

**Light and Dark: The Dual Nature of Tritones in Establishing
Tonal Brightness**

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The tritone has historically been seen in Western music as a rather undesirable interval. Though realistically unavoidable, its clear dissonance caused the Catholic church to heavily discourage its use in music. Romantic composers typically wrote tritones to create an ominous or evil mood, often using them to represent hell itself. Tritones also appear frequently in metal music, whose writers take full advantage of their dissonance to convey intense emotion.

While this is a valid understanding of the tritone, it should be noted that the ambiguity due to its placement in the exact middle of the twelve-tone system gives it a distinct dual nature. Contrary to the popular belief that a tritone is most often used to darken a sound to build tension, this interval is also commonly used to brighten music. In this essay, several examples - both classical and contemporary - will be used to illustrate the tritone's duality.

Part 1: Defining Brightness

The term "brightness" will be defined as the size of intervals between a scale's tonal centre and all other scale degrees. This is directly related to the modern concept of modes, where modes with larger intervals are considered to be "brighter" than those with smaller ones. In this seven-mode system, Lydian would be considered the brightest mode, and Locrian would be considered the darkest.

Mode	Interval Between First and <i>n</i> th Scale Degrees						
	First	Second	Third	Fourth	Fifth	Sixth	Seventh
Lydian	unison	major	major	augmented	perfect	major	major
Ionian	unison	major	major	perfect	perfect	major	major
Mixolydian	unison	major	major	perfect	perfect	major	minor
Dorian	unison	major	minor	perfect	perfect	major	minor
Aeolian	unison	major	minor	perfect	perfect	minor	minor
Phrygian	unison	minor	minor	perfect	perfect	minor	minor
Locrian	unison	minor	minor	perfect	diminished	minor	minor

Figure 1.1 Modern modes and the intervals between any scale degree and their tonal centre.

Here the tritone's symmetry is made clear: While all the modes contain a tritone between two notes, the only ones that have a tritone with their tonal centre and another note are Lydian and Locrian, the brightest and darkest modes. Indeed, composers often place tritones in either of these modes, and knowing the musical context surrounding a tritone is therefore critical to understanding its role as either a point of extreme brightness or extreme darkness.

Part 2: Dark Tritones

Most musicians are more aware of composers using tritones to convey a dark mood rather than a bright one. For instance, romantic composer Richard Wagner famously opens Act II of his opera *Siegfried* with a C-G \flat (F \sharp) tritone ostinato in the timpani and bass to establish a grim atmosphere.

The image shows a musical score for Wagner's *Siegfried*, Act II, measures 1-8. The title is "Träg und schleppend." The score is in 3/4 time and features a tritone ostinato in the timpani and bass. The timpani part is marked with "p" and "pizz." (pizzicato), and the bass part is marked with "pp" and "(Bog.)" (Boguesse). The score is in C major and features a C-G \flat tritone ostinato.

Figure 2.1 Wagner, *Siegfried*, Act II: mm. 1-8

Wagner's decision to write F \sharp in the timpani but G \flat in the bass appears to be merely an arbitrary choice in notation, and as the tuba confirms a C Locrian sound by introducing D \flat in its line, it becomes clear that G \flat is the more functionally accurate name in this case. By understanding tritones as artifacts from the modal system, it becomes easier to see why they create an ominous mood in this example. These C-G \flat intervals rest on on the first and fifth scale degrees of the C Locrian scale - in particular, the flattened fifth scale degree is what differentiates Locrian from the next darkest mode, Phrygian, meaning that said flattened fifth is crucial for creating the darkest possible scale in the seven-mode system.

Establishing the original interval before shifts is what reinforces the tritone's role as a darkened fifth rather than other, brighter roles.

Part 3: Bright Tritones

Whereas previous examples had tritones create a dark sound by having one note rest on the fifth scale degree, tritones can also sound bright by resting on scale degrees that end up raised relative to a major or minor scale. This is commonly seen in music that employs the Lydian mode, whose fourth scale degree is raised relative to the major scale, and Claude Debussy's solo piano work *L'isle joyeuse* is no different.

Throughout its entirety, *L'isle joyeuse* uses Lydian and whole-tone scales to create an especially bright sound. Compared to the major scale, whose "happiness" could be described as more earthly or commonplace, Lydian's conveys a more ethereal, almost spiritual feeling of joy.

Tritones are traced throughout the piece, but a prominent example of their brightening power is found after the climax at m. 236, where a *fortissimo* restatement of one theme in A major suddenly drops to an F major chord with an augmented fourth suspension.

The image shows a musical score for measures 236-240 of Debussy's *L'isle joyeuse*. The score is written for piano and consists of two staves: a treble clef staff and a bass clef staff. The key signature is A major (one sharp). The music is marked with dynamics including *piu ff* and *ff*. The bass line features a prominent tritone interval (B and F) in the final measure, which is highlighted by the text as a Lydian tritone.

