The Oxford Handbook of Music and Intellectual Culture in the Nineteenth Century
Science and Religion

Bennett Zon

Introduction

Science and religion have always been at odds – at least that is how it seems – and the relationship 'continues to be a hot topic in academic circles and general culture.'[1] While science and religion continue to stir up controversy their triangulated relationship to music appears to have received only very limited attention.[2] This chapter seeks to explore that relationship by focusing on three ideologically interrelated parts of the human being: the body, mind and soul. Frequently drawn together under the aegis of religion, aspects of body, mind and soul also form an integral part of the philosophical and empirical discourse of nineteenth century science. Scholarly evidence reveals the extent of theirpan-European currency and exchange within nineteenth-century musical culture in both English and non-English speaking contexts[3]While nineteenth-century science and religion are commonly portrayed as being at war, this chapter uses British musical contextsto test an alternative hypothesis: that science and religion were in fact compatible. It does that by tracking Anglo-European ideological changes in scientific and religious discourse, and explaining how music absorbed and reflected those changes across intellectually reciprocal environments. An introductory section outlines key scientific and religious changes from pre-and post-Darwinian evolutionary formulations to nineteenth-century theologies of divine emotion. Three further sections investigates the relationship of science and religion to the musical body, mind and soul respectively emphasizing concepts of sensation and the voice; consciousness and feeling; and mystery and emotion. A conclusion restates the thesis, summarizes findings and suggests how disciplinary considerations in music might help explain the inherent compatibility of science and religion.

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[1] Michael Peterson and Michael Ruse, *Science, Evolution, and Religion: A Debate about Atheism and Theism*, Oxford and New York: Oxford University Press, 2017, xi.
[2] See Bennett Zon, *Evolution and Victorian Musical Culture*, Cambridge: Cambridge University Press, 2017.
[3] Peter Pesic, *Music and the Making of Modern Scienc*e, Cambridge MA: MIT Press, 2014, 6.

The scientific and religious background

'Evolution is the creation-myth or our age . . . it has great symbolic power, independent of its truth.'[4] No stranger to philosophical controversy, Mary Midgley targets a debatably weak point in scientific dialectical materialism – the very fundamental and widespread belief that science and religion are – and always have been – mutually incompatible. There is good reason to accept that belief, not least when eminent scientists espouse atheism so volubly, Richard Dawkins arguably the most evangelical. Dawkins taps into an historical industry in *The God Delusion* (2006), making a compelling, if selective, scientifically inflected case against God and religion: 'If this book works as I intend, religious readers who open it will be atheists when they put it down.'[5] Dawkins takes to a rhetorical extreme the kind of language found in Stephen Jay Gould's famous essay on the separate spheres of science and religion – their 'nonoverlapping magisteria'; for Gould 'the net of science covers the empirical realm: what is the university made of (fact) and why does it work this way (theory). The net of religion extends over questions of moral meaning and value.'[6] Midley would disagree. And so would many nineteenth-century thinkers. No less divided ideologically, nineteenth-century thinkers had the luxury of being more circumspect because science had not advanced to such a convincing point of evolutionary knowledge. Genetics was a long way off being proven, even though it was discovered by Mendel in 1865, and evolutionary science was far from consensual. Peter Bowler describes Victorian science as an unexpectedly non-Darwinian – emphatically *not* a Darwinian – revolution: 'there is now a substantial enough body of literature to convince anyone that the parts of Darwin's theory now recognized as important by biologists had comparatively little impact on late nineteenth-

[4] Mary Midgley, 'The Religion of Evolution', in John Durant (ed.), *Darwinism and Divinity: Essays on Evolution and Religious Belief*, Oxford: Basil Blackwood, 1985), 2; 154. [PAGES].
[5] Richard Dawkins, *The God Delusion*, London: Black Swan, 2006, 28.
[6] Stephen Jay Gould, 'Non-Overlapping Magisteria', *Natural History* 106 (March 1997), 16–22, http://www.stephenjaygould.org/library/gould_noma.html.

century thought.'[7] Bowler describes Victorian science behaving the same way James Livingston describes Victorian religion – as conflicted, multifarious, divergent, partisan, and from the 1860s ideologically riven by a lack of 'common intellectual context'.[8] In both cases science and religion were apparently not only at odds with one another, but internally self-conflicted as well. Polemical classics in ideological dissimulation, *History of the Conflict between Religion and Science* (1875), *A History of the Warfare of Science with Theology in Christendom* (1896) and *Landmarks in the Struggle between Science and Religion* (1925) propagate an untruth, or at the very least a misrepresentation. More accurate titles might be *History of the Conflict WITHIN AND BETWEEN Religion and Science* (1875), *A History of the Warfare WITHIN AND BETWEEN Science AND Theology in Christendom* (1896) and *Landmarks in the Struggle WITHIN AND BETWEEN Science and Religion.* Far from pointing to divergence, however, nineteenth-century inter- and intra-disciplinary relationships appear to favour the kind of complementarity Alistair McGrath describes as failings of the warfare narrative. The relationship both today and historically is more porous, provisional and co-exisitingly enriching;[9] indeed, even scientists contest the warfare narrative.[10] A history of parallel concepts seems to justify that belief in part: whereas science evolved from a permanently fixed scale of nature (the Great Chain of Being) to random change due to natural selection (Darwinian evolution), religion progressed from God's unchanging nature and inability to feel external emotional stimulus (divine simplicity and impassibility) to God's ability to feel emotion (divine passibility).

Science responded to its changes by dividing into variously defined evolutionary camps. Influenced by Jean Baptiste Lamarcke, transmutationists, for example, believed that characteristics

[7] Peter J. Bowler, *The Non–Darwinian Revolution: Reinterpreting a Historical Myth*, Baltimore MD and London: The Johns Hopkins University Press, 1988, ix.
[8] See James C. Livingston, *Religious Thought in the Victorian Age: Challenges and Reconceptions*, New York and London: Continuum, 2006, 5.
[9] Alister McGrath, *Inventing the Universe: Why We Can't Stop Talking About Science, Faith and God*, 1989, London: Hodder and Stoughton, Kindle loc. 658.
[10] See Matthew Stanley, *Huxley's Church and Maxwell's Demon: From Theistic Science to Naturalistic Science*, Chicago and London: University of Chicago Press, 2015, 242–63.

became inherited if replicated over successive generations (the inheritance of acquired characteristics), and that there is a biological tendency towards development (progression from simplicity to complexity). Those clinging to the Great Chain of Being were nonplussed by a concept of gradual transmutation because it inadvertently produced the well-known and epistemically unsettling quest for the missing link, used initially by Charles Lyell to describe changes in the geological record[11] but ultimately defining a liminally mythic, proto-human ape-man. Resistance to change inflected the substance of other types of evolutionism, like recapitulationism. Recapitulationism reached a peak with Ernst Haeckel's famous axiom 'ontogeny recapitulates phylogeny'.[12] For Haeckel an embryo passes through all stages of human evolution in its development before being born, effectively recapitulating the course of natural history from the smallest living organism to its apogee in man. Recapitulation has direct ancestry in Herbert Spencer's equally unsettling concept of the survival of the fittest, an ethically challenging evolutionary amalgam of transmutation, the Great Chain of Being and recapitulation. One of the first writers to propound a theory of musical origins, Spencer believed that the entire organic and inorganic world – including music – was governed by the same evolutionary principles: 'we propose in the first place to show, that this law of organic progress is the law of all progress. Whether it be in the development of the Earth, in the development of Life upon its surface, the development of Society, of Government, of Manufactures, of Commerce, of Language, of Literature, Science, Art, this same evolution of the simple into the complex through a process of continuous differentiation, holds throughout. From the earliest traceable cosmical changes down to the latest results of civilization, we shall find that the transformation of the homogeneous into the heterogeneous, is that in which Progress essentially consists.'[13] Spencer encapsulates this in his theory of musical development: 'In

