INTRODUCTION

Evolutionary Musicology Revitalized

This dissertation investigates the place of music in historical evolutionary theories, with emphasis on music-evolutionary ideas formulated in nineteenth-century Britain. The question of musical origins had already been a source of fascination among continental thinkers.[1] But with the advent of evolutionary theories, thinkers like Herbert Spencer, Charles Darwin, and Edmund Gurney provided new evidence and explanation for music's presumed place in deep human history. How music was invoked by Victorian evolutionary theorists—many of whom were not practicing musicians themselves—suggests a novel philosophical affordance for music that crystallized alongside nineteenth-century evolutionary science: music as a special kind of boundary-drawing device, valued by evolutionary theorists for its ability to trace or obscure the conceptual borders between human and animal. Music served this adjudicative function especially well within the nascent field of evolutionary science because musical expression was already seen as a uniquely ambiguous way of signifying.[2] In this dissertation, I show that Victorian evolutionists like Spencer, Darwin, and Gurney invoked music to delineate or complicate a human-animal boundary, such that the structures of music became theoretically entwined with the limits and potentials of the human species.

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[1] For a historical account of earlier speculations about musical origins, see Warren Dwight Allen's *Philosophies of Music History* (1962). See also Bryan Levman's "Western Theories of Music Origin, Historical and Modern" (2000).

[2] For example, Joseph Goddard's "The Moral Theory of Music" (1857)—an important precursor to the evolutionary music theories of Herbert Spencer and Charles Darwin—treats musical tones as both non-representational *and* direct reflections of thoughts and feelings (43).

In examining this new philosophical dimension for music that emerged alongside Victorian evolutionary science, this dissertation adds a critical perspective to the resurgent field of evolutionary musicology. For much of the twentieth-century, English-language music scholars were reticent to speculate about the evolution of music. As Peter Kivy noted at mid-century, ideas about music's evolutionary origins were seen as too "speculative" to be afforded serious attention (1962, 328-29). Evolutionary musicology's reputation of unseriousness was compounded by the fact that many music-evolutionary theories reflected transparently ethnocentric accounts of music, with Western musical culture perched at the top of a racist chain of excellence.[3]

In the last few decades, however, studies of music's evolutionary origins have been revitalized. A New Evolutionary Musicology, as we might call it, began to cohere in the 1990s and early 2000s. Some significant contributions therein include Ian Cross' "Is Music the Most Important Thing We Ever Did? Music, Development and Evolution" (1999), Anne Fernald's "Human Maternal Vocalizations to Infants As Biologically Relevant Signals: An Evolutionary Perspective" (1992), David Huron's "Is Music an Evolutionary Adaptation?" (2001), and the edited collection *The Origins of Music* (2000).[4] This revival is not altogether unprecedented; aspirations to an evolutionary level of explanatory power have gone in and out of fashion over the last 150+ years.[5] Now, evolutionary musicology is back. We have entered a new "speculative" moment, to borrow Kivy's word.

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[3] For examples and discussion see Allen 1962 [1939], Zon 2007 and 2017.
[4] I also point to Justus & Hutsler 2005, Levitin 2008, McDermott & Hauser 2005, Panksepp & Bernatzky 2002, Panksepp & Trevarthen 2009, Patel 2008. An extensive review of literature is given in van der Schyff & Schiavio 2017.
[5] See Ames 2003, Mundy 2010 and 2014, Rehding 2000.

The results of these recent evolutionary speculations have been rich and varied. Rigorous and politically thoughtful studies by Aniruddh Patel (2010), Gary Tomlinson (2015, 2018), and Dylan van der Schyff (2013) have meaningfully advanced our understandings of music's evolutionary history, while also helpfully reinforcing the idea that human diversity and difference are not reducible to genetic or environmental phenomena.[6] But many other recent contributions to evolutionary musicology retain reductive views of the discipline's own history, or else use evolutionary theory misleadingly to describe idiosyncratic musical practices as preordained by biology (Charlton 2014, Miller 2000). For instance, studies that begin with the Darwinian idea that sexual selection holds an outsize degree of causal importance for biological variation have tended to advance controversial adaptationisms,[7] thereby contributing to sketchy interpretations of evolutionary science in a similar vein as "Literary Darwinism" or "evolutionary aesthetics."[8] Some scholars continue to treat non-Westerners and their musical practices as examples of less-evolved musical adaptations.[9] Others continue to describe cultural evolution misleadingly as a teleological line of ascent from primitive musical expression to more advanced forms, much in the same way that Victorian evolutionary scientists like Spencer did.

