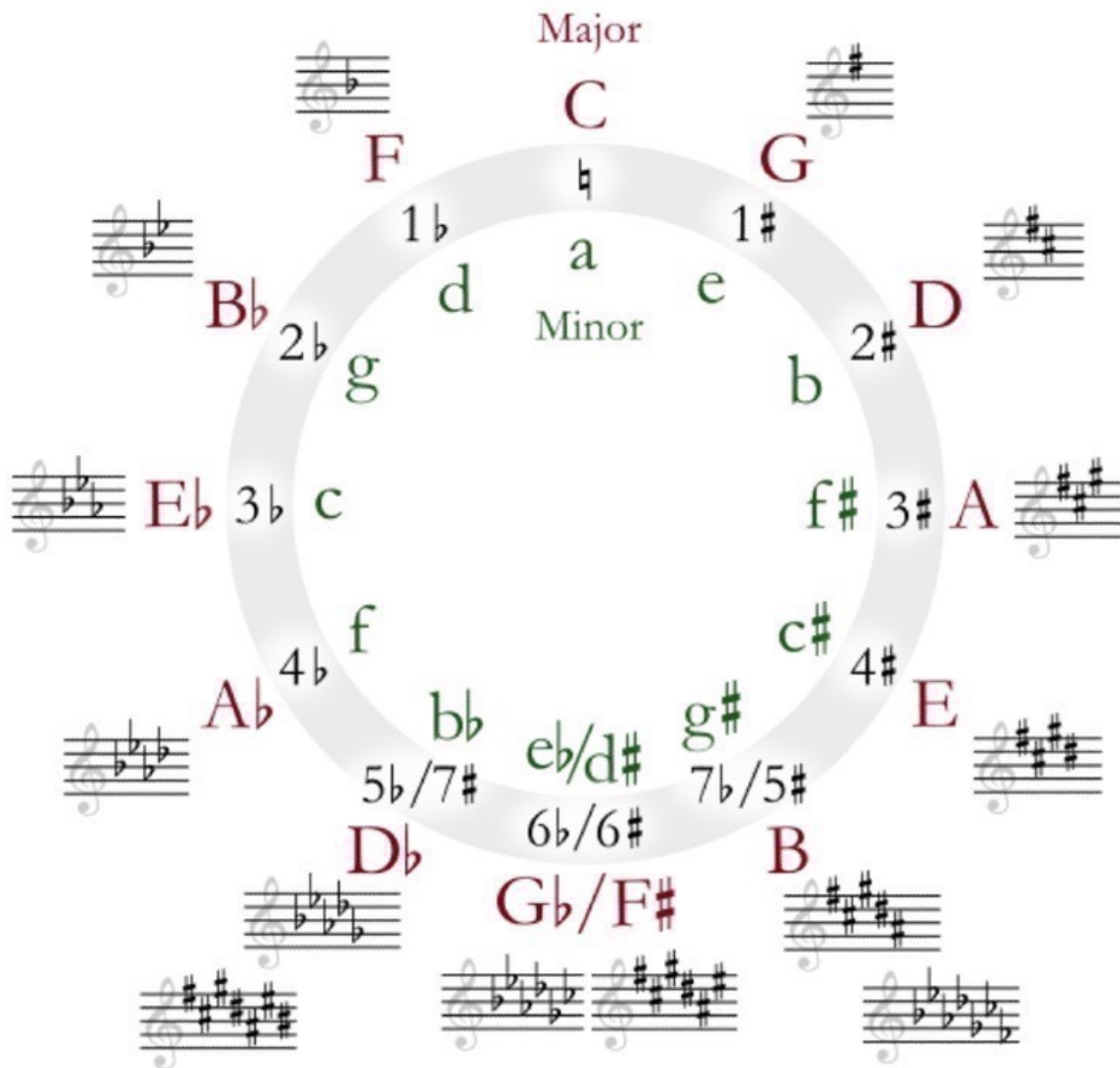
If we play the major scale (starting with 'C'), we get the following

notes:

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

Notice anything interesting? There are no sharp (#) notes when the major scale is being played in the key of 'C'.

This brings us to the introduction of what is known as the Circle (or Cycle) of 5ths.



Wikipedia

**CIRCLE OF 5THS** - Don't be intimidated by the image you see above. It is simply a system based upon the relationships I alluded to earlier that are found between the 12 different 'tonal centers' of the Major Scale (Just to clarify, there are only 7 notes in the Major Scale, but because there are 12 notes in Western Music, each note can play the role of 'tonal center' in a given

situation)

So let's look again at the notes of the Major Scale in the key of 'C'

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

As mentioned, there are no sharp (#) notes in the Major Scale when played in the key of 'C'. Every other 'key' will have either a certain amount of sharp notes or flat (b) notes (I'll address flat notes a little later). So the key of 'C' is unique in that it contains only natural notes. Natural notes are notes without a sharp or flat symbol attached to them. The symbol for a natural note looks like this:



You won't see the natural symbol as often as you'll see the sharp or flat symbols, but it will pop up when accidentals are notated (more about accidentals later).

So our starting point in the Circle of 5ths is the key of 'C'. What happens when we select the 5th note in the 'C' Major Scale to be our next tonal center? We get the Major Scale played in the key of 'G'. The notes of the 'G' Major Scale are:

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

The key of 'C' and the key of 'G' share all of the same notes in common, except for one. And this new note just so happens to be sharp. Now let's take the 5th note of the 'G' Major Scale and use that as our next tonal center. This will be the Major Scale in the key of 'D' and its notes are:

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

You might already be noticing the pattern here. The main tenet of the Circle of 5ths system is: (starting with the Key of 'C') by using the 5th note of the scale to build your next key, two important results will be consistently produced;

- 1.) The new 'key' will always contain the same notes as the previous key, except for one new note.
- 2.) This new note will always be a non-natural note (sharp or flat).

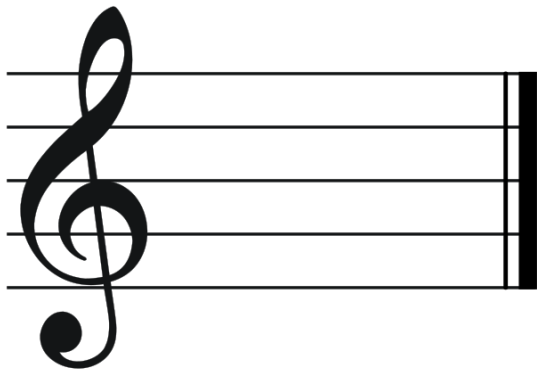
Visually, the Circle of 5ths can be thought of as a 'clock' which produces the aforementioned results by moving clockwise, starting from the top, through the Circle.

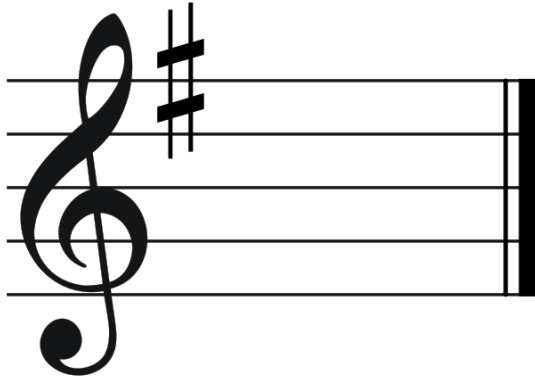
There are a few more interesting patterns that arise (the new note being introduced is always the Major 7th interval of that scale) but the two that I outlined above are at the foundation of the system. At this point, you might be asking yourself these two questions; When and how do the flat notes come into play? How do I actually apply this system to my playing?