[11] Charles Lyell, *A Manual of Elementary Geology*, 3rd and rev. edn, London: John Murray, 1851), 220.
[12] Ernst Haeckel (*Generelle Morphologie des Organismen*, 1866), cited in Ernst Haeckel and Joseph McCabe (trans.), *Riddle of the Universe at the Close of the Nineteenth Century*, New York and London: Harper and Brothers Publishers, 1900, 81.
[13] Herbert Spencer, *Principles of Sociology*, 3 vols., *A System of Synthetic Philosophy* 6-8, London: Williams and Norgate, 1876-1896, n.d., 1876, vol. 1-2, 483.

music progressive integration is displayed in numerous ways. The simple cadence embracing a few notes, which in the changes of savages is monotonously repeated, becomes, among civilized races, a long series of different musical phrases combined into one whole; and so complete is the integration that the melody cannot be broken off in the middle nor shorn of its final note, without giving us a painful sense of incompleteness. When to the air, a bass, a tenor, and an alto are added; and when to the different voice-parts there is joined an accompaniment; we see integration of another order which grows naturally more elaborate. And the process is carried a stage higher when these complex solos, concerted pieces, choruses, and orchestral effects are combined into the vast ensemble of an oratorio or a musical drama.'[14] Materialistically unrepentant, even Darwin thought the idea of progress contained a grain of truth: 'as natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress toward perfection.'[15] Like Spencer, Darwin would apply this principle to music through ethics. Where Spencer contended that music is the 'chief media of sympathy'[16], Darwin believed that it developed love – not just reproductive love (sexual selection) but an even deeper love between creatures: 'Love', Darwin acknowledges, 'is still the commonest themes of our own songs.'[17]

Not dissimilar markers of change can be found in religion, as previously fixed theologies of divine simplicity and immutability yielded to more compliant forms of passibility. Divine simplicity is an assertion of God's absoluteness: 'no principle or power stands back of or alongside God by which he instantiates or understands his existence and essence. He alone is the sufficient reason for his own existence, essence, and attributes. He does not possess his perfections by relation to anything

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[14] Herbert Spencer, 'The Law of Evolution', *First Principles*, 2nd edn (London: Williams and Norgate, 1867), IXV/§114, http://oll.libertyfund.org/?option=com_staticxt&staticfile=show.php%3Ftitle=1390&chapter=99228&layout=html&Itemid=27, accessed 13 July 2017.

[15] Charles Darwin, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, London: John Murray, 1859, 489.

[16] Spencer, Herbert Spencer, 'The Origin and Function of Music', *Fraser's Magazine* (Oct. 1857), in Herbert Spencer, *Literary Style and Music: Including Two Short Essays on Gracefulness and Beauty*, New York: Philosophical Library, 1951, 73-4.

[17] Charles Darwin, *Descent of Man*, 336.

or anyone other than himself.'[18] Critics of divine simplicity abound, particularly in the increasingly subjectivist mindset of nineteenth century theologians.[19] Schleiermacher was seemingly torn. On the one hand he accepts that divine simplicity is 'the unseparated and inseparable mutual inherence of all divine attributes and activities'; on the other hand, that 'all attributes which we ascribe to God are not to be taken as indicating something specific in God, but only something specific in our manner of referring to Him the feeling of absolute dependence.' [20] Tension over human feeling and divine simplicity can be observed permeating Schleiermacher's writing on music, as Eduard, one of the main protagonists of *Christmas Eve* (1826) attests: 'every fine feeling comes completely to the fore only when we have found the right musical expression for it. Not the spoken word, for this can never be anything but indirect – a plastic element, if I may put it that way – but a real, uncluttered tone. And it is precisely to religious feeling that music is most closely related . . . What the word has declared, the tones of music must make alive, in harmony conveying it to the whole inner being of its hearers and holding it fast there.'[21] Hegel weighs into the debate with not dissimilar logic. Surely the very attribution of simplicity is itself an attribution of a God who can 'reconcile to Himself this something which is foreign to Him, this special or particular element which comes into existence as something separated from Him just as it is the nature of the Idea which has separated itself from itself and fallen away from itself, to bring itself back from this lapse to its truth or true state.'[22] That reconciliation, between a unified interiority (the spiritual world) and disunified exteriority (the

[18] James E. Dolezal, *God Without Parts: Divine Simplicity and the Metaphysics of God's Aboluteness*, Eugene OR: Pickwick Publications, 2011, Kindle loc. 197-205.
[19] Steven J. Duby, *Divine Simplicity: A Dogmatic Account*, London: Bloomsbury, 2015, 26.
[20] Friedrich Schleiermacher, and Paul T. Nimmo, 3rd ed., *The Christian Faith*, London: Bloomsbury, 1928/2016, §50, 194; §56, 231.
[21] Friedrich Schleiermacher, and Tice, Terence N. (trans.), *Christmas Eve: Dialogue on the Incarnation*, Richmond VG: John Knox, 1967, 46, cited in Jeremy Begbie, *Resounding Truth: Christian Wisdom in the World of Music*, London: Society for Promoting Christian Knowledge, 2007, 143.
[22] Georg Wilhelm Friedrich Hegel and the Rev E. B. Spiers and J. Burdon Sanderson (trans.), *Lectures on the Philosophy of Religion together with a Work on the Proofs of the Existence of God*, 3 vols., London: Kegan Paul, Trench, Trübner, and Co. Ltd., 1895, Vol. 3, 1.

natural world), would be mirrored – and redeemed – in music. According to Fubini, Hegel deemed music the only art form which 'does not separate its external medium from its spiritual content.'[23]

The emotional corollary to divine simplicity is divine impassibility, and over the nineteenth century it too would experience radical transformation with implications for music. An impassible God is 'is self-sufficient, he cannot be changed. Since he is perfect, he cannot change himself. Thus suffering and emotion are both incompatible with the nature of a God who never becomes, but *is*.'[24] Long-held as a theological principle, by the nineteenth-century impassibility was coming unstuck as Romanticism heightened feeling as a human attribute, often – as in the case of Schleiermacher and Hegel – directly implicated in the attributes of divine simplicity itself. As Keating and White rightly suggest, the classical doctrine of impassibility was simply unable to reconcile an impassible God of the Bible with the God who suffers in Christ.[25] Presbyterian theologian and Principal of the Princeton Theological Seminary Charles Hodge (1797-1878) takes umbrage: 'If love in God is only a name for that which accounts for the rational universe; if God is love, simply because He develops himself in thinking and conscious beings, then the word has for us no definite meaning; it reveals to us nothing concerning the real nature of God. Here again we have to choose between a mere philosophical speculation and the clear testimony of the Bible, and of our own moral and religious nature. Love of necessity involves feeling and if there be no feeling in God, there can be no love.'[26] Hodge's later contemporary, William G. T. Shedd, prevaricates in theology as Hegel does in music: 'While therefore God as a most pure spirit has no passions', Shedd opines, 'he has feelings and emotions. He is not passively wrought upon by the objective universe, so that he experiences physical impressions and organic appetites, as the creature does, but he is self-moved in all his feelings';[27] for

[23] Enrico Fubini, *The History of Music Aesthetics*, trans. Michael Hatwell, Houndsmill: Macmillan Press Ltd., 1964/1991, 278.
[24] Richard Bauckham, 'Only the Suffering God Can Help: Divine Passibility in Modern Theology', *Themelios* 9/3 (1984), 8.
[25] James F. Keating and Thomas Joseph White, O.P., *Divine Impassibility and the Mystery of Human Suffering*, Grand Rapids MI and Cambridge UK; William B Eerdmans Publishing Company, 2009, 1.
[26] Charles Hodge, *Systematic Theology,* 3 vols., New York: Charles Scribners and Company, 1872, Volume 1, 428-9.
[27] William G. T. Shedd, *Dogmatic Theology,* 3 vols., New York: Charles Scribner's Sons, Volume 1 (1888), 178.