In re-reading historical evolutionary treatises, I offer a set of critical approaches that can be brought to bear on historical thought, as well as the contemporary convergence of music studies and evolutionary thought. My historical focus is on the nineteenth-century beginnings of evolutionary science in Victorian Britain, where thinkers like Darwin, Gurney, and Spencer

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[6] See my review of Tomlinson's work (Piilonen 2019).
[7] The philosophical terms of evolutionary biology's ongoing debate over adaptationism is captured succinctly in Peter Godfrey-Smith's "Three Kinds of Adaptationism" (2001).
[8] For a valuable critique, see Jonathan Kramnick's "Against Literary Darwinism" (2011), as well as his response to critics (2012).
[9] As much as possible I avoid citing work in the negative because I do not want to give them attention. Exceptions will be made in chapter 6, for the sake of a specific critical argument.

brought music to bear on their discussions of things like the nature of sonic perception, the development of complex speech, and the differences between primitive and advanced forms of social interplay. These early evolutionary scientists consistently deferred to musical structures like tone, pitch, rhythm, harmony, and timbre. Doing so helped them explain in precise terms the border (or non-border) between human and non-human. I pay special attention to the role that emotion often plays therein. Darwin, for one, posits a sexual selection-origin for music, where musical feeling is analogized with amorousness (1871). This facilitates the establishment of a pre-human origin for music in the mating calls of animals and early humans. Gurney organizes his evolutionary account of music around the pleasure of listening to well-made melodies (1880). This leads to a Darwinian account of music psychology, where the pleasure of music can be explained as embodied memories of primal scenes of erotic courtship. Spencer (1902) describes the irritation of having a song stuck in his head as evidence against a classical model of the self—for what rational, self-knowing person would actually *enjoy* having catchy tunes on mental repeat? I draw attention to these musical theories of emotion because they shed light on the ways that emotion was being reconfigured as an element of the human species' evolutionary descent. In my work, I incorporate ideas from recent turns to embodiment and materiality in music studies to probe the ways that evolutionary theorists wrote about musical emotion. In so doing, my work demonstrates how models of perception that emphasize music's corporeal grounding have led to naturalizations of aesthetic judgments as easily as the "incorporeal" models they critique.

Victorian evolutionists saw music as an important aspect of human species-being, in that music served to clarify and complicate ideas about (inter)subjectivity, psychology, language, and

sensation.[10] For Darwin, music is a kind of proto-language that is common to humans and animals alike; he hears the songs of birds and the chirps of mice as musical (1872; 1874). Herbert Spencer, on the other hand, views music as a specifically human stage of evolutionary advance beyond language acquisition (1857). For thinkers like Edmund Gurney, music is a formalized mode of attention that distills and makes perceptible important features of human psychology (1880). And in a tradition that runs from George Eliot to Walter Pater, music is a useful metaphor for interstitial or ineffable things (Eliot 1871, Pater 1888). These competing views establish radically different perspectives on the origin and function of music in human cultural expression. In addition to testing relationships between humans and non-humans, music-evolutionary thinkers participated in an emerging scientific racism that reflected the expansionist mission of imperial Britain. For instance, when Victorian music scholars like Sir Hubert Parry developed evolutionary accounts of music history, they claimed that non-Western musical traditions were the less-evolved precursors to European classical traditions (see, for instance, Parry's *The Evolution of the Art of Music* [1893][11]). Incorporating strategies from feminist, queer, and post-colonial theories, I show ways that historic ideas about music's evolutionary origins have been dehumanizing.

In "Resonating Subjects," I reconstruct historical theories about music and evolution and I describe listening phenomena associated with evolutionary musicology. I do not try to unlock the "truth" of music's origins. Rather I show that ideas about evolution affect how music is heard.

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[10] For accounts of Victorian musical culture and associated themes, see research by Charles Brotman (2005), Ruth Solie (2004), Nicholas Temperley (1988), Bennett Zon (2007, 2012, 2013, 2014a, 2014b, 2017). See also Alexander Rehding's "The Quest for the Origins of Music in Germany Circa 1900" (2000).

[11] In this book's preface, Parry thanks "Mr. Herbert Spencer" in particular "for communications about the dancing and music of savage races" (1905, v).

And I show that how music is heard affects how the human species is imagined in relation to other species.

