

# Music in Nature and Nursing: Musico-Philosophical Perspectives on the Ontological Dichotomies of Charles Darwin and Florence Nightingale

Izumi Dryden

## Abstract

This paper explores the musical interests of Charles Darwin and Florence Nightingale, two prominent figures of nineteenth-century England, through the lens of Generative Anthropology (GA). Darwin, in *The Descent of Man* (1871), classified animal voices and sounds as music, viewing them as evolutionary tools for communication and survival. Nightingale, in *Notes on Nursing* (1859, 1860), recognized the therapeutic roles of sound--particularly music--in patient care, emphasizing the importance of sound in the life-preserving processes of healing.

Both Darwin's and Nightingale's musico-philosophical perspectives, when analyzed through GA, reflect deeper ontological tensions within human culture. Eric Gans's concept of the "originary scene" (*Signs of Paradox* 101), where symbolic communication first emerged to prevent conflict, helps frame their views. For Darwin, music is part of the evolutionary process, a means of creating social bonds essential for species survival. Nightingale's focus on sound in healing aligns with GA's emphasis on the "deferral of violence" (*The End of Culture* 147) and the preservation of life through shared cultural practices.

In both perspectives, music serves as a tool for "deferring conflict" (*The End of Culture* 129)—whether through evolutionary adaptation or therapeutic care—in line with GA's understanding of how symbolic forms maintain social cohesion. Darwin and Nightingale illustrate how music, as a cultural phenomenon, bridges the creative forces of evolution and the life-sustaining efforts of nursing, embodying GA's focus on the origins of human culture and its role in maintaining social order.

**Keywords:** Charles Darwin, Florence Nightingale, Eric Gans, Music, Ontological dichotomy

\* \* \*

## Introduction

In the framework of Generative Anthropology, the lives and experiences of Charles Darwin (1809-1882) and Florence Nightingale (1820-1910) can be reinterpreted as embodying key anthropological insights that resonate with their intellectual and personal journeys.

Generative Anthropology (GA), as developed by Eric Gans, explores the “originary event” that gave rise to human culture, language, and sociality through acts of representation, particularly the shared experience of mimetic desire and the resolution of conflict through symbolic exchange. By focusing on the parallels between Darwin and Nightingale, their shared traits--especially their profound interests in music--can be understood in light of the GA framework, where music itself becomes a form of communal expression linked to human origins.

The present study focuses on a significant common interest in sound--music and noise--that Darwin and Nightingale pursued during their “invalid years,” when they had ample time to reflect upon their relatively early groundbreaking experience and then expound upon it in major publications during middle age. Both regarded music not as a diversion, but as a serious influence on matters of life and death that significantly impacted their respective disciplines. As a naturalist, Darwin claimed that animal voices and sounds should be regarded as music. He discussed the evolutionary value of music in *The Descent of Man, and Selection in Relation to Sex* (1871), which was effectively the sequel to his more widely known work, *On the Origin of Species* (1859). Similarly, Florence Nightingale, as an advocate of professional nursing and public health reform, expressed strong views on the therapeutic value of various kinds of sound, musical and otherwise. She evaluated sound--music and noise--in nursing contexts in her own magnum opus, *Notes on Nursing: What It Is, and What It Is Not* (1859, 1860), a much-reprinted bestseller that first appeared in the same year as Darwin’s own landmark (and also bestselling) work.

By examining the common interest in music that Darwin and Nightingale shared, the present study considers what I call their “musico-philosophical” perspectives as ways into understanding the “originary event” of music. From the lived experiences and reflections of these two eminent Victorians, a critical distinction emerges, dividing sound into “music” and “noise.” The naturalist Charles Darwin found music in the animal sounds that propagated life, while he regarded general noise as sounds that might threaten a species’ reproductive success. By contrast, the nursing and public health advocate Florence Nightingale distinguished between music as sound that healed patients and noise as sound that could harm and even kill them. Beyond simple survival, however, music can provide human beings with transcendent sacrality. The converging musico-philosophical perspectives of Darwin and Nightingale inform a deeper understanding of this sacrality and may offer clues to the elusive origin of music itself.

