

Vibrato: The Great Debate

Vibrato: When and Where?

You could easily start a musical war on the topic of vibrato. There are many divergent opinions, styles, and theories floating around, and for centuries, musicians have disagreed about the best use, type, and production of vibrato.

Fast, slow, centered, wide, moving around the pitch, in the pitch, below the pitch, or above the pitch? Is it part of the sound, or an embellishment, or an enhancement organically added when expression beckons it forward? Is too much vibrato like too much salt? Is abstinence noble? Do you produce it in the diaphragm, throat, mouth, arm, fingers, or mind? When and where should you apply what is commonly referred to as a modern “continuous” vibrato to Baroque, Classical, or Romantic repertoire?

As I performed around the world, I became acutely aware of the wide variations in personal preferences and aesthetics with regard to tone, volume, and sound. When playing at the same pitch in Britain and then in Switzerland, I found I had to change vocals. The British vibrato seemed to cap at 440, and any sharpness was a major sin punishable by excommunication. Sharp was beautiful in Switzerland and France. A shimmer on the sound blended best, using more head resonance and high, lilting harmonics in the color. The vibrato would ever so slightly exceed the designated $A = 441$. I would use a lighter, sharper vocal to adjust. In Germany they speak of having a “pregnant” sound, which I ascertained to be a round tone incorporating lower harmonics and body resonance in a higher pitch of 442. In Italy sound was the predominant musical criterion, *bel canto* opera being a central model, and the colors I heard were gorgeous. Singers worldwide deploy enormous variety and are free to adapt vibrato to particular musical styles. Why did instrumentalists in many orchestras of the 1950s up through the turn of the century play with industrial regularity?

Vibrato through History

The early music movement has led us to think about pitch and ornamentation, including tone swells, tremolo, shaking, bebung, *flattement*, vibrato, *ondegiando*, *messa di voce*, and more. What was an ornament and what was part of the tone concept? Will the supercilious musicologist or the self-ordained cognoscente heave metaphysical mire in your path if you use modern vibrato? Have we any idea what a historical vibrato is?

Based on my study of hundreds of tutors, I think we should begin by understanding that no one can claim some omniscient, clearly definable concept of vibrato. There are a range of terms whose meaning has evolved and changed over time and place; these terms may be similar to the concept of vibrato but are not what we call vibrato today.

The Baroque era

Far from being ignored or forbidden in the seventeenth to eighteenth century, vibrato was in as much dispute then as in current times. There is an absolute plethora of documentation from the late Renaissance and early Baroque periods describing how ornaments such as shaking, bebung, and tremolo can be applied or withheld at will.

As a subject, vibrato is mentioned directly and indirectly in treatises as far back as 1529, when Martin Agricola identified “trembling breath” as a “special grace” in his *Musica instrumentalis deudsch*.¹ Sylvestro Ganassi’s tutor of 1535 urges wind players to imitate the human voice and speaks of producing vibrato through the variation of breath pressure.² Even more astonishing is how, in 1619, Michael Praetorius included vibrato created by diaphragmatic action in his list of the desirable characteristics of singers.³ Marin Mersenne’s work *Harmonie universelle* (1636–37) refers to “certain tremolos which intoxicate the soul” and specifies that organ tremolo has a frequency of four vibrations per second, which he suggests as a model for wind players.⁴ There was clearly a method for measuring seconds in place.

One of the outrageous components of the Baroque era is how they varied the tone and pitch and used *flattement*, a type of finger vibrato. Jacques-Martin Hotteterre, in his *Principes de la flûte traversière* (1728), presents finger vibrato in depth. Michel Corrette (ca. 1734), Antoine Mahaut (1759), and Johann Joachim Quantz (1752) all refer to the swelling and diminishing of volume within a single note, called a *messa di voce*, produced by a finger *flattement* on the nearest open hole.⁵ To ensure pitch stability, Quantz advised flutists to compensate with the embouchure, rather than let the pitch descend or ascend.⁶ Around 1760 Charles Delusse wrote of a breath vibrato “as an imitation of the organ tremulant, to be used as a measured expression of solemnity and terror.”⁷ Johann George Tromlitz (1791), in his Leipzig publication on flute playing, gave new attention to finger vibrato, or the bebung.⁸ All across Europe, these audacious ornaments and performance practices were flourishing.

It appears that string instruments may tell a similar story, according to Manfred Bukofzer’s publication of 1947:

The manner of holding the violin against the chest precluded in itself extensive use of the vibrato. The idea of playing continually with vibrato would be as preposterous to Baroque musicians as that of always pulling the tremulant stop on the organ. The bebung of the clavichord and the tremulant stop on the Baroque organ roughly correspond to the vibrato ornament and are likewise singular effects and refinements among many others. The production of an even tone was foremost in the minds of the instrumentalists (and singers), and the vibrato must be understood as a deliberate, but only occasional, abandonment of what would today be considered a “lifeless” tone. Being the regular way of producing a tone nowadays the vibrato has ceased to function as an ornament whereas the non-vibrato has in turn become a special ornament the composer must prescribe if he wishes it, as Bartók does in his *Second Piano Concerto*.⁹

A marvelous study providing great detail on vibrato is Greta Moens-Haenen's *Das Vibrato in der Musik des Barock* (1988). Whether or not you agree with her (or in my case, understand the German well enough), her original texts help decipher the enigma of Baroque vibrato. Her study is divided into two parts, the first focused on how to technically produce vibrato for string, wind, brass, vocalists, and clavichord. She provides quotations from original sources and notation charts with signs and symbols, and she concludes with an important examination of the relation between vibrato and tremolo.

When I was studying in Geneva, Sol sent me a copy of the 1978 publication by Frederick Neumann, *Ornamentation in Baroque and Post-Baroque Music*—and gave me two weeks to deliver a full report! Michel Piguet, as a robust performer of period instruments, was teaching a course on this subject when I received the Neumann book. Piguet went wild, making it very clear that most of our contemporary literature was befuddled and out of touch with his reality of performance practice. Both the definitions and the context in which the terms have been used have evolved over time. In addition, several controversial translations provide ample fodder for some very contentious publications and performances.