The primary usage of this system is for when a person is reading sheet music (written music notation). Instead of notating every individual occurrence of a sharp or flat note, the amount of sharp/flat notes found within the given key is simply notated at the beginning of the piece.

If you look at the Circle of 5ths image, you will notice by each key that there is a small picture of the treble clef with a certain amount of sharps (#) or flats (b) next to it. This is known as the key signature. It indicates to the music reader that a pre-established set of notes will be either sharp or flat in a given piece. If you want to be proficient at sight reading then you would need to memorize both the number of sharp/flat notes within each key and the specific notes that are sharp or flat.

To illustrate this example visually, I have displayed the key signatures for both the key of C and the key of G respectively:





In the first image, the lack of a sharp or flat symbol next to the Treble Clef indicates that the subsequent piece will be played in the key of C, where there are no instances of non-natural notes.

In the second image, where you see one sharp symbol next to the Treble Clef, the piece would be played in the key of G, where the F# is the one non-natural note.

This pattern holds true for the entire Circle of 5ths system. Now, what if you're reading some sheet music and you notice that an individual note has a sharp or flat symbol next to it?





These notes are called accidentals. An accidental is any note which is not apart of the family of notes found within a particular key signature.

For example, if I wrote a song in the key of 'G' then every note that I use should come from the following options:

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

In this case, there is no need to notate a sharp symbol every time an F note is played in my song, because it is already assumed to be an F# by virtue of the key signature.

This is also known as being diatonic, meaning "within the key".

But if I want to add some dissonance in my song, then I might throw in a G#. This note would need to be accompanied by a sharp symbol to show the reader that it is an accidental.

**FLAT NOTES AND THE CIRCLE OF 4THS** - Now let's discuss what role the flat (b) notes play in this system. There are two additional rules of the Circle that need to be looked at:

- 1.) If playing diatonically (no accidentals) then the same letter note cannot be notated in two different ways within the same key signature. (F and F# for example)
- 2.) Sharp and flat notes cannot be mixed together in the same key signature

These don't seem like hard rules to follow, until you arrive at the key of F#. If I played the Major Scale, with F# being my tonal

center, the following notes are produced:

F#, G#, A#, B, C#, D#, F,

By containing both an F and F#, there's obviously a conflict within this key. So let's try it this way:

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

Well this version follows the rules, but only when you introduce an E#. But is E# really a note? Sort of. You will see it notated in some books, but it is uncommon. The relationship between these two notes (F and E#) is what's known as enharmonic.

Similar to the concept of compound intervals this is, again, an issue of semantics. An F and an E# are enharmonically equivalent, meaning they're the same exact musical notes but are notated differently depending on the circumstances. In order to avoid notating an E# while still adhering to the rules, we need to utilize the flat notes.

Every sharp note (plus 'B' and 'E') has an enharmonically equivalent flat note. I'll list them below:

A sharp = B flat

B = C flat

C sharp = D flat

D sharp = E flat

E = F flat

F sharp = G flat

G sharp = A flat

Let's try and list the notes of an F# Major Scale one last time, but now we will refer to it as a 'G flat' Major Scale, and all previous instances of sharp notes will be re-notated to their corresponding flat notes:

Gb, Ab, Bb, Cb, Db, Eb, F

This seems to work a little better. The flat notes are added to each successive key in almost the same way the sharps are added, except that we start at the top and move 'counterclockwise' through the Circle by selecting the fourth note from the scale to build the next key.

We can call the 'flat' side the Circle of 4ths.

If we look at the Major Scale in the key of 'F' (the 11 o'clock position in the image) we get the following notes:

F, G, A, Bb, C, D, E

If we take the 4th note and build our next key, we have the Major Scale in the key of Bb which consists of the following notes:

Bb, C, D, Eb, F, G, A

So there you have it. The key of 'C' is the starting point and, depending on which direction you travel, you can refer to it as either the Circle of 5ths (clockwise) or the Circle of 4ths (counterclockwise).

**RELATIVE MINOR** - When you look at the Circle of 5ths image, you might also be wondering what role the lowercase green letters inside the circle play? Well these green letters indicate what the Circle of 5ths would look like if we applied the system to

the Minor Scale.

Let's look again at the notes of the Major Scale in the key of 'C' :

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

Now let's see what happens when we play those same seven notes, but use the 6th note in the scale (A) as our new tonal center. Instead of it sounding like a happy sounding Major Scale in the key of 'A', we end up producing the Minor Scale. This is called the relative minor.

There is an important difference that needs to be emphasized between the Circle of 5ths system and the Relative Minor concept; In the Circle of 5ths, we take the 5th note in the scale and intentionally build a Major Scale with that 5th note being the new tonal center. This means that we can introduce new notes into the picture. However, with the relative minor, we are using the 6th note of the Major Scale to be the new tonal center but maintaining the same seven notes. Remember, for any two scales to have a 'relative' relationship, they must contain the same exact notes, while only shifting the tonal center.

In fact, every key of the Major Scale has a relative minor scale hiding within it. So the green letters found inside the circle indicate the unique relative minor 'key' for each corresponding red letter on the outside of the circle.

Why stop there? Why not turn the 2nd note of the Major Scale into the new tonal center? Or the 3rd note for that matter? This concept can be applied to all seven notes of a given Major Scale and each tonal center creates a different 'mood' and sound. This is the concept of modes.

**MODES** - Modes are often overcomplicated and shrouded in

mystery and confusion. Many players are told that modes are "the secret weapons for any lead guitarist". While there's definitely truth to that statement, modes are basically just scales. There's tons of scales out there, and modes are no different. What makes them noteworthy is their relationship and connection to the 'parent scale' otherwise known as the good old Major Scale.

A cliché statement that you'll often hear is that the Major Scale is "the mother of all scales". This doesn't mean that it's the coolest sounding scale, or that you NEED to use it in order to be a great guitarist. It just means that, when you look at how the most common scales in modern music are connected back to the Major Scale, it seems to play the role of a 'parental' figure. Some of the most popular scales used in music can be directly linked back to the Major Scale.

I'll borrow an analogy I used from Part 1 of this section to explain the 'subordinate' role that modes play in relation to the Major Scale. I compared the constant nature of an interval formula for a particular scale to that of a sports team; Traveling from city to city, where the stadium (the tonal center) can change but the distance of the field from end zone to end zone (the interval formula) will remain the same.

When talking about modes, you can slightly shift this analogy to that of the offense starting at different points along the field. The overall distance is constant (100 yards), but the offense will change their plan of attack based on whether they're on their own 20 yard line, 30 yard line, etc. The difference is that we're not changing stadiums (the key) but instead we're finding unique points within the already established key and using them as our new starting points (tonal center). This is the benefit of modes.