Hegel music's 'own proper element is the inner life as such, explicitly shapeless feeling which cannot manifest itself in the outer world and its reality but only through an external medium which quickly vanishes and is cancelled at the very moment of expression. Therefore music's content is constituted by spiritual subjectivity in its immediate subjective inherent unity, the human heart, feeling as such.'[28]

1. The musical body

Ideological change was no less fraught in musical literature, especially in work focusing on the musical body and sensation. Progressive as he was Helmholtz, for example, retained a belief in fundamentally symbolic nature of sensation (albeit symbols rooted in physically occurring phenomena),[29] and felt that organs of sense produce information about the external world that in some respects tells us more about the organ than the sensation itself. Ben Steege reads in *On the Sensations of Tone as a Physiological Basis for the Theory of Music* (1862) some of the hallmarks of an old way of interpreting sensation (a mind/body split), even if for Helmholtz the physiological 'material ear' occupies far more space than the psychological mental or spiritual ear (*geistiges Ohr*).[30] For Steege Helmholtz is much about sensation as it is about using experimentation to develop a new way of listening – 'to call for a renewed attentiveness to sound *as sound* – to listen with an unprecedented strain and even skill – was to call for a change in the object of study itself.'[31] Leslie Blasius portrays Helmholtz as recuperating eighteenth-century scientism and re-empiricizing psychology through sensation;[32] literary scholar Gillian Beer might describe him as representative of 'Wordsworthian 'pre-existing harmony' between mind and material world'.[33] Helmholtz himself says

[28] Georg Wilhelm Freidrich Hegel, and *Ästhetik*, ed. Lukács, Frankfurt, 1935, and Knox (trans.), *Aesthetics; Lectures on Fine Arts*, Oxford: Clarendon, 1975, 626.
[29] Ben Steege, *Helmholtz and the Modern Listener*, Cambridge: Cambridge University Press, 2012, 77.
[30] Steege, *Helmholtz and the Modern Listener*, 73.
[31] Steege, *Helmholtz and the Modern Listener*, Cambridge, 35.
[32] Leslie David Blasius, *Schenker's Argument and the Claims of Music Theory*, Cambridge: Cambridge University Press, 1996, 6.
[33] Gillian Beer, *Darwin's Plots: Evolutionary Narratives in Darwin, George Eliot and Nineteenth–Century Fiction*, 2nd ed., Cambridge: Cambridge University Press, 1983/2000, 69.

that 'Our representations of things cannot be anything other than symbols, naturally given signs for things, which we have learned to use in order to control our motions and actions.'[34] A devoted Darwinian[35] and cited by Darwin himself,[36] Helmholtz was of great interest to evolutionists, however. He believed in a correlation between music and civilization; interrelationships between music, speech and emotional expression; the cultural construction of tonal systems; and the idea that music arose from artistic imitations of the instinctive modulations of the voice corresponding to feeling.[37]

Apart from Helmholtz's belief in intrinsic qualities of sound, Victorian polymath Herbert Spencer would largely agree with his contemporary in 'On the Origin and Function of Music' (1857), itself rooted in a slightly earlier work *Principles of Psychology* (1855). *Principles of Psychology* tries to evolutionize 'pre-exisiting harmony' by theorizing the pathway body and mind take from sensation to perception to cognition. While at its most fundamental 'the law is that with each muscular contraction there goes a sensation more or less definite; a sensation directly produced, either by the discharge itself, or by the state of the muscle or muscles excited', at its more advanced there is 'good reason to conclude that at the particular place in a superior nervous centre where, in some mysterious way, an objective change or nervous action causes a subjective change or feeling, there exists a quantitative equivalence between the two.'[38] As T. H. Green and later critics suggest, Spencer never really defines 'quantitative equivalence', however;[39] nor does he explain what exactly he means by 'superior'. What he does explain is the role sensory progression plays an essential role in the development of music, and the role music plays in the development of civilization. For Spencer bodily sensation is the beginning of a music-evolutionary impulse – a type of impassioned

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[34] Hermann von Helmholtz (*Handbuch der Physiologischen Optik*, Volume III, Leipzig: Leopold Voss, 1867), cited in Steege, *Helmholtz and the Modern Listener*, 77.
[35] Gary Hatfield, *The Natural and the Normative: Theories of Spatial Perception from Kant to Helmholtz*, Cambridge MA and London: The MIT Press, 1990, 192.
[36] Beer, *Darwin's Plots*, 69.
[37] Delia da Sousa Correa, *George Eliot, Music and Victorian Culture*, Houndsmill and New York: Palgrave Macmillan, 2003, 34.
[38] Herbert Spencer, *Principles of Psychology* (1855), cited in Collins, F. Howard, *An Epitome of the Synthetic Philosophy*, London and Edinburgh: Williams and Norgate, 1894, 197; 197.
[39] Mark Rylance, *Victorian Psychology and British Culture 1850–1880*, Oxford: Oxford University Press, 2000, 247.

proto-language propelling man from language to music, akin to what today archaeologist Steven Mithan might refer to early human utterance:[40] 'All music is originally vocal.', Spencer maintains, 'All vocal sounds are produced by the agency of certain muscles. The muscles, in common with those of the body at large, are excited to contraction by pleasurable and painful feelings . . . it follows that each inflection or modulation [of the voice] is the natural outcome of some passing emotion or sensation.'[41]

Progression from sensation to perception to cognition would for Spencerians not only justify an analogous musical evolution from savage chant to oratorio and music drama, it would also enshrine a teleological evolutionary programme increasingly under siege by Darwinian thought and materialist readings of the human body. Where Spencer subscribed to progression Darwin was concerned primarily with the mechanisms which ensured successful reproduction – natural and sexual selection. Natural selection refers to an evolutionary mechanism of survival in which creatures better adapted to their environments survive and reproduce in their offspring adaptationally favourable characteristics. Sexual selection is the ability to compete successfully and mate, and to Darwin music is the key to sexual selection in all creatures, human, animal and even insect: 'The capacity and love for singing or music', Darwin claims, 'though not a sexual character in man, must not here be passed over. Although the sounds emitted by animals of all kinds serve many purposes, a strong case can be made out, that the vocal organs were primarily used and perfect in relation to the propagation of the species'[42] – in other words, to attract a mate. Although on the surface not dissimilar to Spencer, because of this Darwin differs categorically from Spencer because the impulse to make music is, in its broadest sense, instinctive (i.e., natural) even if the language of that music is learnt (i.e., nurture). Where Spencer, through language, sees music emerging, or even liberated, by the muscular sensation of the body, Darwin imagines it already in place at the body's

[40] Steven Mithen, *The Singing Neanderthals: The Origins of Music, Language, Mind and Body*, London: Phoenix, 2005, 171.
[41] Herbert Spencer, 'Origin and Function of Music', 49-50.
[42] Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, 2nd ed. rev. and aug., London: John Murray 1871/1874, 566.