Greta Moens-Haenen presents divergent types of vibrato and comments on the ways in which each type is useful to express moods and Baroque feelings, or affects. Her concise exploration offers specifically notated uses of vibrato used throughout Europe. She devotes specific chapters to vibrato used on the French violes, guitars, and lute; J. S. Bach; vibrato in ensemble playing; and the tremolo, whether vocal or instrumental. However, she would be at odds with Piguet on the question of vibrato being distinct from tremolo, as in a few key discussions regarding Mozart, for example.

As Piguet so aptly pointed out, some of the Renaissance through Classical authors wrote treatises that were peculiar to a single locale or their own unique instruments, while others wrote comprehensive treatises for all instruments, and some just for wind players. Most important, treatises for string and keyboard players are excellent sources, as they were often universal in spirit, with chapters on musicianship that reveal the important contemporary performance practice of their time.

Piguet brought a million questions and playful musical examples to his classes each week. His library was a vast treasure on display. If you are in any doubt of the multitude of musical terms for different ornaments, just look at Neumann's glossary, which provides a maze-like configuration of historical terms (*batement*, *balancement*, *bebung*, *étouffement*, *flattement*, *mordente fresco*, *ondeggiando*, *pincement*, shaking, sting, tremolo, *trilletto*, *trillo*, vibrato, etc.) and their equally varied symbols.¹⁰ Piguet added dozens more from obscure texts, along with contradictory definitions. We were just at the advent of the push for historically informed performance and had opened a minefield of gloriously bewildering contradictions, all aimed at finding wonderful new ways to express music.

The Classical era

The Classical era provided its fair share of dissention among scholars as to the role of vibrato then. Wolfgang Mozart sometimes discussed singers, trills, and tremolo in his letters.¹¹ From Paris on 12 June 1778, Mozart wrote to his father:

Meissner, as you know had the bad habit of purposely making his voice tremble at times (*zittert*)—entire quavers and even crotchets, when marked *sostenuto*,—and this I never could endure in him. Nothing can be more truly odious; besides, it is a style of singing quite contrary to nature. The human voice is naturally tremulous, but only so far as to be beautiful; such is the nature of the voice, and it is imitated not only on wind instruments, but on stringed instruments, and even on the piano. But the moment the proper boundary is passed it is no longer beautiful, because it becomes unnatural. It seems to me then just like an organ when the bellows are panting.¹²

While disparaging the use by the bass singer Joseph Dominik Nikolaus Meissner (1725–95) of various ornaments, there is a distinction made here between the special effect employed so dubiously, which might have been *zittert*, *bebung*, or tremolo, as distinct from the human voice, which is naturally tremulous (*vibrato*). Scholars disagree as to whether Mozart refers to vibrato or instead to tremolo and *bebung* ornaments.

Francesco Geminiani made the case for the use of continuous vibrato in his treatise, *The Art of Playing the Violin*, published in 1751.¹³ Geminiani titled his fourth chapter “Vibrato: Continuous, Not Just an Ornament.” This further supports the arguments endorsing the principle that no one rule fits all.

Complicating things further, the word “tremolo” did at one time appear to indicate a pitch variation on one note. Leopold Mozart's treatise describes the tremolo effect as being the sound emanating from a “struck bell”: “[The vibrato] arises from nature herself . . . for if we strike a slack string or a bell sharply we hear, after the stroke, a certain wave-like undulation [also referred to as *ondeggiamento*] of the struck note. And this trembling after-sound is called tremolo, also tremulant [or *tremoleto*]. [It]

can be used charmingly on a long note, not only by good instrumentalists but also by skillful singers.”¹⁴

Then as now there were clearly disputed opinions as to the use of, and amount of, vibrato and nonvibrato. What is evident is that vibrato consistently refers to a single-pitch, centric pulsation, rather than a pitch-changing undulation. Just to add ambiguity, in the very next paragraph, Leopold Mozart’s treatise describes the technique to produce “tremolo” as “placing the finger firmly on the string and, one [the player] makes a small movement with the whole hand; which however must not move sideways but forwards toward the bridge and backwards toward the scroll.”¹⁵

Trills, tremolo, messa di voce, and cadential flourishes were all ornaments to add either expression or virtuosity tastefully, as distinct from vibrato, which was considered part of the natural sound.

Leopold Mozart then adds caution on overuse of vibrato:

Performers there are who tremble consistently on each note as if they had the palsy. The tremolo must only be used at places where nature herself would produce it; namely as if the note taken were the striking of an open string. For at the close of a piece, or even at the end of a passage which closes with a long note, that last note would inevitably, if struck for instance on a pianoforte, continue to hum for a considerable time afterwards. Therefore a closing note or any other sustained note may be decorated with a tremolo [tremoleto].¹⁶

The Romantic era

Listening to the recordings of Joseph Joachim playing Bach and Brahms on the violin turned my understandings of vibrato and Romantic style upside down completely.¹⁷ Professor Dr. Joseph Joachim was recorded in 1903, at the age of seventy-two, after a lifetime of musical involvement with leading composers such as Mendelssohn, Liszt, Schumann, and Brahms. I ask all my students to listen to these recordings. Joachim was a close friend of Brahms, and one might well assume that this recording is a real guide for the performance practice of the time. The typical vibrato I used to use in an orchestra playing Brahms symphonies, with a full, gushing flow, is foreign to Joachim. Instead, he performs with a beautiful tone, almost without vibrato, except often as an ornament at phrase endings. When he does employ a shallow vibrato, it is tastefully placed. It is as if he took Leopold Mozart’s indications to heart even then.

