Static Bending: A Microtonal Guitar Technique

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Static Bending

"The oldest, truest, most beautiful organ of music, the origin to which alone our music owes its being, is the human voice."

Richard Wagner's romantic stance on music is a relevant concept in the world of guitar music just as much as any other. He shows his opinion on the opera of his time, and of which he wrote several, but strangely enough, this sentiment can be applied to any non-vocal instrument. So many instruments of the western world seek to imitate the human voice, aiming for that natural, ancient instrument that Wagner describes; viols, woodwinds, brass instruments, etc. This sonoral goal is not limited to the western world either; if you look closely at world scales and instruments, you can see how much more dedicated they are to following the voice's example rather than temperaments and theory. Different maqams in middle eastern cultures are used more for depicting specific emotions, similar to language. Fantastic instruments like the Erhu from China almost sound as if there's a woman trapped within the python-skin-covered sound box, singing a haunting melody that the player dictates for her.[1]

The intention to imitate the voice is blindingly clear in the aforementioned instruments, but not so much in harmonic, equally-tempered instruments like the guitar. The instrument's frets keep the instrument from taking large strides out of the western twelve-tone scale, though this has not stopped guitarists from trying. Bending and vibrato have been used in an attempt to find those fleeting vocal qualities that draw in listeners. Surpassing the frets of the modern guitar while working within their constraints is a difficult thing to do, both compositionally and in performance, but it allows for culturally referential motives, and human-sounding melodies.

[1] Caitlin VanWie, "Object: Erhu," *UTSA Institute of Texan Cultures,* accessed February 25, 2025. https://texancultures.utsa.edu/collections-blog/object-erhu/.

Historical Overview

After attending a conference on microtonal music held in Greenwich Village, Manhattan, I noticed the striking number of guitarists interested in this contemporary, unconventional style. Including myself, nearly half of the attendees were guitarists—classical or otherwise. I presume this is due to how the guitar clearly stands apart from other harmonic instruments like the piano because of its interpretative flexibility. Guitars are more akin to bowed-string instruments than to the piano due to their variety of tone colors, vibrato, and extended techniques; and it seems to me that, like the bowed string family, guitarists share an undeniable interest in moving away from the frets that tie them to a flawed tuning system. For example, look no further than innovators like Tolgahan Çoğulu, Buzz Gravelle, or John Schneider. By either adding more frets or removing the frets altogether, these guitarists reach out to the natural qualities of sound in order to more accurately express themselves as well as displaying the sounds of their own culture's music on western instruments.

Take a look at the countless instances of musicians of old, even, essentially moving backwards from the 'innovation' of frets: the now standard guitar slide or 'glass' began to show up in the nineteenth and twentieth centuries as musicians like Joseph Kekeku, a guitarist from Hawaii, with similar ideas being experimented with in West Africa, possibly earlier than the 1800s[2] (Rick Payne, 2000). You would immediately recognize this tool's smooth, almost vocal sound as this technique then became one of the defining characteristics of the blues style in the United States of America. The blues, being a very soulful and emotional genre, sought to bring the slide's naturally beautiful qualities into the artistic expression of its songs. These earlier musicians would use old glass bottles to defy the frets of the extremely common guitar, allowing

[2] Rick Payne, "History and Origin of the Slide Guitar in the Blues," *Document Records*, December 2, 2000. Accessed February 24, 2025. https://www.document-records.com/show_article.asp?articleID=186.

for the access of the infinite pitch spectrum that normally lies on an empty fingerboard. From the blues, the slide would then become a staple of country and folk music as well.