So, to reiterate, when we turn each individual note of the Major Scale into the tonal center we get seven unique sounding scales or modes (including the Major Scale). The names for these modes have ancient Greek origins and are as follows:

|                 |   |
|-----------------|---|
| Ionian Mode     | (same as the Major Scale)   |
| Dorian Mode     | (when the 2nd note becomes the tonal center)                          |
| Phrygian Mode   | (when the 3rd note becomes the tonal center)                          |
| Lydian Mode     | (when the 4th note becomes the tonal center)                          |
| Mixolydian Mode | (when the 5th note becomes the tonal center)                          |
| Aeolian Mode    | (when the 6th note becomes the tonal center, same as the Minor Scale) |
| Locrian Mode    | (when the 7th note becomes the tonal center)                          |

Each mode has its own 'sound' and character, but they can all (except for Locrian) be put into two basic categories; Major or Minor

Let's look at the intervallic formula for each mode to see why (Remember that the tonal center is always the '1' note in the interval formula. This is why, for example, the Dorian mode doesn't start with a '2', even though it is the 2nd note of the

'parent' Major Scale) :

|            |                            |              |
|------------|----------------------------|--------------|
| Ionian     | = 1, 2, 3, 4, 5, 6, 7      | (Major)      |
| Dorian     | = 1, 2, b3, 4, 5, 6, b7    | (Minor)      |
| Phrygian   | = 1, b2, b3, 4, 5, b6, b7  | (Minor)      |
| Lydian     | = 1, 2, 3, #4, 5, 6, 7     | (Major)      |
| Mixolydian | = 1, 2, 3, 4, 5, 6, b7     | (Major)      |
| Aeolian    | = 1, 2, b3, 4, 5, b6, b7   | (Minor)      |
| Locrian    | = 1, b2, b3, 4, b5, b6, b7 | (Diminished) |

Previously, we also talked about how the 'flat 3rd' is indicative of a minor sounding scale or chord. Based on this logic, we can see that three of the modes are more minor sounding, three modes are major sounding, and the Locrian mode is diminished (because of the 'flat 5th' or 'diminished 5th'). You might also notice how the modal structure is identical to the Major Chord Scale (which I cover in Part 1) :

|           |             |          |                 |
|-----------|-------------|----------|-----------------|
| 1st Triad | Major chord | (1,3,5)  | = Ionian Mode   |
| 2nd Triad | Minor chord | (1,b3,5) | = Dorian Mode   |
| 3rd Triad | Minor chord | (1,b3,5) | = Phrygian Mode |
| 4th Triad | Major chord | (1,3,5)  | = Lydian Mode   |

5th Triad Major chord (1,3,5) = Mixolydian Mode

6th Triad Minor chord (1,b3,5) = Aeolian Mode

7th Triad Diminished chord (1,b3,b5) = Locrian Mode

This further illustrates how nothing in music theory can function in isolation. All concepts are connected.

**MODAL USAGE AND APPLICATION** - In all honesty, you can use these modes and their unique melodic content in any creative way that you'd like. However, there is a logical way to use them in order to weave the tapestry of a piece through different musical landscapes.

For example, if I was writing a song in the key of 'C' Major but wanted to write a 'dark' sounding guitar solo, then my best option would be to shift the quality of the chord progression to a 'minor' sound. Transitions between two different sections can sometimes be the most difficult part of composing a song. Let's say you have two catchy ideas, but one is 'happier' sounding while the other is 'darker' sounding. How can you smoothly transition between these two sections? Should you just treat the two ideas as separate songs to avoid mixing them together? Well, you could do that, but if you felt strongly about marrying the two ideas then you could try transitioning from the Major key to its 'relative minor' or one of the other minor modes (Dorian or Phrygian). Since none of the notes change (only the tonal center), this transition will sound very smooth, natural, and deliberate.

Another way would be to maintain the same tonal center (key of 'C' in this case) but to switch from 'C' Major to its 'parallel minor'. The parallel minor in this case is 'C' minor. The main difference



between relative vs. parallel is that any 'relative' change will adhere to the modal structure (the same family of notes as the parent scale). While a 'parallel' shift alters the notes and sound of the parent scale itself. This transition will sound a little more abrupt, but can be an effective way to deceive the listeners' expectations.

One more option you have when changing the key of the parent scale is to follow the Circle of 5ths (or 4ths). Changing the key in this way is known as modulation (although this term is sometimes used when any change of the tonal center occurs). If you're in the key of 'C' then a transition to either the key of 'F' or 'G' can yield pleasing results in regards to the transition. The main reason for this is because there's only one note of a difference between 'C' Major and 'F' or 'G' Major. Even better, this one note is a mere half-step distance (distance of 1 fret) from either key (In 'C' Major, the 'F' note transitions to F# when modulated to 'G' Major. And the 'B' note transitions down to Bb when 'C' Major is modulated to 'F' Major)

And, of course, you can always change the tonal center at random without any rhyme or reason. When it comes to writing your own music, you don't have to necessarily follow the rules. We'll address this in more detail later.

Well I think it's time that we rap up this section on the Circle of 5ths and Modes. Both topics have the potential to be dissected and discussed ad nauseam. However, there's enough information here which will enable you to become reasonably proficient in both areas.

**SUS, DOMINANT, and 7th CHORDS** - In Part 1, I explain the concept of triads and how they are the foundation for all chords. I also discuss how there are four basic types of triads; Major,

minor, augmented, and diminished. However, there are a few more chord 'qualities' which should be addressed.

**SUS CHORDS** - All triads are comprised of the 1st, 3rd, and 5th notes of a given scale. And we also know that the 3rd note helps define the sound or 'quality' of the triad (whether it's Major or minor). So what would happen if we omitted or 'suspended' (Sus = suspended) the 3rd note and replaced it with something else? Well there are only two other options in-between the 1st and 5th notes; the 2nd or the 4th.

A chord which suspends the 3rd and replaces it with the 2nd note in the scale is called a Sus2 chord, while a Sus4 chord utilizes the 4th note. Sus chords have a more 'open' sound which can be harder to categorize in terms of their mood and quality. Another important point to keep in mind is that the 2nd and 4th notes have to be natural to the Major scale if you're going to use them for a Sus chord.

It is important to note that, in the Jazz world, Sus chords do not always omit the 3rd note completely. Instead, jazz musicians will sometimes play the 3rd note an octave higher so that there's reasonable separation between the 2nd/4th and the 3rd.

**7th CHORDS** - Depending on how comfortable you are with the intervallic system, you might already have an idea of what 7th chords are all about. If we took each triad found within the Major Chord Scale and added the 7th note, then we have a formula and roadmap for using 7th chords in a given progression:

Ionian - 1, 2, 3, 4, 5, 6, 7 = Major 7th Chord (1,3,5,7)

Dorian - 1, 2, b3, 4, 5, 6, b7 = Minor 7th Chord (1,b3,5,b7)

Phrygian - 1, b2, b3, 4, 5, b6, b7 = Minor 7th Chord (1,b3,5,b7)

Lydian - 1, 2, 3, #4, 5, 6, 7 = Major 7th Chord (1,3,5,7)

Mixolydian- 1, 2, 3, 4, 5, 6, b7 = Dom 7th Chord (1,3,5,b7)

Aeolian - 1, 2, b3, 4, 5, b6, b7 = Minor 7th Chord (1,b3,5,b7)

Locrian - 1, b2, b3, 4, b5, b6, b7=Minor 7 b5 Chord  
(1,b3,b5,b7)

So if you wrote a strictly 'diatonic' chord progression in a Major key, then you could add the corresponding 7th note to any of the triad-based chords in an effort to spice things up a bit. That being said, you should still always use your ears to make sure the 7th chord is what you want in your song. Seventh chords might not be appropriate for every musical context as they tend to have a 'jazzy' sound.

**DOMINANT CHORDS** - There is a new term in the list of 7th chords which needs to be explained. You will see one chord labelled as "Dom 7th Chord". This is short for Dominant 7th Chord. Dominant chords are interesting because they share both major and minor qualities. A dominant chord will always be built upon a major triad (1,3,5) with an added 'flat 7th' on top. This gives it a kind of 'bluesy' sound.