The modern era, 1880 to the end of World War II

The proliferation of the “modern” vibrato and vocal preferences from 1940 onward dominated for some fifty years. The innovation of recordings, and the celebrities created by that industry, certainly helped spread modern international styles and further the vibrato debate. As European, Russian, and Slavic players immigrated to the United States, their oral traditions produced orchestras full of divergent and

colorful palettes. Scholars' sleuthing through letters and historical articles provokes our generation to reconsider such well-accepted practices. *Caruso's Method of Voice Production*, written by Dr. Mario Marafioti in 1922, discusses the vocal style and use of vibrato by legendary Italian tenor Enrico Caruso (1873–1921). Interestingly, the author's recommendations and observations on how to produce, sing, and use vibrato are in complete contradiction to the suggested vocal techniques in other eras (Renaissance, Baroque, and Tudor eras).¹⁸

HISTORICALLY INFORMED PERFORMANCE

HIP, as it is commonly known worldwide, has provoked all of us to question and reinvigorate our performances by asking how many of our favorite works *might* have been performed and how they *might* have sounded when first created.

Having grown up listening to and working with the legendary Rudolf Serkin, Vladimir Ashkenazy, Menahem Pressler, Georg Solti, and Antal Doráti, among others, and indulging my gourmet diet of classic recordings by Clara Haskil, Pablo Casals, Jascha Heifetz, Itzhak Perlman, David Oistrakh, Wilhelm Furtwängler, George Szell, Leopold Stokowski, and István Kertész, I realize that these enormously gratifying performances are now at risk of being disparaged by contemporary HIP critics, who deem them to be unqualified and misguided representations.

Last week I heard a thought-provoking Mozart concerto performed in New York by a superb bassoonist. Watching someone sit down (rather than stand up) and perform Mozart with a fast, continuous, twentieth-century orchestral vibrato and play the concerto with long, romantic cadenzas that were written in the 1950s, I felt as if time had stood still for half a century. This was how it might have been performed in Schoenbach's time. I realized that my ears are no longer what they were thirty years ago! I wondered how it is that I still warm to my old, favorite, lush (perhaps overly romantic) recordings while also being a sleuth for HIP?

As we delve into these early tutors—and I am as curious as anyone—should we not tread cautiously? I have found many instances in which period practice was so prevalent that the general customs and performance practice were understood as general knowledge and therefore were not outlined in the period tutors.

If we were to spend a week transported back in time to a world before Romantic and contemporary music, before Van Gogh and Picasso, skyscrapers, travel by car or airplane, and mass media, wouldn't we think differently? Would the human psychology be similar? I think, in the world prior to any electronic sound, sirens, phones, or recordings, we would listen and hear differently. We'd be used to different colors and timbres.

How did Mozart, Bach, and Brahms actually perform their music? Even with tremendous musicological research, none of us can outline with certainty how the music would have been played two hundred years ago. We certainly can't determine what a "normal" sound was or how an audience responded in those times. If anyone has perfected time travel and can share that with the rest of us, I would be most interested. We should question assumptions and look freshly at scores. That being said, I feel very lucky to have played in orchestras when Bach, Handel, Haydn, and

Mozart were still mainstream repertoire. Today, period orchestras dominate the audience interest.

I remember a holiday driving around France, listening to Leonard Bernstein's stunning arrangements of Vivaldi concerti and my father's favorite Bach transcriptions by Stokowski. How can we ignore that in 1788 Mozart reorchestrated Handel's *Messiah* (which had premiered in 1742) so that it was more suitable for Classical era audiences? Less than fifty years after its premiere! Bach constantly rearranged his own work and Vivaldi's; Mahler reorchestrated Beethoven and Schumann symphonies; and so forth. What about Jethro Tull and the Moog synthesizer taking on Bach, or Billy Joel indulging in Beethoven? Would these composers be amused or horrified by such allowances taken with their music, or by today's "critical editions" and the prevalence of HIP?

If you have ever heard profoundly moving recordings, such as Rudolf Kempe conducting Mozart's fortieth and forty-first symphonies, or Clara Haskil playing Mozart concerti, or Pablo Casals playing the Bach cello suites and conducting the Brandenburg concerti, you realize that these iconic musicians may not be HIP, but they created equally valid, aesthetically profound, and historically important musical experiences!

Until the recent upsurge of HIP, we seem to have universally adopted twentieth-century postwar practices across the complete canon of Western music for half a century or so. It is hardly surprising that there are some newer and older entrenched theories, realities, and well-defined opinions that bring us to the brink of artistic warfare.

Thurston Dart, writing in 1967, comments: "The incessant vibrato which has so regrettably infected nine out of every ten singers of the present day could not be obtained with the methods of breath control taught by the finest eighteenth- and nineteenth-century singing teachers. The evidence of early recordings shows that even fifty years ago it was used with the utmost care (though the tremolo seems to have been rather more common than it is today), and it is one of the greatest disfigurements of modern musical performance."¹⁹

It is understandable that in the postwar atmosphere favoring continuous vibrato, Dart and others made the case for minimal or no vibrato. As the pendulum swings left, we push right, and vice versa. Somewhere in between is the area of greater interest. Can we imagine painters adhering to similar rules on tone or style, or allowing museums to update their work for current audiences?