The almost inherent need for guitarists to replicate these fretless sounds persisted as western popular music developed, and would begin to be reflected in the use of bending. If you have ever heard a guitar solo in a rock song or a jazz tune, you know all too well how this effect can inexplicably tug at your heartstrings (pun intended). It seems that these techniques—the guitar slide, bending, and even vibrato—all have at least one, Wagnerian thing in common: they all mimic the quality of the human voice. Think of song titles that personify the guitar; “While My Guitar Gently Weeps” by The Beatles, “My Guitar Lies Bleeding in My Arms” by Bon Jovi, or “This Guitar (Can’t Keep From Crying)” by George Harrison. As humans ourselves, we all share a deep connection with the human voice, and these musicians so often seek to replicate that connection with the guitar. Your mother or father singing you a lullaby, your teacher humming to themself while the class is taking a quiz, the first time you heard your favorite song and how the highs and lows of the melody fill your heart with warmth. This connection draws all musicians, not only guitarists, to mimic this specific, organic sound that can both feel nostalgic and new all at the same time, conveying emotions that don’t yet have words attached to them.

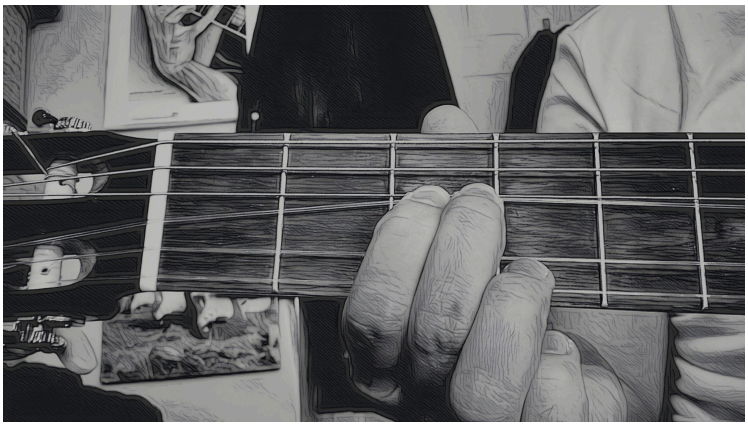

Figure 1. Bent guitar string

The Static Bend

Previously mentioned guitarists that have augmented the guitar in order to achieve different goals certainly have succeeded; Dr. Çoğulu's adjustable microtonal guitar fretboard has revolutionized the performance of world music, allowing for maqams and world scales to be accessed on a guitar. The world of fretless renditions of the guitar have allowed a similar freedom within the expression of vocal qualities. Though I look at these examples with reverie, it is an undeniable observation that these are different instruments; in revolutionizing the guitar, they have fundamentally created a different kind of guitar, and one that is not cheap at that. This seems to be the price of such an innovation: the creation of a new instrument.

Enter the static bend, a technique simply utilizing the standard guitar as it is, reaching out to that feeling that only a bending guitar string can achieve. This particular kind of bend involves bending the string *before* plucking. From doing this, you are creating the illusion that there is some additional, imaginary fret that is hidden after the note you've bent. The inclusion of this technique effectively opens up your compositional palette of pitches, allowing for expressive ornaments as well as otherworldly sounding melodies. If you've wanted to compose a piece that pays homage to the music of a different culture, you can use a static bend to more accurately reflect that culture's scales and tunings. Additionally, the technique can vary on its dismount; you can make the pitch more rigid, as if it were a preexisting fret, or you could slowly release the bend to create a pure fretless glissando. The latter adds to the musician's aim to imitate the human voice, and touches that same nerve as the guitar bending in your favorite rock song.

I choose to notate this with accidentals that have arrows protruding from them, as suggested by Elaine Gould for general microtonal inflections.[3] I find that this most accurately

[3] Elaine Gould. Behind Bars: The Definitive Guide to Music Notation (London: Faber Music, 2011), 274.

reflects the act of a bent string. Not to mention that the bending of the string only allows for pitch approximations, so one cannot exactly perform a mathematically correct quarter tone each time; this allows for differentiation between a fixed quarter-tone and a bent quarter-tone.