# The Harmonic Hierarchy

Since we've been discussing triads and 7<sup>th</sup> chords, this might be the best time to address how a player can take advantage of this knowledge in the context of their lead playing.

The feeling of "hitting a wall" is something we've all gone through as musicians. Our initial reaction might be to quickly slap a Band-Aid over the situation and learn more licks or new scales. Sometimes that approach can help us get out of a slump. But are we really addressing the problem?

It's as if we're just prescribing various medications to treat a patient's chronic illness without examining its root cause, and determining whether we can offer a complete cure. Understanding why things happen and formulating a strategy of preventative medicine is the best approach in this analogy.

Instead of memorizing countless scale patterns from a book or a website, let's try to understand why certain notes sound better than others within these patterns.

We'll first look at chord tones. If you feel comfortable with the first two sections of this book, then you'll know that all major and minor chords are built on a foundation of three notes known as a triad. It is comprised of the first, third and fifth notes found within either a major scale (major chord) or a minor scale (minor chord).

**The first note (the root)** is obviously the center of attention and, consequently, all other notes will be judged either on their stable or unstable relationship to the tonal center. **The third and fifth notes** will have the strongest connection to the root note. Think of them as being in the "goldilocks" zone; they're not too far away from the root, not too close, but in just the right spot which produces a very appealing and balanced harmony. Bending or sliding into these notes will translate into a pleasing sense of

resolution to the listener.

**The second, sixth and seventh notes** could be considered non-chord (or secondary) tones. They're still very useful, but they each introduce varying degrees of tension in relation to the tonal center. However, tension isn't always a bad thing and could add some much needed character to otherwise predictable sounding licks. You can sit on any of these notes, but beware, your ear will most likely pull you toward the nearest chord tone. At that point, you can decide how much tension you're willing to tolerate.

**The fourth note** is almost in a league of its own. When playing in a major key, the fourth is only a half step (semitone) away from the third. This makes things sound very tense if you decide to hold out this note. It will never sound resolved, always wanting to rest on the major third.

In a minor key, the tension is less obvious because that flat (minor) third is a whole step away from the fourth. In some rock and blues progressions, you can ride on the fourth for a little while and use that tension to your advantage. As always, use your ears and experiment.

Since any major or minor scale contains only seven notes (and there are 12 notes in Western music), we can assume there will always be five non-harmonic notes in a given musical context. These notes will never sound stable in relation to the tonal center and, therefore, we call them passing tones. Treat them with caution, but they've been used to great effect in blues, jazz and some rock music.

So now we have a harmonic hierarchy of notes in order of their primary (chord tones), secondary (non-chord tones) and tertiary (passing tones) roles. We can write licks and phrases based on this knowledge and decide when to maximize tension or resolution.

As you let this concept sink in, memorizing patterns will seem less important. What will become more important is the emotional impact you can communicate through your solos.

With that being said, many players constantly ask, “how many scales are there”? There is definitely something intriguing about learning new scales and patterns. Even though this should not be the primary focus of any musician (the phrase “do more with less” comes to mind) there is a fairly simplistic way of accessing 21 (and possibly more) unique scales.

How? Let’s find out!

## “Tons” of Scales, Made Simple

We all know the true measure of an accomplished guitarist is not dependent upon how many scales he or she can blaze through.

Instead, it's much more enjoyable to hear a player who has great command and control over just one or two scales (and knowing the harmonic hierarchy we just talked about). Many of the greats did not possess encyclopedic knowledge of music theory, and it didn't seem to hinder their progress or creativity.

Jimi Hendrix might not have been aware of the Lydian dominant scale—but did that tarnish his ability? I think we all know the answer to that question. The man internalized the blues and pentatonic scales to the point where every note he played sounded so tasteful, deliberate and powerful.

With all of that being said, I do want to talk about how knowing many scales can be a much less daunting proposition than you might think. The key is in truly understanding these various concepts that we've gone over so far. As I've pointed out before, no piece of music theory truly functions in isolation. And it is these connections that will make the learning of various scales relatively painless.

Let's start with the concept of modes. Since modes are linked back to the parental figure of the major scale, we might think of them as being part of one main scale. But since each mode has a unique sound, we can conceptualize seven individual scales coming from the one parent scale (the parent scale plus six others).

What might be less known is that there are two other parent scales that are used quite a bit in classical, metal, and jazz music. These other two parent scales are Harmonic Minor and Melodic Minor.

The melodic minor scale is almost identical to the major scale,

except for the third note in its sequence. Remember that because this third note deviates from our reference point (the major scale), we can't simply label it as "3." Instead, we refer to it as a flat 3rd (or minor 3rd) to indicate that it is a half step lower in pitch than the major scale's third note.

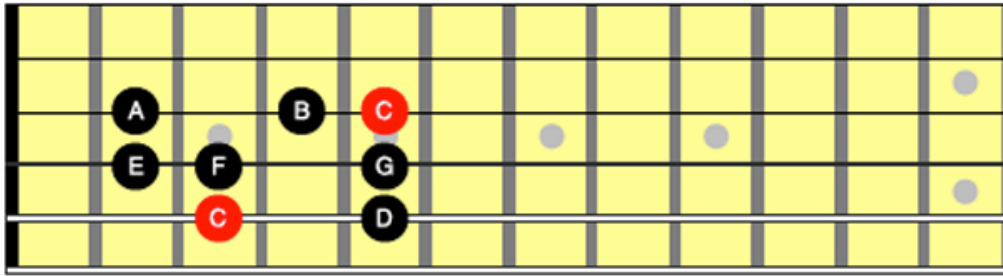
In today's climate, we're all used to the major, minor and pentatonic scales being front and center in our musical landscape. But the natural minor and pentatonic scales play a somewhat subordinate role and can be easily derived simply from the major scale. Think about it this way: The natural minor scale can always be found within a major scale by shifting the tonal center to the sixth note in the major scale's sequence.

And the minor pentatonic scale is simply a shortened version of the natural minor scale (five notes instead of the full seven). Likewise, the major pentatonic is basically the major scale—minus two notes. This eases the burden of having to memorize four individual scales and instead helps us to use a more cohesive and unified approach.

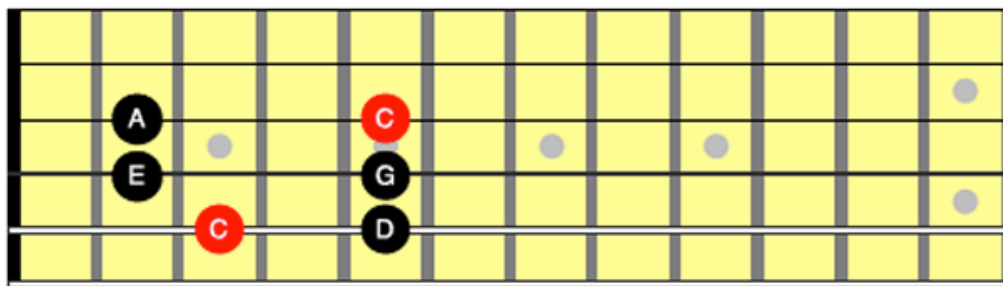
Take a look at how this concept might look in the diagrams below.