David Wulstan comments on the reluctance to forsake continuous vibrato:

The late nineteenth century has much to answer for, since it replaced subtlety of articulation with exaggerated modes of "expression." Most of all, it introduced the unremitting use of vibrato, coupled with the vowel distortions and suppression of consonants characteristic of most operatic singers today. The complex polyphonic textures of Tudor music would be imperspicuous if the parts were blurred, particularly by vibrato. Yet in spite of this, singers are reluctant to forsake wobbling, partly because it appears to amplify the voice, and partly because intonation problems are covered

up by its obligingly wide margin of error. . . . The operatic retracted larynx technique, with its concomitant vibrato, also began to gain ascendancy at about this time. It is obvious that Baroque singers could hardly have sung in such a way that trills were indistinguishable from the surrounding gelatinous wobble, yet it is woefully rare to hear a singer who has forsaken the nineteenth century mannerisms.²⁰

Are metronomes responsible for our modern approach to measured, continuous, and ever-present vibrato? Carl Flesch's *The Art of Violin Playing*, published in 1939, attributes wider and more expansive vibrato to Fritz Kreisler (1875–1962), who allowed Zigeuner (Gypsy) influences into his charismatic music and performances.²¹ Kreisler recordings show clear evidence of a freer vibrato and a variety of more flexible nuances. If this were such a novelty, one would anticipate a rash of critical reviews or commentary from the period. What is far more obvious is the evidence that Eugène Ysaÿe, Yehudi Menuhin, Jascha Heifetz, Emanuel Feuermann, and other leading performers of the first half of the twentieth century all employ vibrato. Furthermore, the well-known wrath of critical commentaries on contemporary performances void of vibrato that are portrayed as “historically informed” suggests that our popular vote is divided, at best, on the topic.²²

Contemporary vibrato

The pioneers of historically informed performance practice ushered in an era of much more abstemious use of vibrato and far more articulation. Currently, the more we delve into the early tutors, the more fashion reverts to the outrageous, contrasting, and, in some cases, even what we now view as Romantic tendencies of articulation, vibrato, and phrasing.

Stokowski and Casals brought Bach back into our daily world through their rich, passionate, and compelling performances. They intuitively phrase Bach and Mozart with additional melodic slurs, deft articulation, vibrato, and dynamic contrast. Then came the urtext era, when publishers provided original, unedited scores. We dutifully obeyed the slur-barren scores to the letter; the lack of printed *crescendos* and *diminuendos*, limited vibrato, and pure choices created some extraordinary performances. Now, in the early 2000s, François Devienne's flute tutors, Johann Nepomuk Hummel's *Méthode complète théorique et pratique pour le piano-forte* (1829), and many others have shed light on historically informed performance practice, particularly how performers used their sense of style and good taste at the time, when publishers rarely included slurs and other markings. Accordingly, we have returned to trusting our musical instincts: a variety of slurs and articulations, and strong dynamic contrast and shading (much as the recordings of Casals and others proffered, albeit with far greater respect and evidence of historically informed performance practice). Vibrato, on the other hand, seems to be one area that differs and to which we still have glaringly different approaches.

REGIONAL DIVERSITY IN CONTEMPORARY VIBRATO USE

As a soloist, I have performed across Europe, Asia, and the United States. Each concert was a completely new experience, with symphonic orchestras, period instruments, and chamber ensembles. Even in the 1980s, international orchestras had diverse concepts of sound, how to play triplets, and what intonation they favored as correct, as well as divergent approaches to vibrato and dynamics. I would spend the first rehearsal adjusting, finding a vocal and reed that would stand out against the texture of each different musical setting.

My experience in the Italian orchestra ranged from hearing some of the most beautiful and warm bel canto playing, with and without vibrato, to some of the wildest, widest vibrato. When one particular soloist I heard loved the phrase, his vibrato was uncontainable. His whole body would shake. Moyse would have rolled over twice! (I must add that this soloist had a marvelous musical sense for colors and phrasing. We have to leave the whole debate for Apollo and Dionysus!)

When in doubt, listen to vocalists and find the most natural sound for the musical phrasing. I am not fond of generalities. At the same time, in the United States, I hear a popular, even pervasive, tighter, faster, continuous vibrato that is different from the many styles found in Europe. Britain and Vienna held out the longest in favoring a noble, intimate, wobble-free tone for the most part. Germany adopted a prominent use of vibrato, and France, a lustrous shine, spinning within the tone.

What history teaches me

After reading pedagogical treatises from the sixteenth century onward in four languages (English, French, German, and Italian), I now wonder how anyone could presume that each of them would use the word “vibrato” in a similar manner.

From Baroque times onward, treatises on wind playing almost unanimously encourage wind players to rival the human voice. I would make the case that vibrato is part of a natural tone that is supported from the diaphragm with sympathetic movement in the throat. What we should *not* do is confuse the finger vibrato and effects that were ornaments in the Baroque period with the (for lack of a better word) vibrato of our contemporary orchestral style.

During our course on historical performance for wind instruments, Piguet explained that a common misunderstanding perpetuated by scholars is that vibrato is an ornament related to tremolo or bebung. First, those two effects are reserved for use only on long notes; the terms do not indicate our understanding of the concept of a natural vibration as part of the sound. Piguet was insistent that there would have been a sign or symbol on the score indicating that you should add an ornament to the very fabric of the music, an ephemeral, emotional, or virtuosic enhancement such as a trill, a passing tone, an appoggiatura, a mordent, a turn, and so on. These were meant to enhance either virtuosity or expression, much in the same way that a diamond earring reflects light. Piguet asserted that vibrato as we know it is an intrinsic

facet of the sound itself; therefore, while it is similar to some of the affects described in the Renaissance and Baroque eras, vibrato remains its own topic.

What we lost through translation and historical interpretation is that the ability to vary the use of vibrato in accordance with diverse musical contexts allows you to master all occasions to enjoy a broader and richer lifetime in music. Vibrato is a component of the tone production and your sound.

It may be that our contemporary use of the word “vibrato,” versus that of historical tutors, is similar to the assertion that Eskimos have hundreds of words to describe snow, while in English we have one generic term. In Scandinavia, I am told that they have well over 180 words to describe snow and ice and nearly a thousand for reindeer.²³

What I Was Taught

When I was a student, vibrato was a requirement, but virtually every teacher provided a different doctrine.