"Hollow" by Luke Villavicencio

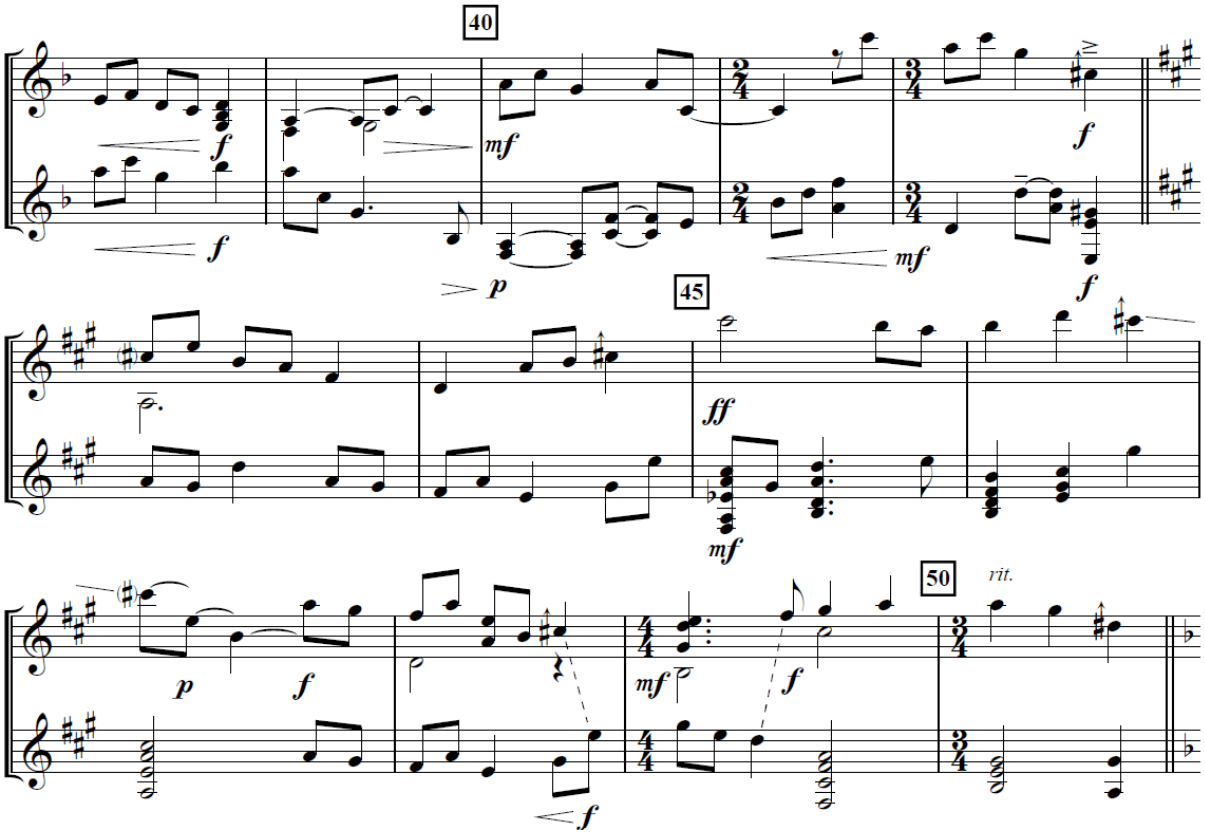

Figure 2. Luke Villavicencio, "Hollow" (New York: LAV Composition & Research), mm. 38-50.

I utilize this in the Berceuse section of my own work, titled "Hollow" for two guitars as seen above. You'll notice that I do not use any form of microtonality in any other section of this piece, and the reason for this is one that I lightly highlighted earlier: lullabies are often sung by a parent in a rather imperfect way which, paradoxically, makes it perfect. In my example above, I attempt to demonstrate the use of static bends in harmonic and melodic contexts. In measure 42, the static bend on C sharp in guitar one is used to harmonically add to the pull of the V/III chord.