most deeply intrinsic, reproductive core. The effect of that subtle distinction was to position the musical body at the centre of an ideological divide over the origin, function and development of music which, if Steven Pinker is to be believed, continues to this day.[43] For Spencer the musical body is practically a contradiction in terms, because although he advocates organic continuity between body and mind, body and mind were qualitatively and evolutionarily asymmetrical in the ascent of human consciousness – the body more primal, the mind more advanced. Hector MacPherson asserts of Spencer that 'Between the humblest expression of life in the animal world and the highest manifestations in the intellect of man, the difference is not one of kind but of degree',[44] but in fact MacPherson underplays a significant evolutionary predilection in Spencer's work. Unlike Darwin, Lamarckian Spencer hierarchizes the evolutionary functionality of the musical body. For Darwin, conversely, the musical body is practically a tautology. The body cannot be anything but musical because music is at the centre of selection, and selection is at the centre of survival. According to Darwin, at our most basic, instinctive level beneath the surface of our human being, we do not really 'musick' at all, if by 'musicking' we mean the humanly organized, socially constructed phenomenon of musical performance. Music, for Darwin, is not only embodied, but intrinsically bodily. The act of musicking for Chris Small establishes meaningful relationships between the music and those musicking – and indeed they may stand metaphorically for ideal relationships 'between person and person, between individual and society, between humanity and the natural world and even perhaps the supernatural world'[45] – but for Darwin and some modern-day Darwinists music is even more primal. It is for a reason that Daniel Levitin's ends *This Is Your Brain on Music* (2006) with a chapter on musical instinct by referring to the 'embodied nature of music, the indivisibility of movement and sound' as 'Evolution's #1 Hit'.[46]

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[43] Stephen Pinker, *How the Mind Works*, London: Penguin, 1997/1999, 534.
[44] Hector Macpherson, *Herbert Spencer: The Man and His Work*, New York; Doubleday, Page and Co, 1900, 108.
[45] Chris Small, *Musicking: The Meanings of Performing and Listening*, Middletown CN: University Press of New England, 1998, 13.
[46] Daniel Levitin, *This is Your Brain on Music: Understanding a Human Obsession*, London: Atlantic Books, 2006, 257.

When, paradoxically, Small invokes the supernatural he hints at the body's transcendental receptors. Long attuned to music's spiritual qualities nineteenth-century thinkers often locate the body as liminal meeting point of sacred and secular world views, and often that meeting point is ideologically fraught for similar reasons adumbrated in Gould's nonoverlapping magisteria. In fact nineteenth-century scientific and theological opinion is often more consonant than one might expect. Spencer claims that music is the chief media of sympathy; Darwin, that love is the most common theme of song. What if any phantom theology of the body lies behind these claims? At its most rudimentary Spencer's musical body is stimulated matter. Matter, according to Spencer, is nothing more than 'that of coexistent positions that offer resistance';[47] the sense of sound, colour, heat, odour and taste 'can be called attributes of body only in the sense that they imply in body certain powers of reaction, which appropriate external actions call forth.'[48] Yet the musical body – and particularly the voice – is unique: 'vocal music', Spencer claims, 'and by consequence all music, is an idealization of the natural language of passion.'[49] The voice – and by extension vocal music – maintains pride of place in nineteenth-century evolutionary histories of music. C Hubert H. Parry speaks by example when he echoes Spencer in claiming that 'The raw material of music is found in the expressive noises and cries which human beings as well as animals give vent to under excitement of any kind, and their contagious power is shown, even in the incipient stage, by the sympathy which they evoke in other sentient beings.'[50] In fact Parry, Spencer and Darwin echo a theological commonplace in which the musical voice is the aboriginal organ of emotional passion: 'The capacity and love for singing or music', Darwin claims, 'though not a sexual character in man, must not here be passed over. Although the sounds emitted by animals of all kinds serve many purposes, a strong case can be made out, that the vocal organs were primarily used and perfected in relation to the propagation of the species . . . Human song is generally admitted to be the basis or origin of

[47] Spencer, *First Principles*, cited in Collins, *Epitome of the Synthetic Philosophy*, 21.
[48] Spencer, *Principles of Psychology*, cited in Collins, *Epitome of the Synthetic Philosophy*, 269.
[49] Spencer, 'Origin and Function of Music', 61.
[50] Parry, C. Hubert H., *The Evolution of the Art of Music*, ed. H. C. Colles, New York; Greenwood Press, 1893/1968, 13.

instrumental music. As neither the enjoyment nor the capacity of producing musical notes are faculties of the least use to man in reference to his daily habits of life, they must be ranked amongst the most mysterious with which he is endowed.' [51] Darwin is not alone in appending a transcendental suffix to an otherwise uncompromisingly evolutionary statement. Spencer claims that music arouses 'Those vague feelings of unexperienced felicity . . . those indefinite impressions of an unknown ideal life which it calls up, may be considered as a prophecy, to the fulfilment of which music is itself aids.'[52]

Scientists might find words like 'mysterious' and 'unknown ideal' critically inadequate descriptors but theologians would recognize them immediately. Whether language precedes music or vice versa, for Spencer and Darwin music originates in the voice and the voice is located in the body. In theology the relation of the body and voice has always been the site of passion because the voice produces emotional expression which can be recorded in word, and word provides the basis of revealed (scriptural) belief through language. In Christian theology God, like human beings, uses his voice to express emotion in both the Old and New Testaments, but it was not, arguably, until the nineteenth century that theologians began asking whether divine expression also expressed a manifestation of divine feeling as well. Like many theologians Kevin Vanhoozer analogizes the voice, and asks a question beginning to burn in the minds of contemporary theologians: 'In the context of grammar, "voice indicates the relation of subject to the action of the verb . . . the Bible appears to ascribe certain emotion to God – "movements" in God's affective life provoked by something outside God. Can something outside God "move" or act upon God as to produce an emotion?'[53] Set against an increasingly materialistic world view the embodied, linguistic nineteenth-century musical voice became not only a site of evolutionary origins, but one of progressive social redemption. Not only did the voice give rise to music, it was also used to initiate music's evolutionary capacity to

[51] Charles Darwin, *Descent of Man*, 566; 569-70.
[52] Spencer, 'Origin and Function of Music', 74.
[53] Kevin J. Vanhoozer, *Remythologizing Theology: Divine Action, Passion, and Authorship*, Cambridge: Cambridge University Press, 2010, 76.

engender sympathy and love: according to John Harrington Edwards 'Music is the harmonious voice of creation, an echo of the invisible world, one note of the divine concord which the entire university is some day to sound.'[54] Spencer and Darwin may not have intended to redeem the secular (material) body by sacralising (spiritualizing) the voice, but they certainly invested their progressive, evolutionary hope in music originating in the voice, human (in the case of Spencer) or both human and animal (in the case of Darwin). When dramatic theological change increasingly questioned the idea of an emotionally immutable God and revolutionary scientific change, the idea of a fixed Great Chain of Being, the voice became a humanly embodied saviour for both science and religion alike, opening up the prospect of human development beyond the limited capacities of the sensory, into the higher orders of perception, cognition and the unfettered access of the mind. Perhaps this partly explains the genesis of Lydia Goehr's assertion that we should fix our concern 'on the matter of people engaging with music as either an individual or social assertion of their freedom – their subjective freedom . . . to be musical . . . through the expressive voice and performed act. Were we to do this, we could then also think about musical activity as a quest for the autonomous (musical) voice.'[55]

2. The musical mind

Goehr's redemptive prescription comes with a genealogy in both science and religion which elevated the mind to an apogee. Indeed, mental perfectibility lay unabashedly at the heart of Spencer's synthetic project. Spencer imagined all life connected by the mind: all organisms progress from simple to complex through gradual differentiation; differentiation creates two branches of life, the physiological and the mental'; and the mental leads from reflex action (sensation) to instinct, memory and will.[56] Contemporaries recognized the importance of his approach to human mental

