

Full-Length Article

The Sound of Deafness: Smetana and Traumatic Tinnitus

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Abstract

Bedřich Smetana's autobiographical String Quartet No. 1 gives musical representation to his experience of the onset of deafness via extreme tinnitus. In that work, his artistic choices relate an initial traumatic event (an explosive chord) to his climactic experience of tinnitus via musical structures that recall and transform that event. As a young violinist, he would often have been exposed to similar loud chords close to his ears. Though his deafness probably resulted from syphilis, Smetana chose to narrate his illness through specific musical evocations of sonic trauma and its tragic recurrence.

Keywords: Deafness, Bedřich Smetana, Ludwig van Beethoven, Tinnitus, Traumatic Sound

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Introduction

Bedřich Smetana's String Quartet No. 1 in E minor (JB 1:105), "Z mého života" ("From my life") includes as its climactic autobiographical detail what he described in a letter to Josef Srb-Debrnov dated April 12, 1878, as "that fateful ringing of high-pitched tones in my ear which in 1874 announced the beginning of my deafness" [1, p 12]:¹



The excruciating definiteness of this pitch leads us to ask: why this high E? Is it an essentially random pitch or can some rationale be given for it in terms of neurology, psychology, or music itself? And what exactly is the sound of deafness, as Smetana experienced and represented it? In his other autobiographical narratives, Smetana gave more complex and divergent accounts of the sonic phenomena that accompanied his loss of hearing, as one would expect for so complicated a phenomenon, which had not been attributed to a single, defined moment of onset. His September 7, 1874 letter to the chairman of the Theater Association noted that during July "in one of my ears the notes in the higher octaves were

pitched differently than in the other and that at times I had a tingling feeling in my ears and heard a noise as though I was standing by a mighty waterfall." In another letter, Smetana recalled hearing in August "moving and ingenious notes" from an invisible flute; "later a terrible roaring in my ears was added to this and the piano at which I had sat down to play, seemed to me to be quite out of tune, particularly in the middle reaches" [1, pp 148–149]. His diary for October 8 records that "for the first time for ages I can again hear all the octaves which were completely jumbled up in my ear, in their proper balance. I still cannot hear anything with my right ear." On November 30 he wrote: "my ear complaint is still as it was at the beginning of the month. I hear nothing at all- neither with the right nor with the left ear. Dr. Zoufal [his Prague otologist] still does not despair of me, but I do. If only that roaring would cease!" [1, pp 150–151].

This "roaring" would at that point be considered in current times as extreme tinnitus, defined as the conscious perception of sound that cannot be attributed to an external source. Even at that point, Smetana was able to look at the scores of other composers and imagine their sound

without any effort of will on my part, as though I could really hear the instruments and voices; only if I persist for some time, then I feel a most unpleasant vibration in my head and the ringing increases... That ringing in my head! That noise! ... that is worst of all. Deafness would be a relatively decent condition, if only all was quiet in my head. But the greatest torture is caused me by the almost continuous internal noise which goes on in my head and sometimes rises to a thunderous crashing. This dark turmoil is pierced by the shrieking of voices, from strident whistles to ghastly shrieks as though furies and demons were bearing down on me in furious rage; the sound of dissonant trumpets and other instruments mingle with this wild cacophony and all that together drowns the thread of the music which had

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¹ Curiously, Smetana (or his editor) here cites the E an octave lower than it actually sounds in the quartet, as if it were the same pitch as the high E at the beginning of the quartet, discussed below.

been born or were being born in my imagination, so that I have to leave my work with a feeling of horror and then, in desperation, I begin to wonder how it will end with me [1, pp 212–213, as quoted from the reminiscences of his friend Eliška Krásnohorská].

These accounts converge in assigning the predominant frequencies of his tinnitus to the high register. Perhaps his most detailed account comes in a letter to Franz Liszt dated May 23, 1880, in which Smetana also speaks about the way his quartet represented the sequence of events:

I believed that I had to describe the beginning of my deafness and I attempted to represent it in such a way as it has been done in the finale of the quartet with the high Es of the first violin. Before going quite deaf I was haunted for many weeks every evening between six and seven o'clock by the strident whistle of the A-flat major sixth [sic] chord A-flat–E-flat–C in the highest piccolo octave, uninterruptedly for half an hour and often for a whole hour without being able to free myself of it. This happened regularly, daily, an evil omen, as it were, for the future! I therefore sought to describe this fearful catastrophe that has befallen me by the shrill E in the finale. Therefore the E must be played fortissimo throughout [1, pp 224].²

Thus, despite Smetana's claim in his program for the quartet that the E was the "fateful ringing of high-pitched tones in my ear which in 1874 announced the beginning of my deafness," we here realize clearly that the E is an artistic representation of more complex sonic events, not a faithful transcription, as if such a thing were possible. To his admired colleague and patron Franz Liszt, Smetana brings forward a more recondite musical account in terms of a rather interesting and "romantic" chord (♭ VI, referred to C major), to whose significance we will return. Rather than contradicting each other, these different narratives may represent different facets or phases of Smetana's felt experience of the radical changes in his hearing.