Evolutionary Claims Are Ontological Claims

One of this dissertation's organizing convictions is that evolutionary claims are ontological claims. By this I mean that they draw on and help to advance ideas about "what music is." In order to explore the ways that evolutionary claims about music can function as ontological claims, one must first accept that "music" is an ontologically unstable category. In Phillip Bohlman's words, "Music may be what we think it is; it may not be" (1999, 17-19). In this dissertation, I argue that when evolutionary thinkers put forward ideas about musical origins—whether this means recovering deep histories of musical traits, reconstructing so-called *Ur*-form of music, explaining music-evolutionary processes, or predicting a musical future based on evolutionary principles—they are implicitly making a case for the very essence of music. My effort to unpack evolutionary musicology's ontologizing potentials is part of a larger imperative for music theorists to grapple openly with the political and ethical consequences of shifting the ground of "music itself." I argue that one way of doing so is by revisiting and critiquing the claims of historical music theories. My focus here is on developing a critical history of evolutionary musicology with an eye toward disrupting and intervening in music-evolutionary questions as they occur in the present.

Throughout this dissertation I work to sensitize readers to evolutionary musicologists' tendency toward "depoliticized speech," to borrow a phrase from Roland Barthes (1972 [1957], 142-56). Depoliticized speech (which Barthes also calls "myth") will tend to describe its object of interest as a natural given, rather than the result of a history that could have been different. To

see de-politicized speech in action, consider a recent confrontation among three music scholars over the idea of political neutrality within musicology. In a 2013 paper, Patrick Savage and Steven Brown proposed a "new comparative musicology" comprised of five major themes: biological evolution, cultural evolution, classification, human history, and universals. A year later, David Clarke critiqued Savage and Brown's proposal on grounds of reductionism. For Clarke, Savage and Brown's model is epistemologically at odds with ethnomusicological modes of inquiry, where scholars "are interested in the *particularities* of a culture and the *actual experience of encounter in the field*" (2014, 11-12, emphasis added). In Clarke's words, a comparative musicology rooted in Savage and Brown's model of cultural evolution would be "based on the abstraction of music and people into data" and it would aspire to a problematic "political neutrality" (2014, 6-12). Savage responded independently to Clarke's critique by doubling down on what he saw as his own "relatively neutral political stance" (2019, 8) contending "it is legitimate to try to limit political aspects in one's published works" (Ibid., 8). Like all depoliticized speech, Savage's model and response presumes no political opposition to its claims and falsely presents its own conclusions as politically neutral. The prefix "de-" in Barthes figuration of depoliticized speech implies an impossible action of removal. This dissertation's reading method inheres the basic conviction that there are no truly apolitical forms of speech. Thus when I say "all evolutionary claims about music are also ontological claims about music," I am inviting scholars to grapple with the political dimensions of their ontologies of music openly.

Evolutionary accounts of music are not just ontologies of music. They are also *ontologies of the human*, in the sense that they invoke ideas about "what a human being is." In the context of Victorian Britain, this can be related to the belief that the development of music tracks with

the emergence of the human from lower forms of life, and thus to the belief that the history of humankind can be recovered alongside an account of the ascent of music. As philosopher Sylvia Wynter (2003) has pointed out, ontological accounts of the human species historically have been poor at describing human difference with any nuance or precision. In her account of the emergence of secular-ontological accounts of the human, Wynter recounts how colonial conquest led to an equation of the human with white Western bourgeois masculinity. Wynter warns against speaking of the human in singular monolithic terms. For her, an Enlightenment notion of humanity that is treated "as if it were the human itself" indexes a problematic recentering of white Eurocentric humanism (2003, 259). In this dissertation, I approach the political and social consequences of ontologizing about musical being through posthumanist and anti-humanist critiques of evolutionary science like Wynter's.[12]

I also draw inspiration from critiques of Ideal Theory leveraged by Charles Mills, who himself borrows from the feminist writings of Onora O'Neill (1987, 1993). In Mills' "'Ideal Theory' as Ideology" (2005), he describes how instances of ideal theory (representations of what things *should* be like) often serve to rationalize a status quo by reflecting "illicit group privilege" (167). I show that early evolutionary theorists' accounts of music and human nature often functioned as instances of ideal theory, such as in Spencer's teleological account of musical progress or Gurney's treatment of melody as the most important element of music. Critiquing evolutionary theories for their tendencies toward ideal theory is nothing new; my work is further indebted to the work of abolitionist and advocate for women's rights Antoinette Blackwell,

