

Introduction

Music, Medical Science and the Body

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This special issue presents four studies on the intimate relationship between sound and medicine, the body and music in the nineteenth century. The aim of this collective study is to explore the many connections between medical science and music (i.e., composition, performance and reception), whereby the body becomes the locus for both professions at a time when the sciences and the arts went beyond external realities to define a hidden or unseen inner reality – a vision that is at the heart of Romanticism.

Before the nineteenth century, medical science was based on observable symptoms, such as fever, blotchy skin, discharge, as well as those articulated by the patient, including nausea and dizziness. Aided greatly by the devastating effects of the French Revolution and the Napoleonic Wars on the population of Europe, medical knowledge changed profoundly with the old classification system coming under heavy criticism for a lack of precision. This taxonomic discourse from an earlier generation was successively replaced in the first half of the nineteenth century with the practice of anatomical pathology, a new diagnostic approach defined by direct engagement with the body. To understand the inner realities of the body, therefore, one had to interact with the diseased part or limb, forcing the physician to go beyond mere sight and supposition and use more intimate diagnostic tools such as palpation (examination through touch), percussion (tapping on the skin), and mediate auscultation (hearing within the body).¹

With this new ‘sensual’ turn in medical practice of the nineteenth century, sound is now interpreted, analysed to reveal an intimate relationship to health and well-being, be it the high “sawing” sound of a tubercular patient near death or the dull, low sound of a fluid-filled organ. This diagnostic understanding of sound, a way to understand the inner health of the body, is related to the physical act of music making as well as the resultant sounds one hears in the music of the nineteenth century.² For example, French composer and former medical student Hector Berlioz was so fascinated with recent anatomical research on the central nervous system that he sought to incorporate the same communicative force between mind and body into his own conducting techniques and their application to the orchestra, where one can hear in the body of the orchestra the inner thoughts of the composer.

¹ See Peter Pesic, ‘Music, Mechanism, and the “Sonic Turn” in Physical Diagnosis’, *Journal of the History of Medicine and the Allied Sciences* 71 (2016): 144–72.

² For a recent study of the relationship between music, the body and medicine throughout history, see James Kennaway, ‘Music and the Body in the History of Medicine’, in *The Oxford Handbook of Music and the Body*, ed. Youn Kim and Sander L. Gilman (Oxford: Oxford University Press, 2019): 333–48.

Beyond the connection between heard sounds and the mind of the composer in nineteenth-century music, there also existed the notion of the physical body as a suffering vessel that defined the very sound of the music itself. The notion of the Romantic artist as a suffering individual is of course a common element from Beethoven on in defining a corporeal struggle in music, thus establishing a sound world where bodily pain not only defined the compositional language but also created an empathetic ear in the listener.³ Furthermore, such sounds broke down barriers of national tradition, historical style or even individuality so that what one heard within the music was not a particularity but a universal sound shared by all. Music thus reflected the pain of life, a point most viscerally commented upon in the 1819 writings of Arthur Schopenhauer:

Music never expresses the phenomenon, but only the inner nature, the in-itself, of every phenomenon, the will itself. Therefore music does not express this or that particular and definite pleasure, this or that affliction, pain, sorrow, horror, gaiety, merriment, or peace of mind, but joy, pain, sorrow, horror, gaiety, merriment, peace of mind *themselves*, to a certain extent in the abstract, their essential nature, without any accessories ... we understand them perfectly in this extracted quintessence.⁴

As this special issue will show, however, with the rise of positivism in philosophical and scientific thought in the mid to late nineteenth century,⁵ the symbiotic relationship between the body and sound is replaced with a heightened scientism, eventually leading both music and medical science to curate ideas that move us away from the human body and the Romantic vision defined earlier in the century. This early-to-mid-nineteenth-century belief in the unification of sound and the body is replaced at the end of the century by a verification system that lies *outside* of the body, a 'scientific method' of pure objectivity and a dissection of parts in isolation. Thus, by exploring the corporeality of music and medicine in the nineteenth century we come to define the limits of Romanticism and the frontiers of a new era of abstraction, where music and medicine are no longer connected to a sensual host but to an analytical theory of form and control.

To begin the special issue on medical science and music in the nineteenth century, Peter Pesic introduces what he refers to as the 'sonic turn' in medical science, and the implications for hearing and playing music through the medical practice of Dr Anton Mesmer. 'Composing the Crisis: From Mesmer's Harmonica to Charcot's Tam-tam' explores Mesmer's desire to connect music and timbre with mental and physical health in the early nineteenth century and its implications for medicine throughout the century.

The second article in the collection, 'The Electrician, the Magician and the Nervous Conductor', by Francesca Brittan, explores the medical use of electricity

³ See for example K.M. Knittel, 'Wagner, Deafness, and the Reception of Beethoven's Late Style', *Journal of the American Musicological Society* 51 (1998): 49–82, which discusses how Beethoven's physical impairment was mapped directly on to the reception of the sonic world of his late compositions.

⁴ Arthur Schopenhauer, *The World As Will and Representation*, trans. E.F.J. Payne (New York: Dover, 1969): vol 1, 261; see Philip Alperson, 'Schopenhauer and Musical Revelation', *The Journal of Aesthetics and Art Criticism*, 40 (1981): 155–66.

⁵ Auguste Comte, *A General View of Positivism*, trans. J.H. Bridges (New York: Speller, 1957); see Johan Heilbron, 'Auguste Comte and the Second Scientific Revolution', in *The Anthem Companion to Auguste Comte*, ed. Andrew Werknick (London: Anthem, 2017): 23–42.

on the body in the nineteenth century and its connection to Berlioz's vision for the orchestra as a corporal machine that is literally brought to life by the conductor's own electrical pulsations and movements. Here, medical science becomes a cipher into understanding the communicative power of music.

Mark A. Pottinger's '*Lucia and the Auscultation of Disease in Mid-Nineteenth-Century France*', the third article in the study, compares how the medical community and the genre of opera define mental illness, which was especially difficult to diagnose and treat, yet at the same time was prolifically defined not only in the genre of Italian bel canto opera (for example, in *Il Pirata*, *La Sonnambula*, *I Puritani*, *Anna Bolena*) but in the many asylums across Paris. Finally, the fourth and final article, Julia Kursell's "'False Relations": Hermann von Helmholtz's Study of Music and the Delineation of Nineteenth-Century Physiology' presents a discussion of the writings of the polymath physician Hermann von Helmholtz (1821–1894) on psycho-physiological experimentation. In Helmholtz we discover a heightened application of scientism to music that leads one away from the sensuality of the tones and towards a theoretical abstraction that underlies the foundations of music theory and the avant-garde movements of the twentieth century.