Even so, his purely musical treatment in the quartet contains an interesting insight into the sonic aura of his tinnitus, an insight further confirmed by Smetana's programmatic commentary. In it, he notes that, in the first movement, he had wanted to give a "tone picture" of his "leaning towards art in my youth, the romantic atmosphere, the inexpressible longing for something I could neither express nor define and also the presage, as it were, of my future misfortune,"



² Though he called it "an A-flat major sixth chord," his spelling A-flat–E-flat–C, with A-flat presumably the lowest sounding tone, is a root position triad, not a sixth chord.

first played by the viola in mm. 4–6, expressly understood to "presage ... the long, insistent note, the one in the Finale



etc. [that] grew out of this beginning... I allowed myself this little play because for me it was so prophetic."

How exactly does this motif B–E "presage" or "prophesy" the sustained high E representing his tinnitus? To be sure, the note E is common to both, but in the motif, the B is far more prominent, marked *sforzando espressivo*.



Smetana may well have considered it not necessary to mention the obvious and striking musical event that immediately precedes this motif, the first chord of the whole quartet (Example 1), an explosive E minor triad marked *sforzando fortissimo*:

Example 1. Smetana, Quartet No. 1, first movement, mm. 1–14.

This first page and arguably the entire quartet seem to emerge as a kind of echo or aftershock resulting from this initial chord, which has few precedents in the chamber music repertoire. Not surprisingly, these are found in the works of another deaf composer to whose situation Smetana readily would have compared his own. Ludwig van Beethoven's second Razumovsky quartet (op. 52, no. 2), also in E minor, begins with two staccato chords, *forte* (Example 2):

Example 2. Beethoven, Quartet op. 52, no. 2, first movement, mm. 1–9.

Or consider the two E-flat major triads Beethoven placed at the opening of the *Eroica* symphony (Example 3):

I
Allegro con brio. (♩. = 60)

Example 3. Beethoven, *Symphony No. 3*, op. 55, first movement, mm. 1–10.

Smetana takes this Beethovenian opening gesture in a new direction by making it even louder and more abrupt (*sff* rather than only *f*) and also by sounding it only once, not twice. In opus 59, No. 2, Beethoven's second chord takes us to the dominant (V^6), thence to hover mysteriously around the tonic and its Neapolitan (mm. 6–7), *pianissimo*. The *Eroica*'s imperious chords give a majestic setting from which the cello theme can emerge. In both these cases, the doubleness of the chordal gesture is then used to call forth the ensuing legato lyricism. In contrast, Smetana maximizes the singularity and abruptness of his initial E minor chord so as to launch the romantic vehemence of the viola's response, sustained by the long E pedal in the cello, as if a continuing echo of the initial E, along with the slow tremolo of E minor in the violins.

Thus, we are directed again to the full initial chord, and especially its highest sounding note, the E played by the first violin.



The final “fateful ringing” literally “grew out of this beginning,” the initial E “shock,” transferred in the finale an octave higher with the whistling eeriness that characterizes a *forte* harmonic on the E string. This by itself may explain the choice of the high E and hence also of the tonality of the quartet as a whole: Smetana could not have used this open

string harmonic had he chose A-flat as his tonality (as his letter to Liszt suggests he might have). Note also that, in performance, the initial violin chord would probably not have used this harmonic (though it is barely possible in terms of fingering) simply because the triple stop would render that infeasible, especially in light of the volume required of the whole chord.

Thus, Smetana's musical representation of the very beginning of his “leaning toward art” and “inexpressible longing” has the shape of a sudden, violent shock, not a gentle or gradual awakening. Here again his exemplar may have been Beethoven, himself so interested in the story of Prometheus and whose imperious “shock chords” have the force of a Promethean thunderbolt. Such shock has the felt force of trauma, an initial act of violence—being hit by lightning—that prepares and presages all that follows. Though his written account makes no mention of a specific traumatic etiology of his tinnitus, Smetana's music represents such a sequence of events: the “traumatic” initial high E eventually recurs as the note of his tinnitus. Intuitively, Smetana's compositional procedure seems to exemplify what later hearing research confirmed, that prolonged noise exposure and trauma are associating factors for the majority of cases of subjective tinnitus.³ That is, whatever the cause of underlying physiological processes that may or may not lead to hearing loss, the *symptom* of tinnitus, including its characteristic sonic spectrum for that patient, can often be traced back to some initial experiencing of traumatic events.