You can hear how the literal relaxing of the string from a bent C-sharp to a regular C-sharp creates an internal sigh of relief, strengthening the resolve of that cadence. Furthermore, this is imitated and partially displaced by an octave in measure 44-45; this is where the bends begin to be used melodically. When we get to measure 46, we see that the microtonal motive returns higher up, with the bent C-sharp being supported by the G-sharp in guitar one, reflecting the tuning of the 11th harmonic in the harmonic series; here I demonstrate the slow release of the bend, eliciting memories of going to see rock shows when I was younger.

Listen: youtu.be/SQneA-lp8l8?si=APmEjb8VTXLtpO9g

(Berceuse section begins at 3:28)

"Tiento" by Maurice Ohana

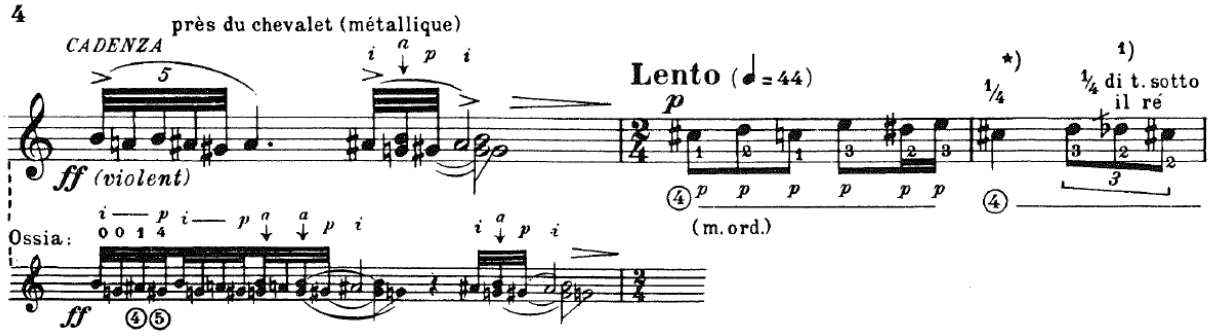

Figure 3. Maurice Ohana, "Tiento" (Paris: Éditions Billaudot, 1957), mm. 62-64.

Maurice Ohana was a lesser-known, twentieth century composer who often experimented with non-conventional compositional techniques in a unique representation of all of the cultures that he identified with. Being born in Casablanca, Morocco, there were certainly some middle

eastern musical values instilled in him, creating an interesting blend with his Spanish and Sephardic roots. These inherent influences are only in addition to the influences of the many other European countries that he experienced the folk music of. His deep love for folk music was lightly harkened to in the short "lento" section of this piece. He primarily utilizes the static bends as a passing tone to add more depth to this interlude. "...the mood of the *Tiento* is Goyesque [in the grim nature of the artist Francisco Goya, whose art heavily influenced Ohana], brutal, melancholic and grief-stricken, as the most emotionally charged songs of the Cante Jondo."[4] The Cante Jondo—which means "deep/profound song" in Andalusian Spanish—is a folk style of flamenco, or Spanish Roma song, known for its emotionally-moving nature and its expressive use of microtonal inflection.[5] Ohana includes this quick reference to this kind of music to help characterize his piece and drive home the longing tone of the piece overall.

There is no coincidence that folk styles that incorporate microtonal inflection and melodies are also referred to as the most emotional, profound styles of music; These styles reach away from any form of pitch rigidity to emulate the longing for something else. From the blues in America to the Cante Jondo of the Spanish Roma, there is a clear effectiveness to this matter of expression. You can clearly note the influence earlier folk vocals from all over the world influenced the upbringing of blues and soul styles which then led to our modern popular music, but now, without that same emotion. With techniques like the static bend, composers can return to the sense of longing that comes as a result of the mimicry of the human voice, "the origin to which alone our music owes its being."

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[4] Caroline Rae, "The Music of Maurice Ohana." (Burlington: Ashgate Publishing, 2000), 97.
[5] The Editors of Encyclopaedia Britannica, "Cante Jondo." Encyclopedia Britannica, October 1, 2020. Accessed February 24, 2025. https://www.britannica.com/art/cante-jondo.

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