[54] Edwards, John Harrington, *God and Music*, New York: The Baker and Taylor Co., 1903, 264.
[55] Lydia Goehr, *The Quest for Voice: On Music, Politics, and the Limits of Philosophy*, Berkeley, Los Angeles and London: University of California Press, 1998, 17.
[56] Robert J. Richards, *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior*, Chicago and London: The University of Chicago Press, 1987, 282.

psychology, John Stuart Mill amongst them: 'It is very satisfactory to see how you and [the psychologist Alexander] Bain, each in his own way, have succeeded in affiliating the conscious operations of mind to the primary unconscious organic actions of the nerves.'[57] Mill corroborates the psychological basis for what musical thinkers would eventually accept as truth – that evidence of the musical mind shows how through the body it continuously recapitulates the evolutionary accession of intelligence (in the broadest sense what Spencer might call the will). J. Hughlings Jackson would apply recapitulation to different parts of the body, while Spencerians would apply it musical structure: 'The highest sensori-motor centres', Jackson claims, 'make up the "organ of the mind" or physical basis of consciousness; they are evolved out of the middle, as the middle are evolved out of the lowest, and as the lowest are evolved out of the periphery; thus the highest centres re-re-represent the body – that is, represent it triply indirectly.';[58] for Spencerian Margaret Glyn the elusiveness of music lies 'in the action of the individual mind upon the form of music, not as destroying that form, but as re-creating it . . . The mind is no less elusive than its creations.'[59] For Spencer himself recapitulation applied not just to mind and body, but to the mind and emotion: 'the antagonism between intellectual appreciation and emotional satisfaction, is essentially the same as one which lies at the root of our mental structure – the antagonism between sensation and perception; and it runs up through the whole content of the mind, rising to such partial conflicts between thought and feeling as those which accompany critical judgments of music';[60] it is evident, moreover, 'that the combinations of tones . . . may be developed into others which are still more expressive. If, with this idea in mind, Beethoven's *Adelaide*, or some of Gluck's melodies, be

[57] John Stuart Mill, letter to Herbert Spencer (3 April 1864), cited in Richards, *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior*, 299.
[58] J. Hughlings Jackson, 'Remarks on evolution and dissolution of the nervous system' (*The Journal of Mental Science* 33, 1887-88), cited in Anne Harrington, *Medicine, Mind, and the Double Brain: A Study in Nineteenth-Century Thought*, Princeton NJ: Princeton University Press, 1987, 211.
[59] Margaret H. Glyn, *Analysis of the Evolution of Musical Form*, London, New York, Bombay and Calcutta: Longmans, Green and Co., 1909, xix.
[60] Herbert Spencer, 'The Purpose of Art', *Facts and Comments*, London: Williams & Norgate, 1902/1907, 32-33.

contemplated, many of the cadences may be recognized as idealized forms of the appropriate emotional utterances.'[61]

Darwin's musical mind is no less emotional, and on a certain level even more deeply implicated materialistically: 'The sensations and ideas excited in us by music, or by the cadences of impassioned oratory, appear from their vagueness, yet depth, like mental reversions to the emotions and thoughts of a long-past age.'[62] Neither Darwin nor Spencer espoused a conventionally materialistic attitude, however, if by materialistic we mean that 'the human mind is a property of the material body.'[63] But unlike Spencerians, Darwinians believed that the bodies and minds of humans and animals share evolutionary history; as Rachel Mundy suggests, 'Darwin problematized the human–nonhuman . . . and his writings on music neatly mapped this "demotion" of the human onto the sonic and onto music.'[64] Psychologist James Sully, for example, maintains that evolution 'regards all species as connected steps in one complex movement of organic development, [and] has naturally tended to raise the intellectual and moral status of animals by suggesting that in them are to be found the germs of mental qualities previously supposed to be man's exclusive possession. Among the attributes which science is thus extending to the lower animals is the artistic impulse. Man can no longer boast of being the sole artist . . . With respect to music, it must of course always have been a matter of observation that the lower animals share in our love of song. The first human musicians doubtless noticed the similarity of their rude art to bird-song.'[65] Darwinians were not entirely united in this belief, however. In *Animal Intelligence* (1881), *Mental Evolution in Animals* (1883) and *Mental Evolution in Man* (1888), for example, Darwin's mentee George Romanes unites animal and human minds through evolution, yet because of his own religious self-conflict clings to a non-Darwinian tenet of musical production: 'the chimpanzee "Sally" not unfrequently executes an

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[61] Herbert Spencer, 'Developed Music', *Facts and Comments*, 54.
[62] Darwin, *Descent of Man*, Vol. 2, 336.
[63] Richards, *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior*, 333.
[64] Rachel Mundy, 'Nature's Music: Birds, Beasts, and Evolutionary Listening in the Twentieth Century', PhD diss., New York University, 2010, 31.
[65] James Sully, 'Animal Music', *The Cornhill Magazine* (Nov 1879), 605.

extraordinary performance . . The song, however, is by no means so "musical." It is sung with any regard to notation, in a series of rapidly succeeding howls and screams – very loud, and accompanied by a drumming of the legs upon the ground. She will only thus "break forth into singing" after more or less sustained excitement by her keeper;' but more often than not she refuses to be provoked by any amount of endeavour on his part.'[66]

These temperamental differences reveal not only a musical disagreement over the place of mind in relation to the body but what is effectively an intra-disciplinary scientific disagreement over the relationship of mind and emotion. For Romanes the animal mind is intelligent and may, as it progresses up the evolutionary chain, experience higher and higher levels of emotion, but music requires not only mental intelligence; it requires emotional consciousness at a level unattainable amongst animals other than man. At the same time consciousness and mind are not one in the same thing, and music proves it. David Blitz characterizes the difference: although humans know their own mind subjectively, knowledge of other minds 'involved an interpretation of objective behaviour combined with a projection of subjective consciousness.'[67] Romanes would call this relationship 'ejective': 'ejectively considered, the distinctive element of mind is consciousness, the test of consciousness is the presence of choice, and the evidence of choice is the antecedent uncertainty of adjustive action between two or more alternatives.'[68] Sally fails musical the test not because her performance lacks beauty or even literacy, but because, ejectively considered, it lacks evidence of choice and its antecedent uncertainty (she needs to be prodded to perform). Sally failed the musical test for the same reasons Darwinism struggled to pass the evolutionary test. If Victorian Britain struggled to relinquish the fixed certitudes of the Great Chain of Being, religion was undergoing its own conflict here and elsewhere, mirroring in theology battles being fought in science. Romanes predicates his understanding of mind on W. K. Clifford's fundamentally atheistic

[66] George John Romanes, *Mental Evolution in Man: Origin of Human Faculty*, New York: D. Appleton and Co., 1902, 377.
[67] David Blitz, *Emergent Evolution: Quantitative Novelty and the Levels of Reality*, Dordrecht: Springer Science+Business Media, 1992, 52.
[68] George John Romanes, *Mental Evolution in Animals*, New York: D. Appleton and Co., 1884, 18.

concept of ejectivity – broadly speaking 'the distinctive character of a mind (or mental process) other than our own in its relation to our own'[69] – yet despite its rejection of subject and object ejectivity is itself a phantom term with strong metaphysical and theological resonances in concepts of unity and diversity. As Johness Zachhuber points out, Tübingen philosopher F. C. Bauer maintains that 'the true goal of any self-reflective scientific endeavour' must be 'to approach the idea of the unity of knowledge.' This idea is 'prefigured in the organism of the human mind'.'[70]