[12] See also Tiffany Lethabo King's "Humans Involved: Lurking in the Lines of Posthumanist Flight" (2017), Zakkiyah Iman Jackson's "Review: Animal: New Directions in the Theorization of Race and Posthumanism" (2013), and Tyrone Palmer's "'What Feels More Than Feeling?': Theorizing the Unthinkability of Black Affect" (2017).

particularly her book *The Sexes Throughout Nature* (1875). One of Blackwell's signature claims is that Darwin and Spencer misrepresent the evolution of sex differences by excluding the insights of women scientists. I take Blackwell's cue to reflect critically on the ways that narrow assumptions about gender and sex feed into ideas about the place and function of music in human cultural practice, and vice versa.

So, this dissertation is really about two subjects. The first subject is Victorian evolutionary accounts of music. The second is the cultural legacy of evolutionary musicology, which has become newly relevant to us as we witness the reemergence of the field. This dissertation treats Victorian speculation about music's evolutionary origins as an important laboratory for testing various philosophical problems raised by *all* evolutionary accounts of music. By taking this kind of critical approach, and by paying special attention to the role of emotion in evolutionary writings, I interpret early music-evolutionary theories as a series of strategies that serve to prescribe and reinforce a *felt musical norm*.[13] Put differently, I show that by referencing music as a key example of the nature of evolution, thinkers like Darwin, Spencer, and Gurney implicitly tried to naturalize *what it feels like* to be properly human.

Contributions and Review of Literature

My research contributes to three fields: (1) **evolutionary musicology**, (2) **music theory**, and (3) **critical theory**. (1) To **evolutionary musicology** (the study of music's origins) I read and interpret recent scholarship and I offer a critical history of the field that helps contextualize

[13] To some my work will scan as broadly Foucauldian in orientation (Foucault 1994).

its competing ideas.[14] Recent studies of music's origins tend to be identified as either "adaptationist" or "nonadaptationist." These terms—notably brought to evolutionary musicology by Aniruddh Patel (2010)—distinguish between the idea that music is an evolutionary adaptation (adaptationism) and the idea that music is a cultural invention with no adaptive function (nonadaptationism). I unpack the history and implications of the adaptationist / nonadapdationist division, as well as associated tendencies to demarcate a strict biological or cultural origin for music. I do not seek to advocate for one view over another. Nor do I combine adaptationist and nonadaptationist views into a unified "biocultural" perspective, as scholars like Tomlinson have done. Rather, I see evolutionary musicology as an inherently speculative field where conceptual tensions can be left unresolved.

By thinking historically and critically about the problem of music's origins, I show that music evolutionism—and the divergent ways its logics have been (mis)interpreted—should be considered together, as idiosyncratic "evolutionary" ways of listening. For an example of an evolutionary way of listening, consider evolutionary theorist Geoffrey Miller's often-cited argument that Jimi Hendrix's promiscuous lifestyle is evidence of Darwin's suggestion that music's function is for mate selection (2000). With this claim, Miller propagates an aggressively mechanical relationship between music and sexuality. He sees this musical-erotic fission as a universal truth, verified by "scientific" methods and endorsed by retro-fashionable figures like Darwin. I argue that Miller's quasi-Darwinian view of music is problematic, not just for its gendered and heteronormative assumptions, but for taking too literally Darwin's speculative

[14] In addition to the literature cited elsewhere in this dissertation, I point to Ian Cross' work (2001, 2003, 2005, 2009) as well as the following: Bannan 2012, Brown 2004, Cross & Morley 2009, Davies 2012, Hauser & McDermott 2003, Killin 2016, Morley 2002 and 2013, Panksepp 2009, Peretz 2006, Phillips-Silver *et al.* 2010, Ravignani *et al.* 2014, Schulkin & Raglan 2014, Snowden *et al.* 2015.

comment about music—Darwin himself complicated his musical ideas in *The Expression of the Emotions in Man and Animals* (1872). By showing that Miller's misreading of Darwin and his hearing of Hendrix's music feed into one another, I show that proverbially scientific views of music can emerge from and reinforce seemingly natural ways of hearing music.

(2) Music evolutionism is closely connected to **music theory** and many relevant scholars work across both disciplines.[15] It is surprising, then, that so little attention has been paid to the musical claims implicit within the history of evolutionary thought about music, particularly its nineteenth-century beginnings.[16] My project offers to music studies a method for attending to the role that music has played in ideas about music's evolutionary origins. My primary texts are the early evolutionary treatises that double as theoretical accounts of music's origins, from Darwin's *The Descent of Man* (1871) to lesser-known works by Herbert Spencer and Edmund Gurney; I both close-read these texts and examine their music theoretical claims.