In my teens, vibrato was an enigma. As a cellist, I was taught to set my finger on the fingerboard, and, once centered in the pitch, I was to allow a subtle downward and upward undulation. The pitch was to remain piercingly steady, while the vibrato added warmth, color, and poignant intensity. A variety of speeds were anticipated, depending on the musical selection, the mood, the emotional context, and the musical line. However, the next cello teacher insisted that the undulation of the finger was only to descend and never rise above the pitch, so I changed the angle and practiced all over again. Over four decades I have witnessed unending discussions among leading performers on the topic. My hero was Pablo Casals. I listened to every known recording, watched every documentary, and read every book about him that I could find. The Marlboro and Prades festivals, which his indomitable musical spirit initiated, are deeply entrenched within my musical roots. I was lucky to attend them in my teens and continue throughout my career. Listening to Isidore Cohen, Mieczysław Horszowski, Alexander Schneider, Rudolf Serkin, and many great artists at a young age left indelible ink on my musical heritage. When I want to indulge myself on a lovely Sunday morning, I still return to recordings from that era. My heart would pound at such concerts, and I could barely sit in my seat. Listening to recordings of Casals and watching films of his performances, I began to realize that no theory could possibly explain or set a simple rule for vibrato.

When I was learning to play the clarinet, my teacher never spoke about vibrato, other than to mention that it was not used on clarinet. When I went to play in London, the subject became even more confusing. I found that far less vibrato was used in general, London being known as the “wobble-free zone.” My Chicago training—a fast, centered vibrato for everyone—was not the norm in Europe! Even more puzzling was that the British clarinet legends used vibrato occasionally. What was a girl to think? Having been drilled to respect abstinence from even contemplating vibrato when coupling either the clarinet or the French horn in orchestral and chamber parts, the Brits were allowing the opposite. The upside to restraining vibrato was maximizing vibrant head and body resonance to achieve a rich, warm tone. Without

using vibrato for expression, the clear tone colors you can create and enjoy are magnificent. I learned to adore the British oboist Terence MacDonagh. The old recordings are far too bright for contemporary tastes, but he was a master of phrasing, tonal variety, and occasional vibrato. This was light years away from my experiences in the United States or the French school of Maurice Bourgue and Heinz Holliger. Each of these legendary performers contradicted the certitudes of my training, and it was intoxicating.

When I took up bassoon, my teacher spoke about vibrato being an integral part of the sound, delivering an internal pulse and intensity to the tone, almost as if it was an integral component in basic tone production. Vibrato seemed to be either on or off, and almost always *on*. I was put through the course of rhythmic practice, which I will also outline, and various discussions as to whether vibrato comes from the diaphragm or throat (with the understanding that only a diaphragmatic vibrato was socially acceptable).

Early on, I questioned this diaphragmatic vibrato idea, as I could only imagine the scene in *Mary Poppins* where everyone floats to the ceiling with laughter. When practicing diaphragmatic vibrato, it seemed my throat moved sympathetically. It seems, from the medically informed research I have reviewed, that vibrato takes shape naturally (at least sympathetically) in your throat and is dependent on breath support for the expressive ambient air column. Still, I tried it all: the exercises, the dog panting, the rhythmic diaphragmatic vibrato, and singing lessons. It seemed to me that listening to singers and emulating a vocal line was most natural.

Even when working with Marcel Moyse, I was intrigued at the contradictory signals given around this topic. On the one hand, he would refer to vibrato as the *cache-misère* (a cover-up for misery) to suggest that a poor tone or intonation was being robed in vibrato to try and improve matters. However, at the same time, he would sing phrases with a natural vibrato himself and had us listen to recordings of Nellie Melba and other favorites, all of whom used ample vibrato. At my youthful age, I took this differentiation to mean that when one remains within pitch and style and uses a speed that gives direction, line, and an aesthetic sense, vibrato was welcome. He jokingly said one day, critiquing a flutist in a course in Brattleboro, "You have a terminal case of vibrato, worse than cholera." I was trembling when it was my turn to play.

Performing the Donizetti aria "Una furtiva lagrima," Moyse started singing, "Je t'aime" (I love you). This was not a personal declaration; he was using the French language to demonstrate an appoggiatura and teach us how to add emphasis as a wind player that would be as clear as when we spoke emotionally. The next thing I knew, he was singing the actual words, "Una furtiva lagrima" (a furtive teardrop), which was a relief, as he stopped using "Je t'aime."

But then the unthinkable happened: he clearly asked for more emphasis (louder volume and a faster tempo, more intense vibrato as compared to the other notes) on the second intervention, beginning on G \flat . I could see everyone's eyeballs popping open and looking around the room. I just kept going. Of course, I modeled how he sang across the phrase, with a *crescendo* through the silence lengthening the phrase across eight measures.

Naturally, the debate over vibrato continues today. It is perhaps complicated by the amazing diversity in how it is used all over the world.

I recall a master class with Sol Schoenbach in Sarasota, Florida in 1974. A terrific player (now solo bassoon in a prominent orchestra) was demonstrating measured metronomic diaphragmatic vibrato. Tall and lean, his “six-pack” was definitely belly dancing, and the intensity was powerful. It was very impressive but wildly different from my Chicago training. I had heard about diaphragmatic vibrato but had never seen it, and to set the metronome as a guide was confusing. Sol commented on how impressive it was, but in his usual way, he left the door open for further consideration. When listening to Sol’s recordings, it seems he used different vibrato speeds and styles when playing different genres of music, and when he worked with singers, I couldn’t tell the bassoon and the voice apart.

The next week, Sherman Walt was teaching, and he demonstrated *his* ideal vibrato: a hypnotic, slow, gentle, slightly wider vibrato that was more in harmony with a throat vibrato. It was stunningly beautiful. His recording of the Vivaldi C-Major Concerto was a life-changing moment for me. His advocacy of slow vibrato was very different from my early training, and I had to admit I was convinced. He even discussed using a jaw vibrato occasionally. Now that was as naughty as parallel fifths!