For the Tübingen theologians and German Idealists more generally there is an organic continuity between the particular individual and universal whole evidenced by history: 'Despite all their differences', Zachhuber suggests, 'Hegel, Schelling, and Schleiermacher all agreed that the mind that examines nature and history encounters itself in the object of its reflection, and this ultimate identity of subject and object is the very condition for any such reflection.'[71] The mind that examines music and history encounters the same self in the object of its reflection. Schleiermacher would call this 'immediate self-consciousness', and apply it to the idea of Gefühl, 'the feeling of absolute dependence' on God. Jeremy Begbie characterises this as 'being conscious-of-oneself-as-being-in-relation-to-God.'[72] In *Christmas Eve* music's 'true content is the great chords of our mind and heart, which so marvellously and with the most varied voices ever resolve themselves into the same harmony.'[73] Critics of Schleiermacher stress the confusion over his substitution of religious feeling for experience of identity between subject and object,[74] and the general absence of Christological import in favour of religious transcendentalism,[75] but he defined feeling when science, religion and musical identities were undergoing similarly methodological transformations. Now

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[69] Romanes, *Mental Evolution in Animals*, 16.
[70] Ferdinand Christian Bauer, cited in Johannes Zachhuber, *Theology as Science in Nineteenth-Century Germany: From F. C. Bauer to Ernst Troeltsch*, Oxford: Oxford University Press, 2013, 64.
[71] Zachhuber, *Theology as Science in Nineteenth-Century Germany*, 84.
[72] Jeremy Begbie, *Music, Modernity, and God: Essays in Listening*, Oxford: Oxford University Press, 2014, 114.
[73] Frederich Schleiermacher, and Terence N. Tice (trans.), *Christmas Eve Celebration: A Dialogue*, revised translation, Eugene OR: Cascade Books, 2010, 32.
[74] Julia A. Lamm, 'The Early Philosophical Roots of Schleiermacher's Notion of *Gefühl*, 1788-1794, *Harvard Theological Review* 87/1 (Jan. 1994), 67.
[75] Jacquieline Mariña, 'Schleiermacher's Christology Revisited: A Reply to his Critics', *Scottish Journal of Theology* 49/2 (May 1996), 177.

along with science the religious mind felt, rather than just simply thought, inverting the conventional certitudes of the Enlightenment. Spencer, perhaps even more than Darwin, summarizes this position when he claims that music combines mental and muscular excitement, as impassioned speech, an ideal life, a meeting point of 'the idealized language of the emotion and its natural language.'[76]

Schleiermacher and Spencer emotionalize the mind at a transitional moment in history, when readings of God's own emotional mind were beginning change through new theologies of kenosis. In the same way that Romanes 'ejects' subject and object, kenosis teaches that the subject of Christ empties himself into the object of Jesus and becomes fully human without affecting the integrity of his divinity. Kenosis reaches an apogee in the increasingly emotionalized mentality of nineteenth-century theology which sought 'to mediate an integrally human Jesus of more modern awareness and sensitivity with the Christ of confessions.'[77] A good example of this is found in the trajectory of Victorian hymns, where impassible theologies of atonement and the Christ of faith give way to passible readings of incarnation and the Jesus of history.[78] Manifestly emphasizing the heart 'Thou didst leave Thy Throne and Thy kindly crown' passes the ejectivity test on mind (unlike Sally the chimpanzee), and captures the transition in a brief encapsulation of Jesus's life, death and resurrection. He (Christ) is conscious of his being, makes his choice (Jesus) and through scripture (the Bible) provides evidence of antecedent uncertainty of adjustive action. He is immediately self-consciousness and feels absolutely dependent – 'true deity, true humanity' yet 'relinquishes all divine attributes, powers, prerogatives, and glory':[79]

> Thou didst leave Thy throne and Thy kingly crown,
> When Thou camest to earth for me;
> But in Bethlehem's home was there found no room
> For Thy holy nativity.

[76] Spencer, 'Origin and Function of Music', 69.
[77] Thomas R. Thompson, 'Nineteenth-Century Kenotic Christology: The Waxing, Waning, and Weighing of a Quest for a Coherent Orthodoxy', in C. Stephen Evans, *Exploring Kenotic Christology: The Self-Emptying of God*, Oxford: Oxford University Press, 2006, 95.
[78] Ian Bradley, *Abide With Me: The World of Victorian Hymns*, Chicago IL: GIA Publications, Inc., 1997, 109.
[79] Thompson, 'Nineteenth-Century Kenotic Christology', 79; 87.

O come to my heart, Lord Jesus,
There is room in my heart for Thee.

Heaven's arches rang when the angels sang,
Proclaiming Thy royal degree;
But of lowly birth didst Thou come to earth,
And in great humility.
O come to my heart, Lord Jesus,
There is room in my heart for Thee.

The foxes found rest, and the birds their nest
In the shade of the forest tree;
But Thy couch was the sod, O Thou Son of God,
In the deserts of Galilee.
O come to my heart, Lord Jesus,
There is room in my heart for Thee.

Thou camest, O Lord, with the living Word,
That should set Thy people free;
But with mocking scorn and with crown of thorn,
They bore Thee to Calvary.
O come to my heart, Lord Jesus,
There is room in my heart for Thee.

When the heav'ns shall ring, and her choirs shall sing,
At Thy coming to victory,
Let Thy voice call me home, saying "Yet there is room,
There is room at My side for thee."
My heart shall rejoice, Lord Jesus,
When Thou comest and callest for me.

3. The musical soul

Nineteenth-century science responds variously to what is a religious idea of the soul. The closest Spencer came to believing in anything approximating a religious idea was his much criticised concept of the Unknowable.'[80] The Unknowable is Spencer's attempt to reconcile religion and science: 'If both Religion and Science have bases in the reality of things, then between them there must be a fundamental harmony. There cannot be two orders of truth in absolute and everlasting opposition. To understand how Science and Religion express opposite sides of the same fact – the one its near

[80] Bernard Lightman, 'Spencer's British Disciples', in Mark Francis and Michael W. Taylor, *Herbert Spencer: Legacies*, London and New York: Routledge, 2015, 237-241.

and visible side, and the other its remote or invisible side becomes our problem.'[81] In musical terms the answer produces a solution not unlike idealism more generally, not least when Spencer claims like Wackenroder, Hegel or Schopenhauer that music is effectively the 'idealized language of the emotion.' Unlike other idealists, however, Spencer makes no genuinely spiritual claims for music. Music for Spencer is not transcendent but if anything immanent in the way it is embodied in Small's concept of musicking. For Spencer if music has a soul at all it is not in the music itself but in the people who musick it individually and/or collectively; that is why music is so important in the construction and evolutionary survival principle of human sympathy. It is part of what is in essence a progressive liberal ethicism in which 'various modifications of voice become not only a language through which we understand the emotions of others, but also the means of exciting our sympathy with such emotions.'[82] Yet the evolutionary purpose of sympathy cannot alone explain the 'true' Unknowable function or meaning of music: 'Those vague feelings of unexperienced felicity which music arouses—those indefinite impressions of an unknown ideal life which it calls up, may be considered as a prophecy, to the fulfilment of which music is itself aids. The strange capacity which we have for being so affected by melody and harmony may be taken to imply both that it is within the possibilities of our nature to realise those intenser delights they dimly suggest, and that they are in some way concerned in the realisation of them. If so, the power and the meaning of music become comprehensible, but otherwise they are a mystery.'[83] Vague feelings, indefinite impressions, unknown ideal life, prophecy, mystery: surely this is theological language masquerading as transcendentalism.