Furthermore, in describing and reflecting on the music theories of these early evolutionary thinkers, I investigate the complex significances they hold for us in the present. For instance, in exploring the import of Spencer's phenomenology of the earworm, I reflect on songs I myself have had stuck in my head (of late: "better off" by Ariana Grande). The pleasure I experience as the conduit for an earworm puts me at odds with at least one recent account of the earworm as a "malfunctioning" of the mimetic processes upon which "we depend for comprehension of speech and music" (Cox 2011, fn. 17). In my dissertation, I delight in such moments of analytical

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[15] One area of music theoretical research that has been key for evolutionary theories of music is the study of beat induction. See, for example, Clark 1999, Fitch 2005 and 2009, Molinari *et al.* 2003, Patel *et al.* 2009, Todd *et al.* 2007.

[16] Works by Charles Brotman, Peter Kivy, and Bennett Zon works are notable exceptions, though my project differs substantially from theirs in terms of its central thematics, relative scope, and interpretive style.

friction, which help reveal the subtler differences between a given pair of music theories, and which engine my dissertation's broader conviction: that music-evolutionism is as much a social and philosophic enterprise as it is a scientific or technical one. Thus my work contributes to both *history of music theory* and *philosophy of music.*

This dissertation also contributes to understandings of music as a material and environmentally-situated phenomenon. For instance, in Holly Watkins and Melina Esse's "Down with disembodiment; or musicology and the material turn" (2015) they advocate for an understanding of musical practice as embodied action; in Maeve Sterbenz's (2017) feminist music-analytic paradigm, the relationship between musical sound and bodily motions figures centrally in constructions and interpretations of musical meaning; and in Peter Martens' (2016) "update" on music theory's turn toward the body, he notes that music theorists have long since moved away from the primacy of written notation and toward music as heard.[17] As many scholars have shown, the turn to music-listener interaction effectively places conceptual emphasis on the individuals and technologies that do the labor of making music. This is sometimes seen as an explicitly political gesture that works to destabilize the hegemony of idealized musical works or of autonomous composer-geniuses.[18] My work participates doubly in

[17] In Martens' review, he advocates for the use of embodied methods in music analysis and credits Andrew Mead's advancement of "Bodily Hearing" in a 1999 issue of the *Journal of Music Theory* for early interest in such ideas, followed by essay collections edited by John Rink (2002) and two issues of *Music and Gesture* (Gritten & King 2006; 2011). This genealogy of "music and the body" offered by Martens is unfortunate, as it does not give credit to the feminist and queer music theorists who engaged the body before it was popular to do so. Martens fails to cite Suzanne Cusick's "Feminist theory, music theory, and the mind/body problem" (1994) and Fisher and Lochhead's "Analyzing from the body" (2002), among others. Sterbenz (2017) implicitly corrects this.

[18] See Born 2010, Butler 2006, Cimini 2011, Cox 2016, Godøy & Leman 2010, Naveda & Leman 2010, Phillips-Silver & Trainor 2005 and 2007, Schiavio 2014, Toiviainen, Luck & Thompson 2009a, and 2009b, as well as edited collections by Bloechel, Lowe & Kallberg (2015)

this turn toward music-listener interaction, 1) by reconstructing Victorian evolutionary theory's perspectives on the embodied and ecological nature of musicality and 2) by building on the interpretive strategies of music scholars like Mark Butler (2014), Eric Clark (1997, 2005, 2012), and Suzanne Cusick (1994, 2008, 2012, 2013) in my own set of music analyses. To give just one example, I show how Spencerism potentiates a radical, relational view of musical emotion, whereby the emotional force of music emerges from the material "correspondence" between listener and musical object and thus is neither entirely here nor there. This undermines the dominant view of musical emotion as *expressed* by either the music or the listener, and opens up new conceptual and interpretive possibilities for music theorists.

(3) While my work shares many features with recent music theoretical work, it is unique in its engagement with and modification of recent scholarship in **critical theory**, specifically the subfields of posthumanisms and affect theories.[19] My research brings music back to the foreground of these research areas, where it otherwise tends to be invoked as an effervescent tool for describing ineffable, ambiguous, or natural things.[20] I balance music's seeming ineffability with the rigorously formalist and socially-engaged approach offered by recent music theory, showing that music's distinct qualities and challenges can enrich conversations about (for example) language, emotion, and identity. This helps me achieve a more implicit goal of my dissertation: extending the cross-disciplinary reach of Music Theory.