To be sure, the medical evidence indicates “beyond doubt” that syphilis contracted about March 1874 was the true etiology of Smetana's deafness and eventual mental collapse.⁴ Though the role of syphilis in otological problems had been noted in the medical literature since 1868, Smetana's illness was diagnosed as “tube catarrh” by his Prague physician, Zoufal; he consulted the Viennese otologist Adam Politzer, who diagnosed “labyrinth laming” with no mention of syphilis.⁵ Whether through ignorance or shame, Smetana never indicated any awareness of syphilis in his various accounts of his illness.⁶ In either case, Smetana's musical composition presents his artistic interpretation of how and why his initial symptoms took their particular form.

Setting aside the physiological question of whether or not trauma can imprint a specific signature that predisposes the

³ “Subjective” as distinct from the much rarer “objective tinnitus,” in which the sound source can be identified and is audible to others, such as from abnormal blood flow pulsations near the middle-ear bones. See [2,3].

⁴ [4, pp3:190–199, on 194], which includes a detailed clinical history on 166–190. [5] notes that, upon exhumation and examination of Smetana's body in 1987, all signs of syphilitic infection were positive.

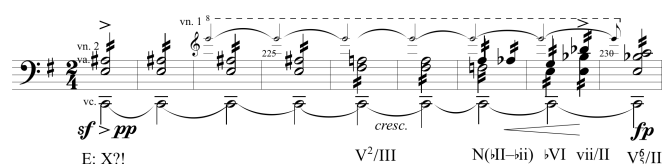
⁵ [4, p3:167] Politzer also prescribed an unspecified “smear treatment” on the whole body, arguably a mercury treatment as would have been used at that time against syphilis [3, 172].

⁶ [6, pp390–394] indicate, however, that Smetana's family believed that his decline was due to syphilis.

spectrum of later tinnitus, Smetana himself seems to have taken something similar to such a view as he shaped his dramatic narrative of his illness. His autobiographical writings list a number of early sonic stressors. On one occasion, his father “boxed my ears and boxed them hard,” presumably as a form of corporal punishment. At age eleven, a glass bottle containing gunpowder exploded in his face, leading to infection and osteomyelitis of the right temporal bone and mandible; his face remained visibly asymmetric [5]. From early childhood, Smetana played the violin, sometimes “until far into the night,” and (as every violinist knows) would have heard that high E very close to his left ear on many occasions (sounded over and over in Felix Mendelssohn’s E minor Violin Concerto, for instance).⁷ Though one might not think of this as particularly “traumatic,” hearing studies have indicated that the ear’s cochlear hairs are sufficiently delicate that even rather moderate volumes might have damaged the highest frequencies enough that, when from other causes his hearing began to fail, the tinnitus would most naturally appear in those same frequencies that had been affected by years of playing. Though presently orchestral musicians often wear protective earplugs (specially designed not to alter the perceived pitches, only dim their intensities), such protective devices were unknown in Smetana’s time. To be sure, many others would have been exposed to similar sonic stressors without later experiencing such radical hearing loss; our argument here is only to indicate the importance of traumatic aural events in shaping *which* frequencies would then be predisposed to be perceived as tinnitus, were it to emerge.

Whatever may have been the specific aural traumas he underwent, Smetana chose to represent his felt experience of initial shock by high frequency sound as answered by passionate response, the opening viola solo as expressive of his youthful answer to the call of his art. In the following movements (as he describes them in his program), he depicts his “happy times” as a dancer and composer of dance music, then his first love and marriage, finally his joy in his success, “checked by the catastrophe—ominous for me—of the beginning of deafness.” Further, he not only depicts *his* experience but enables *us* as listeners to share it, hearing for ourselves the traumatic initial shock, the viola’s outburst, the dance music, finally the shrieking E that not only represents but in a direct sense *is* a kind of temporary, artificial tinnitus made audible for us too.

Smetana not only presents the shattering moments of trauma and recollected catastrophe but, in addition, through his harmonic treatment, analyzes their content and import. The high E is not presented in isolation but embedded in a richly ambiguous and shifting harmonic context (Example 4):



Example 4. Harmonic outline of Smetana, *Quartet No. 1*, fourth movement, mm. 222–230.