Spencer never actually attributes music to anything other than evolutionary principle of sympathy, and so the mystery of music remains unsolved and certainly not located in a soul as conventionally understood. Darwin is no less uncertain about the presence of a soul – he at least

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[81] Spencer, in Collins, *Epitome of the Synthetic Philosophy*, 5.
[82] Spencer, 'Origin and Function of Music', 57. See also Bennett Zon, 'Spencer, Sympathy and the Oxford School of Music Criticism', in Jeremy Dibble and Julian Horton (eds.), *British Music Criticism, 1850-1950*, Woodfield: Boydell & Brewer, forthcoming 2018.
[83] Spencer, 'Origin and Function of Music', 75-76.

had the intellectual honesty to call his views on religion a 'muddle'[84] – but like Spencer he attributes to music properties that in other circumstances might be deemed to have spiritual – if not religious – origins: musical notes must be 'amongst the most mysterious with which he [man] is endowed', he suggests; love is 'still the commonest theme of our own songs'[85] and sympathy with music can even bring people to tears.[86] The musical soul is, however, of interest to many other scientists, ranging from Christian non-Darwinists to Christian Darwinists and Christian Darwinisticists.[87] Christian non-Darwinists come in many denominational and creedal varieties. They usually accept some or all of the basic tenets of Spencerian evolutionism (progression from simplicity to complexity, recapitulation and survival), and inflected by Christian theology they ascribe to God what Spencer ascribes to the Unknowable. Christian Darwinists might accept the scientific validity of natural selection yet reconcile it with divine design or origins. Christian Darwinisticists adopt an altogether more metaphysical approach. A good example from the spectrum is musicologist W. J. Treutler, avid follower of evolutionary science, and probably one of the first Victorians to attribute evolutionary properties to the musical soul: 'there is a necessary something more than the external organ of hearing and the cerebral auditory centre, however highly these may be developed and exercised in the individual, and this "something more" is a sensitive, feeling, impressible, and highly organized *soul*.'[88] Treutler is not unique in proffering the idea of musical soul, however his conceptual reach takes the idea further than most. Like many others at the time Treutler believed that *all* animals had a soul,[89] even if that soul was in a state of lower development: 'the intelligent comprehension of

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[84] Charles Darwin, 'Recollections of the Development of my Mind & Character' [Autobiography (1876–4.1882)] CUL-DAR26.1–121, transcribed Kees Rookmaaker, 62–63, Darwin Online http://darwin-online.org.uk/, accessed 20/7/17.
[85] Charles Darwin, *Descent of Man*, 336.
[86] Charles Darwin, *The Expression of the Emotions in Man and Animals*, London: John Murray, 1872, 218-19.
[87] James R. Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America: 1870–1900*, Cambridge at al.: Cambridge University Press, 1979, 218–20.
[88] W. J. Treutler, 'Music in Relation to Man and Animals', *Proceedings of the Musical Association* 25 (1998–99), 83.
[89] Teresa Magnum, 'Animal Angst: Victorians Memorialize their Pets', in Deborah Denenholz Morse and Martina A. Danahay (eds), *Victorian Animal Dreams; Representations of Animals in Victorian Literature and Culture*, Aldershot: Ashgate, 2007, 22.

music, even by the higher animals, will always be more or less imperfect, because their soul is of a lower order, their intelligence is unable to grasp and comprehend the sequences and rich combinations of musical sounds. And hence the effect of music on animals cannot be other than fragmentary and imperfect'.[90] The effect of music on humans is similarly variable, because not all humans are equally advanced. Reflecting a long history combining music and racist developmental prejudice,[91] he finds optimistically that the 'musical soul of man is capable of progress and development by education, cultivation, and training, and has been so developed from one generation to another and from the days of primitive man.'[92]

Treutler is clearly a scientific friend of religion, not just because he believes in a musical soul, but because his musical soul unites the whole of the animal kingdom spiritually. Yet God is an absent presence from his musical considerations. Others, like putative Christian Darwinisticist Joseph Goddard, were less circumspect. Goddard's work is wide-ranging philosophically, and reflects a serious commitment to German Idealism: 'Music', he asserts, 'imparts *the sentiment direct*. That it does not copy the natural features of form, but only the spirit, or any influence. That music is itself *emotion's natural form*.'[93] At the same time Goddard delves into the spiritual world without the present absence of God, even if the musical soul is a creation of the human spirit: 'In the case of Music . . . man not only bestows the soul, but, to all appearances, the form also; for where in Nature do we find a musical effect bearing anything like a close resemblance to the effects of the Art?'[94] Goddard not only acknowledges the presence of a soul, but uses the heyday of the oratorio to describe the telling, changing theological conditions of the time: 'when it was habitual to *practically* and *externally acknowledge* that relationship of God to humanity which is mostly *inwardly understood*; – if we consider these circumstances, we are more than ever impressed with

[90] Treutler, 'Music in Relation to Man and Animals', 83.
[91] See Bennett Zon, *Representing Non-Western Music in Nineteenth-Century Britain*, Rochester NY: University of Rochester Press, 2007.
[92] Treutler, 'Music in Relation to Man and Animals', 83.
[93] Joseph Goddard, *The Philosophy of Music: A Series of Essays, entitled, respectively, The Relationship of Music to the Other Fine Arts; The Moral Theory of Music; and The Laws of Life in Art*, London: PUB, 1862, xiv.
[94] Goddard, *Philosophy of Music*, xiii.

the fitness and appropriateness of these incidents and conditions of humanity for representing those circumstances, amidst which the great tide of man's feeling towards God and his brother man would mostly arise.'[95] These and Treutler's words epitomize the unrepentant hybridization of scientific and religious thought within musicology of the time: on the one hand, the soul and God; on the other, evolutionary fitness and appropriateness, all strung together by the cooperatively unifying force of transcendental feeling and the emotions.

The musical soul also offers a window into the progressive, humanizing secularization of a musical emotion instantiated through nineteenth-century changes in the theology of divine simplicity and impassibility. According to the Rev. Haweis the individual soul is deeply co-implicated in the emotions of human nature, but the emotions reside not in the mind, nor in the body, but in the soul itself: 'there was a region of abstract emotion in human nature constantly indeed traversed by definite thoughts, but not dependent upon them for its existence – that this region of emotion consisted of infinite varieties of mental temperature – that upon these temperatures of the soul depended the degree, and often the kind of actions of which at different moments we were capable.'[96] In *Music and Morals* (1871) musical emotions press 'the subtle atmospheres of the soul';[97] and later in *My Musical Life* (1884) they would become the 'mother of sympathy'.[98] For Haweis, as for Spencer and Darwin, sympathy not only unites man and his emotions it also unites man and society. But for Haweis it also unites man to his God in a way that provides an underlying, implicitly incarnational message in which man becomes simultaneously the object and subject of God's action: 'we must stand upon the holy hill with hands uplifted like those of Moses,' he preaches, 'and see the battle of Good against Evil with a deep and inexhaustible sympathy for righteousness, and a sense of triumph and victory in our hearts. The highest service that art can accomplish for man is to become at once the voice of his nobler aspirations, and the steady

[95] Goddard, *Philosophy of Music*, 134-5.
[96] The Rev. H. R. Haweis, *Music and Morals*, London: Longmans, Green and Co, 1871/1912, 47.
[97] Haweis, *Music and Morals*, 82.
[98] The Rev. H. R. Haweis, *My Musical Life*, London, New York and Bombay: Longman, Green and Co., 1898, 118.

disciplinarian of his emotions.'[99] Like Schleiermacher, Haweis extols the religious virtue of musical emotion, and locates its sympathy in the centripetal dynamic of an individually, yet corporately unifying soul.