Figure 3.1 Debussy, *L'isle joyeuse*: mm. 236-240

Two opposing factors are at play here. Harmonically, the music becomes darker: Placed immediately after an A major passage, the F major chord, formed from the flattened sixth scale degree, implies an A minor sound. But melodically, the music becomes brighter: instead of the repeating B serving as the second scale degree in A major, it now forms a tritone with the F root, implying a Lydian

melody. Lydian's raised fourth scale degree - which would be B in this case if F is taken as the tonal centre - causes it to sound brighter than the major scale. In other words, although the listener feels as though the music is darkening due to modal mixture in its harmonic structure, the melody feels *even brighter* because of the F-B tritone.

Both principles - outlining the tritone in the Lydian scale and repeating the same interval while the harmony darkens - are utilised in a similar fashion in Ryo Nagamatsu's *Mount Wario*, which featured on the soundtrack of the 2014 racing game *Mario Kart 8*.

After a brief C whole-tone passage followed by a trumpet motif that establishes C as the tonal centre, the violin introduces the main theme.

The image shows a musical score for a violin melody and a rhythm section. The violin melody is written in treble clef and the rhythm section is in bass clef. The score is divided into four measures. Above the violin staff, the chords are labeled: C, Fm C, Ab, Bb7, C, and Abmaj7. The violin melody starts with a C whole note, followed by a quarter note G# and a quarter note A. The rhythm section provides a steady accompaniment with eighth and sixteenth notes.

Figure 3.2 Nagamatsu, *Mount Wario*: The main theme introduced in the first lap.

While there is no true tritone present, the implied Lydian mode outlines one between C and F# in the first measure, just as *L'isle joyeuse* implies F Lydian with a F-B tritone between the bass and melody. F# rests on the fourth scale degree of C Lydian and is thus what differentiates the scale from a traditional major scale. The tritone forms a larger interval compared to the perfect fourth found in C major, increasing the overall brightness of the melody.

This brightness is maintained even as the music builds tension by shifting to a darker mode. Upon reaching the second lap, *Mount Wario*'s music repeats the first several notes of the main theme but accompanies it with a new harmony. By imposing the same melody on top of an A minor chord, the mode shifts to imply A Dorian, whose intervals are smaller relative to C Lydian. This added darkness

corresponds to the in-game context of the music as racers enter the interior of Mount Wario, which introduces a more hectic track layout with increasingly difficult ramps and turns. These factors, both in gameplay and melodic brightness, contribute to the second lap's role of building tension towards the climax of the race.



Figure 3.3 Nagamatsu, *Mount Wario*: The mountain interior section.

With the tonal centre shifting to A, the theme's C-F# tritone is no longer fixed to the tonic and instead rests on the third and sixth scale degrees. Because the F# is now the sixth scale degree, it plays a new role in differentiating the mode from the traditional minor scale, which is relatively darker due to its flattened sixth. The melody's tritone is critical to retaining the brightness found in its original C Lydian form even though the music as a whole darkens, similar to how *L'isle joyeuse's* B in m. 236 retains a Lydian sound while the piece becomes harmonically darker.

In both *L'isle joyeuse* and *Mount Wario*, tritones serve a role in establishing a bright sound as well as maintaining it as harmonic structure changes. Because these tritones rest on the scale degrees that differentiate Lydian from Ionian and Dorian from Aeolian (the fourth and sixth, respectively), they feel brighter than in cases in which tritones rest on scale degrees like the fifth, which imply a Locrian sound.

Another key factor that contributes to this distinction is the presence of an alternate fifth scale degree that clearly points to the tritone functioning as an augmented fourth. The chord in *L'isle joyeuse* contains C alongside the F-B tritone, and the main theme in *Mount Wario* begins with an open fifth motif before it introduces the fourth scale degree. Without this additional context, it is easy for the listener to feel as though the tritone is functioning as a diminished fifth, thus darkening the sound.

Conclusion

The tritone's darkness is often attributed to its dissonance, but by observing it through the lens of the modal system, it is less so the tritone itself than it is the surrounding material that truly determines whether it is bright or dark. By setting up an expectation for a perfect fifth only to replace it with a diminished fifth like in *Siegfried* or *Resurrections*, the tritone in question undoubtedly darkens the sound. But by introducing other elements that point towards the tritone resting on the fourth scale degree or otherwise like in *L'isle joyeuse* or *Mount Wario*, it takes on a much brighter role. Music's extreme subjectivity in interpretation is on full display when it comes to understanding the function of certain components because of how those functions change dramatically depending on the context, and the polarizing tritone is a shining example of this.

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