This entire passage rests on a low C pedal, the cello’s deepest note, ever more stark because it is sounded on an open string.⁸ Yet the harmonic significance of this note remains ambiguous for nine measures, only clarified in the course of a series of daring enharmonic shifts. As leading tone to the dominant, the second violin’s initial A# might signal vii/V, but that is contradicted by the C ♮; the high E forms an upper pedal, doubling the viola E, which does not resolve the contradiction. The deadlock continues until measure 5, when the second violin’s A# moves to A ♮ and the viola’s E to F#, hence indicating the dominant of the relative major (V²/III), but that is immediately destabilized by the shift of F# to F ♮, followed by A to A ♭. This would indicate the major Neapolitan (F), which immediately slides to the minor (f), all the while in strong conflict with the high E. This strong dissonance only begins to be resolved in measure 8, as F natural moves downward to E, for the first time indicating E: ♭VI, which now is confirmed in measures 8–9 as the shifting voices all align to explain that flattened sixth as E: V⁶₅/II, just at the moment the high E suddenly stops (m. 9).

In this passage, Smetana uses the high E not just as a *coup de théâtre*, but also as the crucial axis of rotation between harmonies, above the pedal C. Indeed, the harrowing effect of the harmonies “squeezed” between these two pedal points generates a large part of the felt effect of this passage. That these harmonies finally resolved into a flat VI chord recalls the explanation of his tinnitus that Smetana gave Liszt, in which (thinking of C major as a kind of “default” tonality) A ♭ also could be heard as ♭VI. In fact, of the pitches Smetana named in his letter to Liszt, A ♭ and C definitely figure strongly in this passage, perhaps indicating ways in which Smetana was connecting different facets of his tinnitus through this harmonic context. This in its entirety seems to show how much of his hearing was mediated by shared musical conventions; the flat VI was, for both men, a “Romantic” tonal area both often used, specifically inherited from Beethoven, the first composer to use it for extended harmonic contexts. Even the eruption of extreme tinnitus in the upper frequencies, dramatically presented as a kind of incontinent recollection of early trauma, did not remain for Smetana mere cacophony but was integrated into the harmonic language that he knew. Yet the cognitive and aural dissonance involved in

⁷ For Smetana’s early experiences playing the violin, see [1, pp11–14]; he began piano studies at age five and also mentions two dangerous illnesses during his gymnasium studies, which also might have had otological sequelae.

⁸ String players often (and rightly) notice composer’s use of such open strings (and especially of the low C or G strings), employed to set climactic moments in even higher relief.

this integration gives this passage, and the quartet as a whole, its special expressivity and force.

As denouement, the remainder of the finale ruminates over the consequences of this climactic passage, presenting fragments of earlier movements in way that directly recalls similar collages of fragments in Schubert (for instance, at the end of the finale of his posthumous A major piano sonata, D. 959), which in turn look back to late Beethoven (the finale of the Ninth Symphony and the late string quartets). These very passages in Beethoven and Schubert were touchstones in the association of the harmonic region of the flatted sixth with transcendence, with the unearthly and visionary, with dreams and liminal experiences.⁹

Unlike the triumphant final gestures of Beethoven and Schubert, Smetana uses the flat VI to move towards a kind of resignation as he closes quietly in the major.¹⁰ By using the flat VI to “hear” his deafness, Smetana integrated and reimagined his catastrophic aural disturbance within the artistic tradition that sustained him, yet also took that tradition in a new direction. Unlike Beethoven and Schubert, Smetana experienced a marriage and a family life; his recollection of the love music from the third movement (addressed to his wife) seems to sustain him through his final pages. His most significant change may be that, where the initial traumatic violin E was answered by the viola in the first movement, by contrast in the final movement, after the recurrence of the E as tinnitus, the answer comes in the first violin itself, which had just sounded that note. In so doing, Smetana seems to assimilate the cause and symptom of his deafness (as he understood it) within the persona of the instrument he himself had played and whose high notes may have both imprinted the music through which he lived and the deafness that finally supervened. In this last page, the viola’s role has changed from angry protagonist to a reflective, murmuring voice whose final words change the upper neighbor of E from the doleful Neapolitan, F natural (mm. 276–278), to F# (Example 5).

The cause for this final shift following measure 278—which opens the way for a full ending in the major—seems to have been the violins’ recollection of a moment of love (Example 6).

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⁹ See [7], which also discusses the “circle of sixths” that may have informed Smetana’s choice of the tonalities E–C–A♭–F♯=E that characterize this passage. More globally, Smetana used the Neapolitan (flat second) and flat sixth relations as hidden, organizing principles for the tonalities of the movements of his quartet: e–F–A♭–E.

¹⁰ [6, pp317–320] reads the quartet in terms of “his acceptance of his cruel destiny.”

Example 5. Smetana, Quartet No. 1, fourth movement, mm. 274–285.

Example 6. Smetana Quartet No. 1, 4th movement, mm. 278–279, first and second violins.

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