For Schleiermacher, the composer's greatest triumph 'is when he bids adieu to language altogether and embodies, in this endlessly changing wealth of tonal sequences and harmonies, all the tremors of life that can pass through the soul.'[100] For Haweis, similarly, that soul not only unifies an individual's mind and body with God through feeling, it also unifies minds and bodies in the formation of a congregation of people. The congregation of an orchestra provides him with the perfect musical analogy: 'To the eye of an uninitiated spectator that uniform drawing up and down of bows all in the same direction and all at once – that simultaneous blare of horns, trumpets, and flute-notes sounded instantly at the call of the magic wand, may seem like human mechanism, but it is not, it is sympathy. The individuality of each player may be merged in a larger and more comprehensive unity of thought and feeling; but it is a unity with which he is in electric accord, and to which he brings spontaneously the faculties of personal appreciation and individual skill.'[101] The soul of Haweis's orchestra is, however, as much a statement about cultivation of emotional sympathy as it is the liberation of divine simplicity and progression towards passibility. The classical doctrine of divine simplicity imagined a changeless, emotionless God, but Haweis's simplicity defines a unity positively buzzing with (electric) individual action, and action predicated on the developmental creativity in performance, composition and listening. Indeed, if as Stephen Holmes suggests, the theology of simplicity was undergoing 'a fundamental shift in the doctrine of the divine perfections that occurred in the nineteenth-century'[102] Haweis's deeply humanizing orchestra reflects the new face of that theological imaginary by ejecting subject and object, to use Romanes's

[99] Haweis, *My Musical Life*, 46.
[100] Friedrich Schleiermacher, and Lehnerer, Thomas (ed.), *Ästhetik: Über den Begriff der Kunst*, Hamburg: Felix Meiner, 1831-32/1984, 174.
[101] Haweis, *Music and Morals*, 74.
[102] Stephen R. Holmes, 'The Attributes of God', in John Webster, Kathryn Tanner and Iain Torrance (eds.), *The Oxford Handbook of Systematic Theology*, Oxford: Oxford University Press, 2007, 65.

term, and defining the ensemble the way Berlin theologian I. A. Dorner describes God's simplicity – as 'eternal self-identity'.[103] For Haweis this is the musical soul: of Schubert he claims that 'It reveals us to ourselves – it represents those modulations and temperamental changes which escape all verbal analysis – it utters what must else for ever remain unuttered and unutterable – it feeds that deep, ineradicable instinct within us of which all art is only the reverberated echo, the craving to express, through the medium of the senses, the spiritual and eternal realities which underlie them.'[104]

Conclusion

'Evolution is not just an inert piece of theoretical science. It is, and cannot help being, also a powerful folk-tale about human origins';[105] so are various parts of the Bible.[106] If science and religion both produce folktales, surely they must have something in common. Surely nineteenth-century science and religion were not at war – not mutually cancelling, nonoverlapping magisteria; surely they were more positively entangled, interpenetrating and co-exisitingly enriching, as Alistair McGrath suggests. This chapter uses music to prove McGrath's point. In nineteenth-century intellectual culture music became a site of reconciliation, not just wrangling, within and between the seemingly separate spheres of science and religion. Both used music to configure the mind, body and soul, often with strikingly similar language, methodologies and metaphysical aspirations. For Spencer the origin and function of music were interrelated. Music was impassioned speech that developed an evolutionarily favourable adaptation – sympathy. For Darwin the function and origin were reversed; the function was sexual selection, but its origin lay in the emotion of love. For Spencer the musical body was largely reactive and the mind proactive; for Darwin, the musical body

[103] I. A. Dorner and Alfred Cave and J. S. Banks (trans.), *A System of Christine Doctrine*, 4 vols. (1888-90), Edinburgh: T&T Clark, Vol. 1, 1888, 215.
[104] Haweis, *Music and Morals*, 286.
[105] Mary Midgley, *Evolution as a Religion: Strange Hopes and Stranger Fears*, revised edition, London and New York: Routledge, 1.
[106] Hermann Gunkel, *The Folktale in the Old Testament*, London and New York: Bloomsbury, 2015, 35.

was reproductively proactive and the mind to some extent reactive to a long past emotion. Both, however, considered music mysteriously indefinable in some way, and so did their followers in wherever their place on the evolutionary spectrum. Christian evolutionism produced no less diversity over the musical body, mind and soul. The musical body was a theologized voice; the mind, a locus of 'immediate self-consciousness' and Gefühl, and the soul a place where divine simplicity and emotion are reconfigured. Behind these opinions are systemic transitions in the practice and theory of science and religion: science, from pre- to post Darwinian ideas unchaining evolution from the Great Chain of Being; and religion, from the doctrine of divine simplicity to humanized theologies of God's emotion.

What with the advent of very highly specialized disciplinarity, when it comes to music science and religion seem even further apart today than they were in the nineteenth century. The psychology of music treats transcendence and religious feeling with admirable scientific objectivity. According to Alf Gabrielsson, categories of transcendent experience include magical, supernatural, mysterious and spiritual experiences; ecstasy and trance; cosmic experiences merging into something greater and dissolution into one ego; experiences of other worlds and realities. Music and religious experiences include visions of heaven, paradise and eternity; spiritual peace, holy atmosphere and Christian community; conveyance of a religious message and contact with divinity; and meeting the divine or God.[107] Music Theology is as largely uninterested in hard science as music psychology is in theology. Maeve Heaney comes closest perhaps, by revealing some of the scientific methodologies lurking beneath music theological constructions of an aesthetic nature, especially those linked to ethnomusicology such as social science, linguistics, cognitive structuralism, psychology, philosophy and anthropology.[108] Semiologist Jean Molino is useful to Heaney, for example, because his methods are scientific; as he says 'every human science has a semiological

[107] See Alf Gabrielsson, *Strong Experience with Music: Music is Much More than Just Music*, Oxford: Oxford University Press, 2011, 193-227 and *passim*.
[108] Maeve Louise Heaney VDMF, *Music as Theology: What Music Has to Say about the Word*, Eugene OR: Pickwick Publications, 2012, 58.

dimension.'[109] Perhaps, lastly, the real division evidenced here is not between science and religion, but between science and *theology*. Perhaps theology is the disciplinary outlier when it comes to nineteenth-century musical culture because theology is 'at its broadest thinking about questions raised by and about the religions',[110] whereas religion is the province of 'historical an structural enquiries, such as sociology, phenomenology, etc.'[111] In the nineteenth century this division was arguably less pronounced – though in many ways no less strongly felt – in the nascent discipline of musicology, born as it was of scientific *and* religious parents. [112] As this chapter has aimed to prove, science and religion may have constructed nineteenth-century British musical identities, but equally music affected the construction of disciplines in a crucial, formative stage of transition – not only in the mind, body and soul of music, but in the body, mind and soul of the creation myths used to describe its intellectual culture.

[109] Jean Molino, cited in Heaney, *Music as Theology*, 76.
[110] David Ford, *Theology: A Very Short Introduction*, Oxford: Oxford University Press, 1999, 3.
[111] Ninian Smart, cited in Donald Wiebe, *The Politics of Religious Studies: The Continuing Conflict with Theology in the Academy*, New York: St Martin's Press, 1999, 55.
[112] See Bennett Zon, 'All Arts Constantly Aspire to the Condition of Musicology: Victorian Musicology as Interdiscipline' in Bernard Lightman and Bennett Zon, *Victorian Culture and the Origin of Disciplines*, forthcoming 2018.