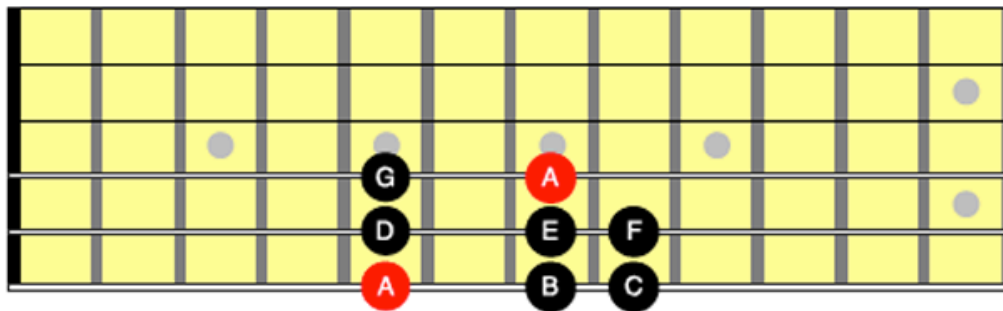
Major Scale ("C" is the root note)



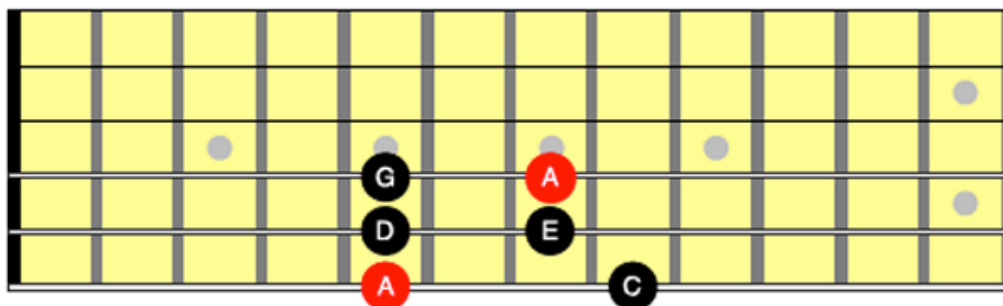
Major Pentatonic ("C" is the root note, contains 5 of the 7 Major Scale notes)



Minor Scale ("A" is the root note, contains the same notes as "C" Major Scale)



Minor Pentatonic ("A" is the root note, contains 5 of the 7 Minor Scale notes)



So far, we've explored how you could visualize four seemingly separate scales as one unified concept.

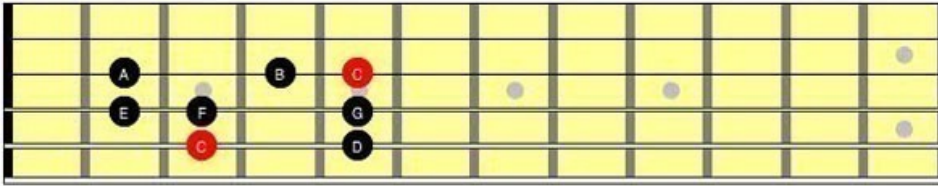
To illustrate this point, I used the major scale to produce the major pentatonic, the natural minor and the minor pentatonic scales.

Simply by changing the tonal center of the given scale, our ears perceive dramatically different flavors and musical moods. This can be an often-overlooked and underestimated approach by some musicians. The important rule to follow with the modal structure is that the tonal shift must happen within the same family of seven notes derived from the parent scale.

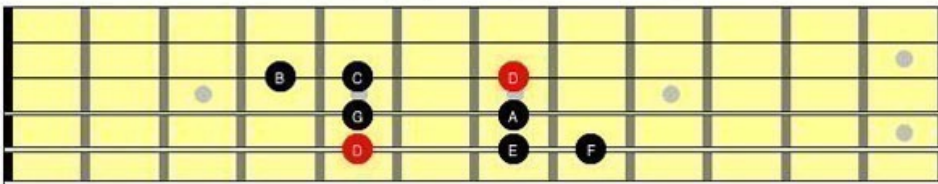
This is how I was able to produce four different sounding scales from the same seven notes. The road map for this concept starts with the major scale.

Let's visually explore the seven modes of the Major scale.

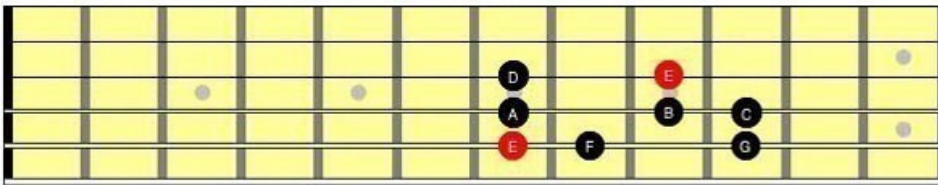
Major Scale or Ionian Mode, "C" is the root note (Play over a Major chord)



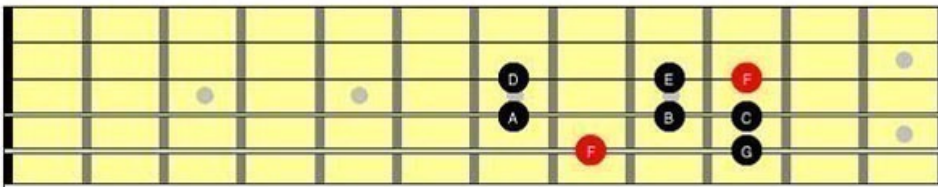
Dorian Mode, "D" is the root note (Play over a minor chord)



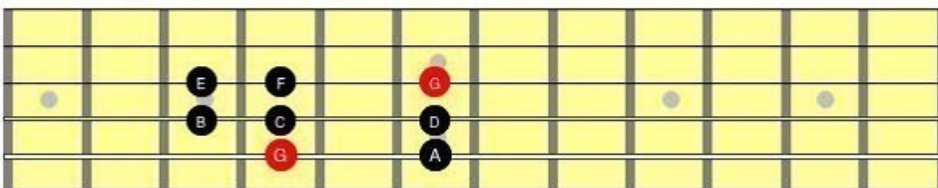
Phrygian Mode, "E" is the root note (Play over a minor chord)



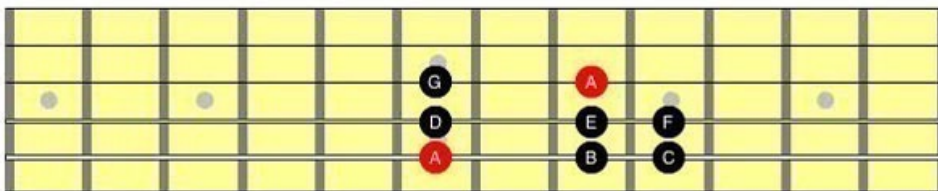
Lydian Mode, "F" is the root note (Play over a Major chord)



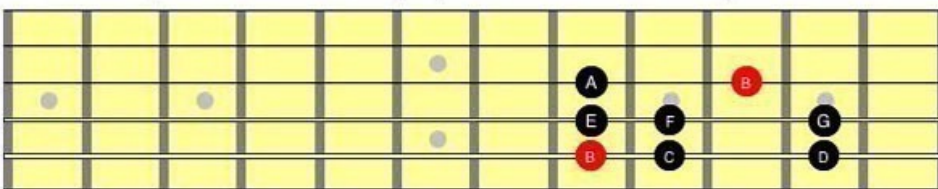
Mixolydian Mode, "G" is the root note (Play over a dominant chord)



Aeolian Mode or the Natural Minor Scale, "A" is the root note (Minor chord)



Locrian Mode, "B" is the root note (Play over a diminished chord)



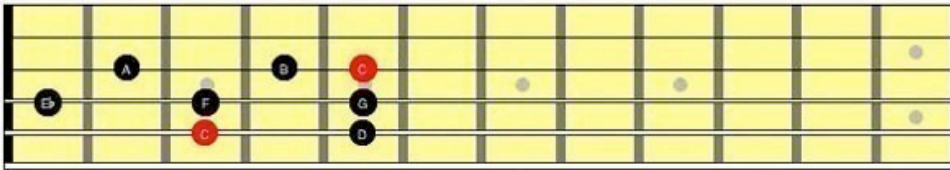
So we have the familiar major scale, followed by the melodic minor scale and the harmonic minor scale. These three parent scales act as the gatekeepers to an immense plethora of musical variety.