In Philadelphia I heard Roger Birnstingl, as solo bassoon in the London Symphony Orchestra, playing Tchaikovsky symphonies. His huge, rich, warm, clear tone seemed to have a slight shimmer from vibrato that lent direction to the musical line but didn’t fall into any of the categories above. Was this the Italian school of Enzo Muccetti, à la London Symphony? What was it that worked in different settings? Is vibrato universal?

Sol’s response when I raised the matter of whether we should always use vibrato was typical. “My wife, Bertha, wears earrings to compliment her beauty, her outfit, and the occasion. If she had a deformed ear, she wouldn’t wear earrings.” I took this to mean that once the musical phrasing and tone are already beautiful, then you can add tasteful vibrato as appropriate. What a relief it was to find out there was not a requirement to fit any one style. However, if you listen to orchestras around the world, you will hear contrary tendencies, local and global. When applying for a position somewhere, you should listen and appreciate each approach.

Using Vibrato Today

As part of the global performer’s natural tonal concept, vibrato that can vary in speed and style, rather than being relegated to one set approach, provides freedom to perform diverse musical repertoire with colleagues all around the world. The notes or the musical content may be the same, but the context is different each time. Just as our pianos have more volume and power, and our steel or gut strings allow newer techniques and tonal textures, and period instruments allow lighter articulation and dynamic range, our concert halls for thousands, as opposed to an intimate Venetian palazzo, demand different projection and volume. I trust that each of us as musicians

will find the fullest musical range of expression imaginable in those differing contexts.

Historically informed performance works up to a point, until we consider that virtually none of our modern instruments sound or feel similar to period instruments. Similarly with urtext editions: certain understandings existed so clearly for such long periods of time that printing of certain matters seemed unnecessary, so we cannot trust the scores to be comprehensive. However, when discovering musical texts from another time, we need to bring to life the traditions and aesthetics of that time.

Playing historically informed instruments and pieces

When learning to play period instruments, I had to reexamine vibrato further, as the amount of air and pressure used, in my experience, is lighter. Vibrato quickly saturates the tone unless it is produced proportionally, and only when desired. Even today, when performing Baroque and Classical works, whether on modern or on period instruments, I find that the instrument is not as important as respecting the style and manner of playing a period instrument.

Twenty years ago, you had to be very careful not to apply a period reticence to vibrato when performing with modern players who were used to a centered continuous vibrato. Now it is almost the opposite: anyone still using the dated continuous vibrato is questioned. Personally, I was amused at how my first recording of the Mozart B \flat -Major Bassoon Concerto, K. 191, was blasted by U.S. critics because I didn't develop the cadenza. At the same time, I won accolades across Europe for emulating a historical style by daring to use a short cadenza of one breath and include harpsichord, as was the historical custom, and adjust the overall balance for a Classical context. Years later, this is common ground, as players are even more adept at period cadenzas and fantasias.

I remember performing at the Newport Music Festival, where they have a piano that belonged to the Russian cellist Gregor Piatigorsky. This Steinway, from early in the twentieth century, was a revelation to my ears. The sound is lighter, and it felt more like playing with a harp than a piano. Immediately, I changed to a very light, nimble vocal with a clear tone. Softer dynamics were a treat to indulge, as I didn't need any power to pass through the sound of the piano. It made me realize that in an intimate setting playing with such a piano, one would inherently add less vibrato because of the transparency of the period instruments.

In my limited experience, the rich harmonics of period brass and wind instruments neither require nor benefit from vibrato. Similarly, when performing Baroque and Classical bassoon, it sounds ludicrous to use the continuous vibrato typical on a modern instrument. The entire manner of blowing adjusts due to the lightness of the volume, the instruments themselves, and the reeds.

Blending your sound with others

Your use of vibrato can enhance your performance and bring a solo line to life. At the same time, when your line is part of a harmonic chord or supporting line, use of vibrato has to be considered in the larger musical context. When clarinet or horn is featured and does not use vibrato, there is a strong case to resist any vibrato. When part of an orchestral or chamber timbre, the vibrato should blend with the harmonic framework and shade the sound. A wide, uncontrolled vibrato can obliterate a beautiful chord.

You need to be careful not to use vibrato to disguise ambiguous intonation or as a substitute for warm resonance and musical phrasing. Vibrato must serve to underpin the musical phrasing and your ideal tonal colors.

How to produce vibrato

Singers are masters at expressively tapering off or revving up a vibrato, even in a *rallentando* or *diminuendo*. String players often begin the vibrato before they even touch the string, and definitely before the bow pulls the string. This is an exact parallel of how your air must begin with the speed, your complete tone concept with movement and vibrato, *before* you let the sound release. Should you decide to use no vibrato and feature a very pure tone at the end of a phrase or in specific musical settings, as you can often hear in the Bach sonatas played by contemporary string players and in other pieces, you must still make sure that the air spins seamlessly out of the vibrato into the sound you leave in the concert hall. Head resonance and support must sustain and nourish the tone, whether vibrato is used or not. In fact, you may need to increase the resonance level to balance a transition from vibrato to wobble-free lightness.

VIBRATO TECHNIQUES

There are at least three variables to consider in using vibrato techniques:

- First, how will you produce vibrato as needed or desired on the bassoon? On a cello, it makes perfect sense, but on a wind instrument, it's all inside and impossible to view.
- Second, does the pitch vary or not? Ideally, vibrato should stay within the pitch center, neither leaning sharp nor falling below. There are additional special effects for glissandi and other ornaments that change the pitch, distinct from vibrato.
- Third, what speed or speeds? Unsurprisingly, there are differing opinions on this; the musical context determines your answer. If you are able to use vibrato with different speeds, you'll be able to collaborate with colleagues on all instruments and tastes.

How to practice vibrato

Listen to great singers and string players: Jascha Heifetz, Maria Callas, Pablo Casals, Kathleen Ferrier, Brigitte Fassbaender, and others, to inspire and inform your concepts of sound and vibrato. When practicing, always use the tuner. It is too easy to be swayed by a tone color, rather than lock in on a pitch. If you are playing with a piano or harpsichord set to $A = 440$ or $A = 441$, there will be no mercy. With instrumentalists, there is more give-and-take in placing a pitch in a harmony, but you want to begin from a place of clarity and focus, knowing the pitch center in your mind and your body.