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and Jensen-Moulton, Straus & Lerner (2015). For review of embodiment research in music theory, see Kozak 2012.

[19] Texts that have influenced my work include Ahmed 2014, Barthes 1977, Bennett 2010, Braidotti 2013, Brennan 2004, Brinkema 2014, Cumming 2000, Derrida 2008, Halberstam & Livingston 1995, Haraway 1991, Hayles 1999, Langer 1941 and 1953, Massumi 2002, Morton 2010, Pettman 2017, Scott & Wynter 2000, Weil 2010, and Wolfe 2010.

[20] See, for instance, the chapter "Tone" in Sianne Ngai's formidable monograph *Ugly Feelings* (2005, 38-88).

I also cross between the arts and sciences by historicizing scientific views of music's origins.[21] For example, consider Darwin's view of music. Darwin hears certain animal sounds as musical, usually those that exhibit aspects of Western tonal structures. This analogy of the natural world with the concert hall has implications both for his own explicitly aestheticized love of natural order and for the ways Western music is often conceived as modeled on nature.[22] By staging a dialogue between contemporary and historic conceptions of music and evolution, I bring scientific modes of thinking to music, broadly considered, while simultaneously subjecting scientific modes to humanistic scrutiny. I thereby contribute to increasingly urgent considerations of what counts as knowledge, evidence, authority, and truth in musical thought.

Chapter Summaries

The project consists of eight chapters, plus an introduction and conclusion. In **Chapter 1 ("Herbert Spencer Writes to Alfred Tennyson")**, I introduce Herbert Spencer's evolutionary theory of music through an admiring letter (or rather, a thinly veiled request for endorsement) that Spencer wrote to the famous poet laureate soon after publishing his treatise *The Principles of Psychology* (1855). I close-read this letter in order to situate Spencer's theory of perception within the emerging field of Victorian psychology and at the forefront of evolutionary science.

In **Chapter 2 ("Herbert Spencer Versus Charles Darwin")**, I compare Spencer's and Darwin's competing evolutionary accounts of music's origins. Where Darwin understands music as an unconscious proto-language that emerges alongside instinctual urges for domination,

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[21] As a contribution to the history of science, my work is indebted to Thomas Kuhn's landmark book *The Structure of Scientific Revolutions* (1962).
[22] See Suzannah Clarke and Alexander Rehding's edited collection *Music Theory and Natural Order* (2001).

conquest, and sexual reproduction (1871, 1872), Spencer describes music as an advanced province of the human species, which alone possesses the emotional "force" and "variation" (1857, 398-400) necessary for musical expression. In sharpening the distinctions in this evolutionist debate, I offer a close reading of what Spencer sees as an emblematic musical experience: the earworm. For Spencer, having a song stuck in his head is evidence against the idea of a unified personality or "Self," and a blow to the metaphysics of autonomous subjectivity. This accords with his broader theory of emotion—first put forth in his *Principles of Psychology* (1855)—which is "nonsubjective." By nonsubjective, I mean his theory of emotion troubles earlier accounts of the human subject as self-contained, autonomous, and endowed with mental abilities completely unlike those of animals.

Highlighting this nonsubjective dimension to Spencer's theory of emotion is the first signal I make toward an account of how musical emotion was depicted by Victorian evolutionary science. I argue that evolutionary musicologists from Spencer onward grappled with models of musical emotion that present challenges to the human subject's self-containedness. Instead, they emphasized instead the human's dynamic interconnectedness with other entities. Although nonsubjective accounts of emotion have become endowed with a liberatory character through recent affect theory, I show that in the case of early music evolutionism they functioned repressively by naturalizing the ideals of specific musical traditions as biological axioms.