Let's look at the C melodic minor scale. You could also refer to the melodic minor as the "Ionian flat 3" scale for logical reasons; it only deviates from the C major scale by one note, which is the flat or minor 3rd.

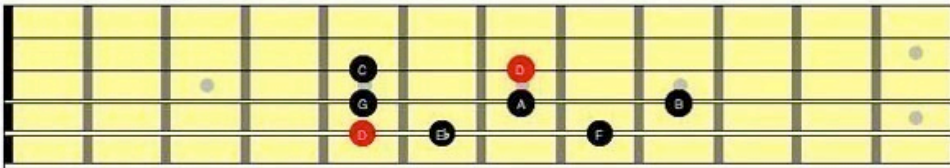
It should be mentioned that in classical theory, the melodic minor scale is meant to be played only in ascending order (from lowest to highest) and then descend with the natural minor scale. But for the purposes of this book, we'll use the jazz world's approach which plays the same scale both ascending and descending. Because of this, it is also called the jazz minor scale.

By using the modal approach and shifting the tonal center to each individual note, we can produce the following scales:

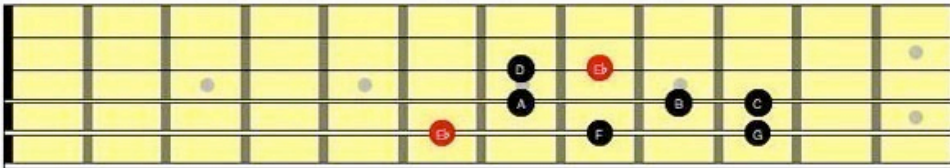
Melodic Minor or Ionian b3, "C" is the root note (Play over minor/major7th chord)



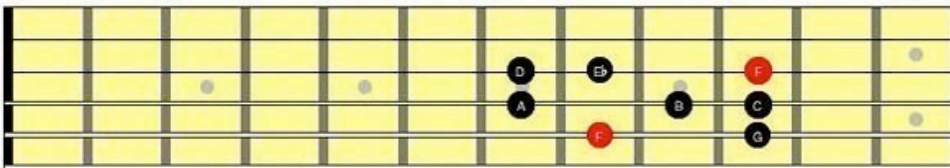
Dorian b2 mode, "D" is the root note (Play over minor 7th chord)



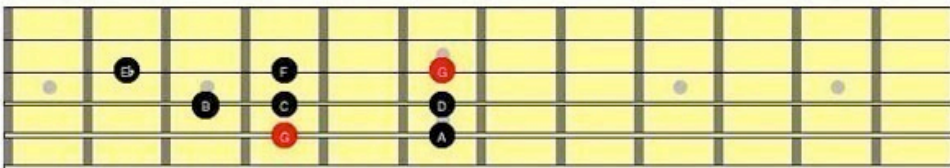
Lydian #5 modes, "Eb" is the root note (Play over Major7th #5 chord)



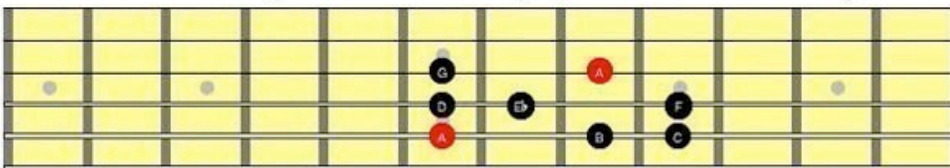
Lydian b7 or Lydian Dominant mode, "F" is the root note (Dominant 7th chord)



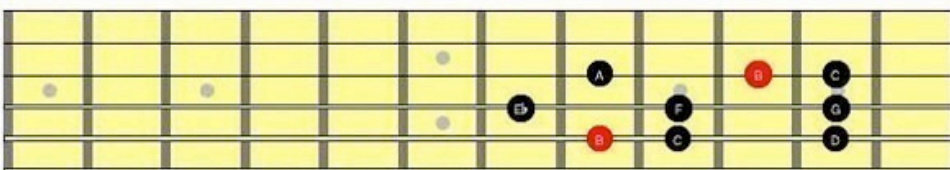
Mixolydian b6 mode, "G" is the root note (Play over Dominant 7th chord)



Locrian natural 2 mode, "A" is the root note (Play over minor7 flat5 chord)



Super-locrian or the Altered mode, "B" is the root note (Minor7 flat5, or an altered 7th chord)

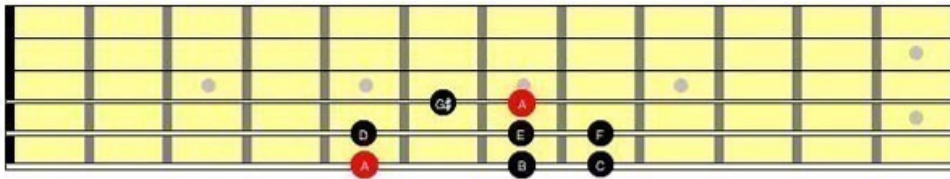


Admittedly, it might take some time for your ears to acclimate to these scales, especially if you're mostly a rock/pop listener. I am not even completely comfortable with all of the harmonic colors produced by the above scales. But definitely mess around with them, you might be inspired to write some unconventional guitar solos. To help you with these new sounds, I have provided a chord you can play under each particular scale. Obviously this will not tell the whole tale of their melodic potential, but it's a good start.

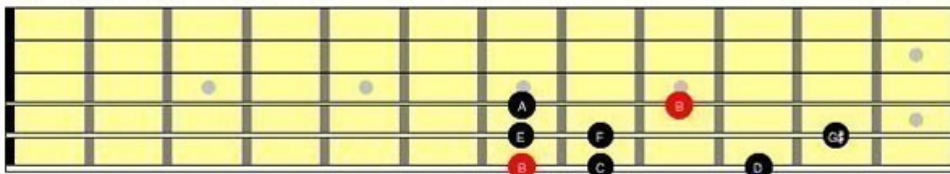
The final parent scale we'll be looking at is that of A harmonic minor. You might be wondering why I chose to use the note of A as the tonic for this scale as opposed to C, like the other two. Simply because the A natural minor scale (or Aeolian mode) is relative to the C major scale, meaning they share the same seven notes. So the harmonic minor is almost identical to the natural minor except that its 7th note is raised by a half step.