When I shift from one country to another, I practice with the tuning box to make sure my body is clear on the pressure needed for a specific pitch center. During the entire first rehearsal, a part of my mind is listening to the center of the pitch in the orchestra and the type of sound they use. Believe me, a full symphonic orchestra, chamber orchestra, or contemporary ensemble each provides a different backdrop for a bassoon concerto. Your body must shift gears to blow differently. You have to listen carefully and prepare for the pitch center and colors at 442 or 440, for example, in order to ensure that your resonance contrasts and blends as needed to contribute and shine in the musical timbre.

In daily practice, I tend to focus on one tone for tuning, choice of scale, and intervals practiced. I add vibrato practice into the long tones and whatever drills I have set for that day. When practicing for dynamics, you need to darken the tone when you are loud (using more body resonance) and brighten the tone when soft (using more head resonance).

However, with vibrato, you move into a mix of dark and bright (flat and sharp) boundaries of the center of the note. Having practiced zealously myself and then witnessed countless numbers of students get stuck on this area of practice, I have come to advocate beginning your practice with a beautiful *mezzo forte* sound. Slowly extend the dynamic boundaries, first louder, then softer textures.

Toolbox: Practicing Vibrato

The usual manner to practice vibrato is simple.

- Place your hand on your stomach just below your navel.
- Imitate open-mouthed panting, like an animal.
- Imagine the vowel hah or hoe. This is a natural, albeit exaggerated, breathing technique. Attention must be paid not to push too harshly, or you will begin to tense the throat and solar plexus areas.
- Use a gentle but evident undulation. You should be able to hear the panting.
- With a metronome set at 60 for a quarter note, practice panting one pulse per beat, then two pulses per beat, then triplets. You will notice how, when using a faster speed, the margins of the panting are slightly smaller.
- Perform the same exercise with your instrument.

- Begin with a low to midrange pitch, one that you can play with only one hand. Place the other hand on your belly again.
- Hold a beautiful mezzo forte long tone, and center the pitch with the tuning machine. (If you are flat or sharp, incrementally use airspeed to support the pitch.)
- When settled on the pitch and mezzo forte tone, slowly diminuendo to mezzo piano. Pay attention that you keep airspeed and pressure consistent to maintain the pitch, but reduce the quantity of air.
- Crescendo back to mezzo forte. Use more air, but keep the pitch steady, with stable airspeed and pressure.
- Let this process speed itself up until the vibrato oscillates naturally.
- The air pressure remains constant whether soft or loud.

You should practice to control the speed of your vibrato. Ultimately, you can vary the speed through a phrase or control it based on musical (rather than mathematical) decisions. However, to practice this, continue with the exercises that follow.

Toolbox: Grounding Your Vibrato

- Begin with pants, or a small *crescendo* and *diminuendo*, of one oscillation per four beats.
- Imagine that the first beat with the diaphragmatic accentuation is loud, returning to soft for the other three beats.
- Practice this as if the overall sound is *mezzo piano*, with breath accents being louder (*forte*); this helps you hear and correct any pitch distortion.
- Make sure your throat stays calm so it doesn't tense when you pulse the abdomen.
- Check that your arms are not tensing or sympathetically pushing with the pulsing from your lower diaphragm.
- Now speed this up to one pulse every second.

If you want a wider vibrato (*forte* to *piano*), then your sound needs to be large enough to handle the proportions of those vibrations.

If you want a faster vibrato, increase the airspeed from your belly and use smaller, more condensed vibrations.

- In $\frac{6}{4}$ time, choose C and descend chromatically for three measures and one beat, finishing on A. Breathe, and begin on A for three measures and a beat finishing

Inhale
Hold
Exhale
Wait

T Prep f > p < f > p < f > p < f > p < f > p < f > p <

f > p < f > p < f > p < f > p < f > p < f > p < f > p < f > p < f > p <

3 3 3 3

EXAMPLE 8.1. Introductory Vibrato Exercise, Slow Tempo.

on F \flat . Continue in the same succession, descending to the lowest notes of your instrument.

- Return to C and ascend chromatically, using the same pattern to the top register of your instrument.
- Now repeat the pattern using two pulses per second, then triplets, then sixteenths, and then groups of sextuplets.
- As you accelerate the speed, notice how you shift from abdominal to throat involvement, supported by your diaphragm.
- As you practice, use a tuning machine to be sure you are centering the tone at the right pitch.
- Tape yourself, and listen back to verify that the pitch is centered, rather than modulating.

Sing your parts, and listen to how you naturally use vibrato or not. Sing in a choir if you can, and listen to great singers, string players, and others.

Mastery: Vibrato

Tentative starts

Begin with the full tonal concept inclusive of vibrato in your mind's ear before you play. When at all hesitant, you might start a note and then add the speed or vibrato, making it a "too little, too late" experience. The intonation is complicated and easily distorted. Even if you are adjusting instinctively, it is actually more difficult to play this way than if you just start with the vibrato as part of your concept from the beginning of the note. If ever you are wrong, don't worry. You will know immediately and find the solution.

Accordion squeeze boxing

Some players use vibrato piecemeal through each motif, rather than through a long line. This seems to happen when they are paying enormous intellectual attention to the details of phrasing in the musical sentence without practicing the airflow through the longer musical paragraph. To the listener, this may appear as a dynamic swell, with vibrato on certain notes or prime sections of the phrase, rather like a series of accordion squeezes of almost equal interest than a long, rich line.

Sound and phrasing

Don't confuse vibrato and a nice sound as a substitute for well-planned phrasing. Be vigilant to ensure that the direction and volume of a phrase lead through to the penultimate note. The second-to-last note holds the tension and height of the phrase just before you release into the final, predictable note. Vibrato can lend direction forward and entrain other musicians to join the phrasing you imagine and therefore create. When you are playing in an ensemble, your vibrato provides a clear, nonverbal indication of your musical intent.