In **Chapter 3 ("ANALYSIS I – A Spencerian Theory of Earworms")**, I develop Spencer's ideas about music, emotion, and subjectivity into a demonstrative analysis of the phenomenon of the earworm. I bring Spencer's ideas about emotion and subjectivity into contact with contemporary studies of earworms, subjectivity, and embodied music cognition in order to excavate some minor aesthetics associated with "stuck song syndrome." Through Spencer's

sense that the earworm represents a kind of intrusion upon the self, I explore ways that earworms vivify a sense of dynamism between subject and external world through sound. I demonstrate that thinking nonsubjectively about emotion can help vivify and complicate colloquially unusual features of human cognition, such as the experience of having a song stuck in your head, and I show how this is generative for music analysis. Importantly, this analysis is foregrounded by the anti-oppressive injunctions described in this dissertation's Introduction and is not meant to be an evolutionary argument about the earworm. Rather, I treat Spencer primarily as a philosopher, in order to explore what kinds of musical meanings are made possible by nonsubjective speculations about musical origins.

In **Chapter 4 ("Music and Language in Spencer's Evolutionary Thought")**, I examine more closely the mimetic theory that undergirds Spencer's injunction, "All music is originally vocal" (1857, 397). By this he means that all music originates in vocal expression, that is, in impassioned speech, which he claims evolved first. In "The Origin and Function of Music" (1857), Spencer tracks a questionable line of ascent from simple vocal exclamations, to complex speech, and finally to music. An increasingly dynamic emotional capacity (one that is specific to the human) gets expressed and evidenced by an equally dynamic musical capacity; Spencer's vision of musical progress tracks with his conception of a special capacity for emotional progress that is unique to the human species.

The Spencerian idea that sonic expressivity evolved teleologically from simplicity to complexity reflects his more general theory of evolutionary progress, and anticipates certain

modernist aesthetic ideologies.[23] Because some of the subtler aspects of Spencer's theory of music demand investigation into his theory of language as well, I spend a large portion of this chapter examining his statements about language. In close-readings of Spencer's essays—such as "Progress: Its Law and Cause" (1881) and *Philosophy of Style* (1884)—I highlight the *mimological* core of Spencer's thought, that is, the idea that language began as sonic imitation of the phenomenal world. "Mimologics" is Gérard Genette's term for theories of language that invoke a mimetic origin or function. By locating Spencer within Genette's much longer mimological tradition—alongside Plato, Gottfried Leibniz, John Locke, and Max Müller, among others—I bring overlooked philosophical dimensions of his mimetic hypothesis to the fore and grapple with them in fresh terms. In **Chapter 5 ("Mimologics in Contemporary Evolutionary Musicology")**, I continue with this philosophical mode of inquiry by reflecting on mimologics latent within recent evolutionary accounts of vocal expression, with special attention paid to Gary Tomlinson's evolutionary musicology.

Chapters 6 and 7 are concerned with what I call the *Darwinian musical hypothesis*—Darwin's idea that music's origins are in sexual selection. **Chapter 6 ("The Darwinian Musical Hypothesis")** examines Darwin's theory of music's erotic beginnings. I open the chapter by critiquing two recent studies where scholars purport to prove the Darwinian musical hypothesis right. In these "strict" interpretations of the Darwinian musical hypothesis, scholars draw on Darwin's ideas about music to prop up misogynist and ethnocentric accounts of musical creativity and progress. I focus my critical reading on their problematic appeals to Darwin and I offer a re-reading of Darwin's ideas that help to show what is interesting about what he has to

[23] Progress, for Spencer, is the principle underlying every aspect of the universe. Music is one example of the human species' advancement beyond "primitive" vocal communication, and apparently beyond the highly emotive forms of speech used by poets and "great orators."

say about music, as well as why he is not the most useful authority on the subject. In *The Descent of Man* (1871) and *The Expression of the Emotions in Man and Animals* (1872), Darwin postulated that music plays a primeval role in sexual selection and procreation. Having observed the sonic behaviors of animals during mating season, Darwin extrapolated their meanings to early humans, arguing that musical displays are emblematic of the strong emotions that define both human and non-human courtship rituals.

While my attitude toward what I call strict readings of the Darwinian musical hypothesis is negative, I nevertheless want to explore the music-analytical potentials Darwin's metaphorical equation of musical feeling with erotic sensation, in order to formulate alternate uses of the Darwinian musical hypothesis. In **Chapter 7 ("ANALYSIS II – Music As Sex")**, I develop an approach to the Darwinian musical hypothesis that emphasizes Darwin's metaphorical equation of music with sex, rather than his adaptationism. With recourse to recent feminist and queer theory, I develop a Darwinian analogy between music and sex that is not reducible to reproductive instinct.