The harmonic minor scale has a somewhat classical sound that might be familiar to metal fans. Another noteworthy scale found within harmonic minor is Phrygian dominant, which also is used in certain genres of metal and has a more Middle Eastern sound. Here are all seven scales (including harmonic minor) shown below:

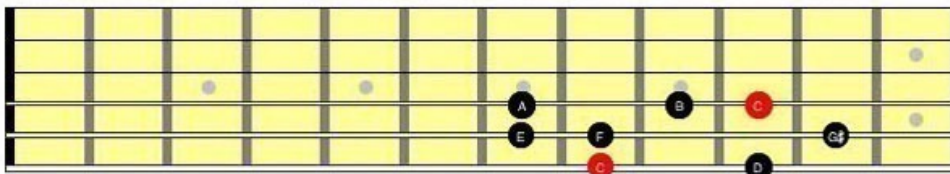
Harmonic Minor Scale, "A" is the root note (Play over a minor/Major 7th chord)



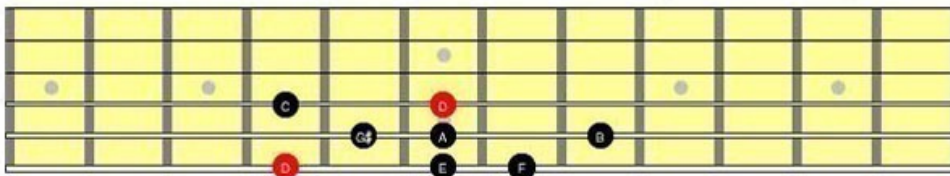
Locrian natural 6 mode, "B" is the root note (Play over a minor7th flat 5 chord)



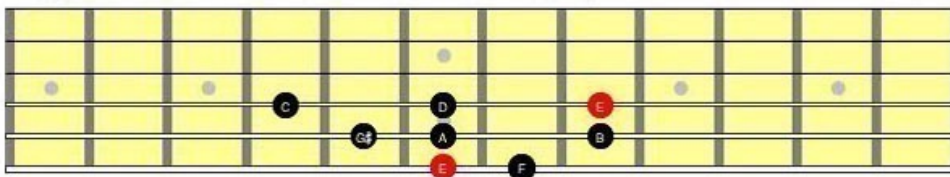
Ionian # 5 mode, "C" is the root note (Play over a Major7th sharp 5 chord)



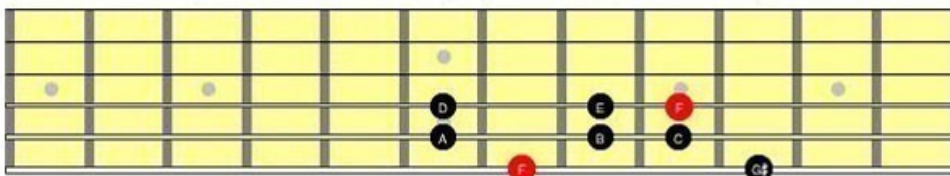
Dorian # 4 mode or Romanian scale, "D" is the root note (minor7th chord)



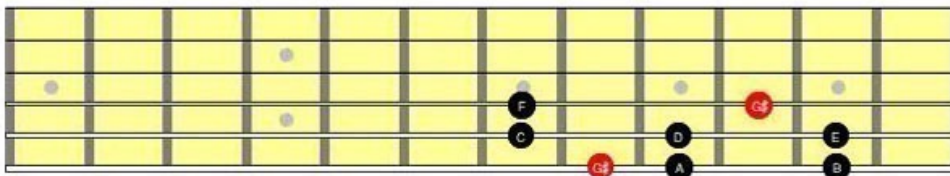
Phrygian Dominant mode, "E" is the root note (Play over a dominant 7th chord)



Lydian # 2 mode, "F" is the root note (Play over a Major7th chord)



Super-Locrian bb7 or Ultralocrian mode, "G#" is the root (Diminished 7th chord)



Another interesting thing you might notice is how all of these modes/scales are named. Much like the intervallic system, the modal system is all based around the major scale and its modes. For example, the second mode in melodic minor happens to be almost the same as the Dorian mode, except the second note is a half-step lower. So we call this mode Dorian flat 2 (or Dorian flat 9).

There you have it. We have 21 completely unique, harmonically diverse scales that can really propel your playing to the next level. To be clear, this number can be considered even higher when you realize each scale has a pentatonic sequence found within.

To wrap things up, in the beginning of this section, I began by conveying my belief that to be a great guitarist you don't have to know many scales. Rather, you should know a few scales very well. This is something I still believe and will continue to communicate to others.

But there shouldn't be a line drawn in the sand between those of us who know a ton of scales and those of us who only know one or two. This is similar to the constant battle between players who swear by theory and those who believe it over-complicates the fun of creating music. This is a false choice. Real musical freedom is in doing what you want to do with the information provided. You might gravitate toward only one of the 21 scales I've shown you — and that's awesome! Dissect that one scale and make it your own.

Throughout the course of this book, we have gone over LOTS of information. Becoming well adjusted to these concepts will not happen overnight. I truly empathize with the sense of intimidation that some of you might be feeling. So in the next section I'd like to share some of my personal thoughts and insights on practice.



## Practice Philosophy

Many players believe the process of practicing scales, chromatic patterns and other dexterity-related exercises is an essential part of advancing one's technique.

The problem is that this process often can become tedious and boring. In response, teachers and self-taught musicians have devised various methods and strategies to lessen the monotony of this laborious yet necessary aspect of everyday practice.

One approach I personally enjoy is watching TV while running through my exercises. This is something I started almost by accident. Back when I was first starting out, I knew what had to be done in order to get better: Constantly practice.

I wasn't fully aware of the concepts of muscle memory, but I intuitively recognized (like most people) that the more you do something, the better you get. Some people hate the idea of going on a diet or starting a workout regimen. But if you stick with it, you will start to notice changes in your mood, energy levels and physical appearance that can further fuel your motivation.

So when I didn't have enough time on a particular day to watch a specific TV show and also devote at least an hour or two to practicing, I would do both.

Of course, there's always a trade off. Practicing with the TV on is beneficial for basic finger mechanics, but it also could be construed as passive practice. This isn't necessarily bad, but it should be treated as a means to an end. In a perfect scenario, the passive practice is a warmup that leads into the more fulfilling part of your practice routine.

Another option is to run through your various scale and dexterity exercises over backing tracks. This approach has become much easier to accomplish now with the ubiquity of free jam tracks on

YouTube, Spotify, various apps and countless other sites. Even as a warmup, practicing over jam tracks will minimize passivity and maximize musicality. By that, I mean it should fully immerse you in the sound and quality of whatever scale you decide to utilize.

But once again, there are two sides to every coin. If you have a comprehensive list of scales, licks and arpeggios that you practice every day, it might be overwhelming to try and fit them into certain jam tracks. It's as if your mind is racing to finish a checklist instead of focusing on what actually sounds good. The potential result: a weakening of your improvisational chops.

In this context, when I mention "chops" I'm not necessarily talking about technical prowess. Improvisation has as much to do with the amount of silence you can tastefully inject as it does with the amount of notes. Also, creating melodic passages that complement the backing chord progression is equally important and helps achieve that "song within a song" effect.

For these reasons, you should not feel obligated to include every scale/lick pattern within a particular backing track. Those who do, ironically, might find themselves back to square one: passively practicing.

So how do we balance passive and active practice methods? For starters, we can always treat the first backing track as our "warmup." Pick a track that's a little longer (maybe eight minutes in length) and allow yourself to run through your mental list of patterns and exercises without hesitation. If you want to increase the speed of those exercises, pick another track with a faster tempo and repeat the exercises (perhaps in a different order to keep things interesting).