Spend the dollar wisely

The last notes of a phrase can be deceptively attractive. You are just about to finish the last of your air, take a breath, and start a new phrase. Often what happens at this intersection is that all the remaining air, vibrato, and energy from the phrase are placed on that utterly predictable final note, which then overshadows the entire musical phrase. It's rather like adding a period to the sentence in a larger font than the text; it distorts the entire sentence. The expression, air, and vibrato should have been put into the musical *phrase* rather than the last *note*.

If you have one dollar, you want to spend ninety-nine cents of that tonal dollar (including vibrato) throughout the phrase, leaving just one beautiful penny for the predictable final tone. There are two issues to consider in spending your dollars.

First, spend down your air supply, vibrato, and tonal intensity through the important harmonic section of the phrase—don't waste it on the least important note.

Sometimes the air builds up in your chest so you have to release it in rest beats or take less air in for that phrase.

Second, when deciding where to place the vibrato and how to shape the line, ask yourself the following questions:

- Which is the most interesting note? Surely this is where you spend extra.
- Where is the naughtiest harmonic dissonance?
- What is the most unexpected harmonic transition? (They say that well-behaved women rarely make history; you have the same opportunity here to surprise, excite, or draw away. Such moments are the softest, most sublime, or the most heroic, bold, and generous of pleasures. How will *you* use vibrato?)
- Where does the musical line climax?
- Is the phrase asking a question? Giving an answer?
- Does the phrase remain strong through to the end and pass the line on to the next phrase, or is it complete and returning to harmonic expectations?
- Do you need to breathe in the middle of a phrase on a *crescendo*? Just do it, and keep the musical energy clear.
- Is the final note predictable? If so, don't add your jewelry there; look for all the other exquisite moments of the phrase!

Solving the dilemma for yourself

Using vibrato is easy in comparison to the musical decisions each musician faces. The use of vibrato is the signature of many great performers. How will you make your choices and develop your personal style?

In 1977 Sol Schoenbach resigned from the Curtis Institute of Music. He suggested I go study with Roger Birnstingl in London, referring to him as “the man with the most beautiful tone in the world.” I was stunned to hear this from Sol, as I had no intention of leaving Curtis so soon. However, off I went to enjoy seventeen years in Europe. I studied with Roger for two years and then enjoyed thirteen romantic years as his partner. Roger's career in the London Symphony Orchestra as principal solo bassoon (a wobble-free zone) and his study with Enzo Muccetti (La Scala principal bassoon) provided a unique take on the question of vibrato. Roger seemed to have an innate sense of when to allow vibrato, or use no vibrato, to enhance expression in his clear, warm tone. Listening to all types of music, musicians, singers, and musical genres reshaped my understandings and appreciation of vibrato. Roger's tone—still legendary well into retirement—epitomized that vibrato is a jewel you add to call attention to something that is already beautiful.

As I listened to six different cellists each play a superlative Bach cello suite at the Kronberg Academy of Music in Germany last October, I was struck by how amazingly free we are as musicians. One player took the approach of historically informed ornaments, tone, vibrato, and freedom. It was magical. Another young virtuoso played so fast that, while I was enthralled, I was on the verge of irritation—until I heard the most overwhelmingly beautiful sarabande and realized it was just another approach to a piece I know well. Each player had a completely different and unique musical voice, style, vibrato, and tone palette. The sheer variety of convincing musical taste was powerful and delightful. You must seek out such musicians and construct your own references to personalize your musical signature.

Different palettes of vibrato usage relate to divergent tonal textures, sound color, intonation, and volume. You will develop your personal favorites and respond to each musical context with flexibility and expressive power.

Vivaldi, Beethoven, Bach, and Brahms would have had different preferences for the tasteful use, style, and amount of vibrato. Extending this supposition to Tchaikovsky, Ravel, Puccini, Dave Brubeck, Frank Sinatra, John Corigliano, and Stockhausen only leads me to conclude that all these considerations are valid. The only clear, unifying guidance might be that, ideally, wind players should emulate singers. Beyond this, I suggest that you apply what is naturally expressive in the unique context of each performance (historical instruments, modern reproductions, symphonic or chamber orchestra, etc.).

Vibrato can only contribute to what should already be a beautiful musical line. Listen, listen, and listen even more to great performers who come from different musical tastes and backgrounds. You will have to make musical choices based on your own temperament and instincts.

Notes

1. Agricola, *Musica instrumentalis deudsch*, 29.
2. Ganassi, *Opera intitulata "Fontegara,"* 9.
3. Praetorius, *Syntagma Musicum III*, 215.
4. Mersenne, *Harmonie universelle*, 573.
5. Quantz, *On Playing the Flute*, 165.
6. Ibid., 49.
7. Delusse, *L'art de la flûte traversière*, 9.
8. Tromlitz, *Ausführlicher und gründlicher Unterricht*, 127.
9. Bukofzer, *Music in the Baroque Era*, 377–78.
10. Neumann, *Ornamentation*, 576–604.
11. Mozart, *The Letters of Wolfgang Amadeus Mozart*.
12. Mozart, *The Letters of Mozart and His Family*, 552.
13. Geminiani, *The Art of Playing the Violin*, 17.
14. Mozart, *Versuch einer gründlichen Violinschule*, 203.

15. Ibid.
16. Ibid., 203–204.
17. *Great Violinists 1900–1913*, compact disc.
18. Wulstan, *Tudor Music*, 229–33.
19. Dart, *The Interpretation of Music*, 51–52.
20. Wulstan, *Tudor Music*, 179–80.
21. Flesch, *The Art of Violin Playing*, 40.
22. Bose, “Vibrato Wars.”
23. Magga, “Diversity in Saami Terminology.”