I focus on erotic listening experiences of my own, with recourse to recent phenomenological approaches to music analysis like Kate Heidemann's (2016). I focus my analytical attention on a track that is famous for invoking sexualized listening experiences: Jeremih's "All The Time" (featuring Lil Wayne and Natasha Mosley). Wanting to compare my own experiences listening to this song with the experiences of others, I turn to track commentaries available on the internet, specifically in YouTube comments. By reflecting on ways that YouTube commenters use ordinary language to develop and exchange ideas about musical eroticism, I clarify and complicate what it means to listen in an erotic way. I pay special attention to YouTube commenters' uses of the term "mood," which I understand to mean "the

feeling of the whole song" or "the atmosphere or pervading tone of the track." I develop an analytical tool, *listening for mood*, that reflects and modifies colloquial descriptions of "the feeling of the whole song." Ultimately my analysis of what sounds sexy about "All The Time" adds up to an argument about the Darwinian musical hypothesis. Music's eroticism can be conceived as a dynamic element of musical life that is contingent upon the specific contexts in which the music is heard, and thus often curves the expectations established by strict Darwinian readings. I argue that even when musical experiences are directly sexual, this does not automatically ratify Darwin's musical rule. My analysis thus affirms a queer injunction offered in author C.E.'s radical manifesto "Undoing Sex": "*If there is something of a species-being that remains in me, it seems irretrievably lost*" (2012, 31).

In **Chapter 8 ("Edmund Gurney's Darwinian Music Formalism")**, I examine Edmund Gurney's account of music in *The Power of Sound* (1880) as an instance of ideal theory, in Mills' sense. I pay special attention to Gurney's Darwinian treatment of musical form, which differs meaningfully from stereotypes about formalism that have recently led to a widespread suspicion of analytical programs that examine "the music itself."[24] Gurney developed Darwin's ideas about music's origins in sexual selection into a theory of musical pleasure, according to which music arouses a special mode of ineffable feeling that dimly recalls primal scenes of courtship and domination. In this chapter, I extract Gurney's Darwinian theory of musical pleasure and I probe his brand of music formalism.

At this dissertation's conclusion, I define what I call the "post-Darwinian" state of music evolutionism. In the post-Darwinian age, it can be argued that our music theories must consistent with the fact of evolution. And yet the history of music evolutionism shows us that evolutionary

[24] See, for instance, Joseph Kerman's "How We Got Into Analysis, and How to Get Out" (1980).

theory can be an especially limiting way of engaging with music. Being post-Darwinian is especially interesting for music theorists, given that our field has historically seen itself as half science and half art.[25] I point to the present state of thought about musical origins, from evolutionary theorist Steven Pinker's hearing of music as evolutionarily useless (1995), to new empirical studies of music's evolutionary proliferation,[26] to philosopher Kathleen Higgins' sense that music can help people become "more humane" by virtue of its shared natural origin (2012). Ultimately my work reinforces the idea that music has as much power to alienate as it does to bring together. In other words, even if music can be conceived as a singular monolithic thing, or a "universal language," it has never guaranteed universal understanding.

[25] This is especially evident in the collection of essays that comprise the *Cambridge History of Western Music Theory* (2002).
[26] See, for instance, research being published through Harvard's The Music Lab.

CHAPTER ONE

Herbert Spencer Writes to Alfred Tennyson

Shortly after Herbert Spencer published his *Principles of Psychology* (1855), he penned a letter to the poet laureate Alfred Tennyson:

> I happened recently to be re-reading your Poem 'The Two Voices,' and coming to the verse
>
> "Or if thro' lower lives I came—
> Tho' all experience past became
> Consolidate in mind and frame—"
>
> it occurred to me that you might like to glance through a book which applies to the elucidation of mental science the hypothesis to which you refer. I therefore beg your acceptance of *Psychology,* which I send by this post. (Duncan 1908, 101)

Unfortunately for Spencer, any perceived affinities between him and Tennyson were strictly unidirectional. Tennyson never wrote back and most of the pages of his copy of Spencer's *Psychology* were left uncut (Tate 2009, 61-62). Tennyson appears not to have made it past Part I, where Spencer describes human mental action as an embodied product of evolution, rather than an immaterial or divinely-given phenomenon. Had Spencer anticipated how short Tennyson's attention span would be, he might have urged the poet to begin with Part III, the "General Synthesis." In Spencer's *Autobiography,* he notes: "Part III was written first: the reason being, I believe, that it contained the fundamental conception which pervades the entire work; and I was anxious to put this conception down on paper in its complete form" (1904 vol. 1, 536). This