At this point, you would have roughly 15 minutes of solid warmup time, which is half passive and half active. The third track you play along with should be the start of a fully musical practice session. Disregard the pressure of including every exercise and focus only on what's best for a particular backing track. If you have a lot of time, find multiple tracks with different moods (major, minor, Lydian, Dorian, blues, etc.). Or you can alternate

the type of tracks you use on different days.

For scales/licks that are still brand new to you, it might be best to practice them in isolation or maybe with the 'TV' approach at first. Just be careful to avoid a habit of only practicing while the TV is on. You might feel like you've accomplished something for the day because your fingers touched the guitar, but did your mind touch the guitar?

As I often say, balance is the key. There's nothing wrong with some passive repetition for technical improvement, but always counter that with a steady diet of mentally engaging practice.

## Practicing, Without Your Guitar

The term “tedious practice” can mean different things to different people. That initial and often uncomfortable moment when your fingers are learning to play something brand new will require some amount of repetitive and likely boring practice.

At that early stage, it's too difficult to have fun with the pattern or lick in question, so you play it (ad nauseam) until it becomes second nature. This highlights the process of improving one's muscle memory.

If you can make some noticeable improvements with your physical chops by passively practicing (perhaps while watching TV), can you sharpen your mental chops without a guitar in your hands? Absolutely.

There are only so many hours in a day, and most people don't have access to a guitar for a good portion of that time. But that doesn't disqualify the average person from becoming a great musician. What can you do to actively "practice" while you're driving in your car, riding on the subway, stuck on an airplane, at the gym or on your lunch break?

First, we can use technology to our advantage instead of playing random cell phone games. Most of the devices we carry in our pockets have immediate access to more information than heads of state had only a few decades ago. Let's make a list of the best ways you can practice when you're away from the six string.

### **Learning Music Theory**

When you think about it, the main objective of music theory is to fully explain the concepts behind chord construction and how that logically connects with intervals, scales and modes. Once you

grasp these concepts, it's advisable to memorize them so you're not constantly referring back to various websites.

This is the first step before you can apply any of your new-found knowledge in a musical scenario. So you really don't need to have a guitar around when you're acclimating to this new information. All you need is a phone or tablet and a decent website (or eBook) with reliable information.

### **Memorizing the Notes on the Fretboard**

Let's say you only have an hour (maybe two) in an average day to sit down and play your guitar. Do you really want to spend the first 20 minutes trying to memorize notes like you're studying for an exam? I didn't think so. It's better to spend those 20 minutes warming up your hands.

Memorizing the notes can be carried out by using an app on your phone or tablet. This way, you don't feel the pressure of "studying" the notes. Instead, just casually look at the app whenever you have a few minutes to spare during the day. After a while, you'll realize how comfortable you are with the fretboard.

### **Learning Rhythm Notation**

Again, this is an activity you can engage in without a large and bulky book. Just download an app and become familiar with basic rhythmic divisions (whole note, half note, quarter note, etc.). Even if sight reading isn't an ultimate goal of yours, it never hurts to be able to read some basic notation.

### **Watching Videos**

Instead of watching some viral YouTube video that probably won't enrich your life in any way, watch a video of a great guitarist that will inspire you to practice harder. It's funny how a five-minute video can totally shift your perspective and motivate you to learn

new things.

### **Actively Listening to All Styles of Music**

This might be the most underrated aspect of becoming a well-rounded musician. The key word here is "actively." In today's world, we have music playing all the time. You can let your iTunes library play in shuffle mode for hours on end. But how often are we just listening to music? No reading, no playing video games, just fully enamored with whatever song is playing?

This is especially beneficial if you're trying to get into different genres of music. A rock guitarist might get into jazz by simply playing "2-5-1" progressions and practicing some jazz-oriented scales. On the surface, this might make him or her feel like they know how to play jazz. But I'm sure a seasoned jazz player would disagree.

Put down the guitar and listen to some great jazz music. Obviously, the same goes for any style (country, blues, classical, etc.). This will take you much farther than memorizing a few finger patterns.

There you have it, you can accomplish a great deal without having a guitar anywhere near you. Take advantage of any free time you have and use it wisely!

## At the end of the Day, Music Theory Offers Options, Not Rules

I briefly touched upon how polarizing the topic of music theory can be for some musicians in the beginning of this book.

I described it as being a false choice, a line in the sand between the ardent supporters of theory and those who believe it's a hindrance to the creative process.

I say this is a false choice because it is not a cut-and-dry issue. Depending on your perspective, music theory can be thought of as a rule book or a road map. I prefer the latter.

The main benefit in treating music theory like a road map is that it can alleviate the perceived burden it holds over creativity. In this context, music theory offers us various options, not fixed rules.

We can now envision the process of songwriting as if we are driving on a main road or highway. Knowing even a little bit of theory will allow us to better navigate the ride. If we want to take detours, perhaps shift the tonal center in a given progression, then we know there are proven methods (reliable off-ramps) that can make the transition seem more deliberate and less random.

The subject of altering the tonic (root) chord in a given progression is of particular importance. Before understanding theory, I used to think that dramatic shifts in musical keys were truly an example of "outside the box" thinking. I still believe this, but I was also surprised to find out how much of these abrupt movements were explainable by certain precepts of music theory.

Transitions from one musical mood to another can be the most challenging component of writing a good song. If hastily constructed, some transitions will sound too indiscriminate and can upset the fluidity of the entire piece. For some listeners, this randomness can add an interesting and unexpected dimension.

But what if you want your transitions to sound smoother? Luckily, you have some alternate routes if you know how to read your road map. Changing from a major progression to its relative minor is one path that can yield a "best of both worlds" result. This clearly alters the mood and vibe of the entire song, yet it is still pleasing to the ears because no outside notes are being introduced into the equation. The alteration occurs within the boundaries of the same seven notes.

However, this approach might be too predictable for your ears and you might instead want to introduce a chord that does not belong to a given diatonic progression. A common option is a secondary dominant chord. If we follow the "guidelines" of a diatonic chord progression, the V chord is what is known as dominant. A dominant chord usually gives the impression that it wants to resolve to the tonic (root) chord and is built upon the foundation of a major triad with an added flat or minor 7th.

So, logically, whenever we play a dominant chord during our progression, it's going to tell our ears that it wants to go back to the tonic chord (or a perfect 5th interval below its position). So what happens if we throw in a dominant chord that is out of place? By "out of place," I mean it's no longer the V chord, but instead, it's now the ii chord (for example). In a major progression, the ii chord is usually minor. If we swap out this minor chord for a dominant chord, that dominant will gravitate toward another chord aside from our established tonic note.

Depending on how long we sit on this secondary dominant, we can totally reshape our listeners' perception of the tonal center. If



this hypothetical progression started out in the key of "G" major, then the secondary dominant in place of the ii chord can shift our attention to the key of "D" major.

These are just two ways in which you can surprise your listener in a clever and creative way. You could also utilize the circle of 5ths to modulate your progressions, or you can dabble in the more advanced concepts of jazz chord substitutions.

The point is, there really are no right or wrong ways in the world of music theory. Just suggested paths. You don't have to do any of these things. You might even want to try your own thing and see where it takes your song. But wouldn't it be nice to have all of your options laid out for you in a logical manner? This is what music theory offers. Not a restrained way of thinking, but a plethora of potential scenarios where your music can flow seamlessly from section to section — or stagger unexpectedly.

Going back to the driving analogy, it's like having a GPS system built inside your head. You're no longer driving blind, afraid of getting too lost in your own creation. You know when you can diverge from the main road, and when to get back on, all without going too far off course.