Both Darwin and Nightingale were keen observers of life and deeply engaged with consequential social and scientific issues of their day. Their engagement with music suggests that sound and rhythm might serve as foundational human activities, reflecting

Gans's idea of "the scenic imagination" and the role of imitation in forming human culture. Darwin saw music as an evolutionary phenomenon, integral to natural selection, with animal sounds contributing to survival and reproduction. In contrast, Nightingale, drawing on her nursing experiences, recognized music as a therapeutic tool, distinguishing between healing sounds and harmful noise in the clinical context. This distinction between "music" and "noise" aligns with Gans's notion of the sacred and the profane in the human social order, where representation plays a crucial role in resolving tensions.

Darwin and Nightingale shared some crucial life experiences, the details of which may clarify their achievements in relation to Generative Anthropology. Both achieved exceptional early renown--Darwin for his reports of his naturalist findings on his circumnavigational exploits while he was still in his twenties; Nightingale for her highly publicized nursing mission in Turkey during the Crimean War when she was in her mid-thirties. Both subsequently suffered mysterious debilitating illnesses during their transition from youth to middle age, followed by decades spent as invalids. As the medical academic and historian George Pickering begins, "Charles Darwin and Florence Nightingale were treated as suffering from organic disease throughout their lives. . . "(33). Pickering then proposes that both Darwin and Nightingale were, in fact, suffering from "psychoneurosis" which, left undiagnosed and untreated, prolonged their periods of invalidism. Their disorders--which included obsessive/compulsive symptoms--enabled them to manipulate others and secure their own agency and autonomy, making them highly productive in ways that mattered most to them. Pickering concludes:

Unless the reader fully appreciates this he will not understand the extraordinary contrast between the vigor and the invalidism that characterized the earlier and later periods of the lives of Charles Darwin and Florence Nightingale. (33)

In his young manhood, a strong and healthy Charles Darwin literally circled the globe. Freshly graduated from Cambridge and still in his twenties, Darwin served as ship's naturalist on the nearly five-year survey expedition of HMS *Beagle* between December 27, 1831, and October 2, 1836. This voyage of discovery, near the end of the age of sail, took Darwin to the eastern, southern, and western coasts of South America, the South Pacific, the Indian Ocean, and the southern and western coasts of Africa. Darwin encountered astonishingly rich varieties of flora, fauna, and geology, as well as great human cultural and physical diversity. From Darwin's remarkable encounters with the natural world and human cultures, the evolutionary theory would grow. But Darwin's horizons suddenly narrowed, as his vigorous youth was cut short early and mysteriously:

Between the ages of thirty and thirty-three [Darwin] became an invalid recluse, which he remained till he died. Before this illness he conceived, and during this illness he perfected, the idea on which his fame depends, and wrote a prodigious number of other learned books. The nature of his illness has given rise to much speculation. . . .

(Pickering 34)

The speculation led, in the twentieth century, to the theory that Darwin's illness had an origin in psychoneurosis which Darwin used as a "social weapon" to secure undivided attention to his work on evolutionary theory (Pickering 83-95). Darwin spent well over the second half of his life in relative seclusion, during which he produced most of his prolific scientific publications. He was sustained by the loving presence of his wife and children in the life they shared at their spacious home and grounds in the Kentish countryside.

Florence Nightingale's life paralleled Darwin's in a number of striking ways, starting with a youth spent in travels to what were once called "exotic" lands, though her destinations differed greatly from his. Young Nightingale's wealthy parents took her and her elder sister on several extended grand tours of Europe--starting with a prenatal journey for Florence, as she was named after the Tuscan city in which she was born. Later in her young adulthood she ventured even farther though the Mediterranean world to Egypt, Greece, and Turkey. These were destinations geographically and ethnographically far from Britain, and Nightingale had transformative experiences there. Her most significant experience was the nursing mission that she led at British military hospitals in districts of what is now modern Istanbul during the Crimean War, for nearly two years from October 1854 through July 1856:

[Nightingale's] selfless devotion brought comfort, and indeed life, to thousands of sick and wounded British soldiers in the Crimean War, and whose energy and example founded nursing as a skilled and respected profession. (Pickering 99)

Nightingale's outstanding achievements in her mid-thirties, which established her early fame, were, like Darwin's exploits in his twenties, followed by a sudden health crisis that led to chronic disability throughout middle age and into old age, with decades of bedridden seclusion:

[But], on her return from Scutari, a national heroine at the age of thirty-six, she became first a recluse and then an invalid under sentence of death. She did not re-emerge into the world until she was sixty, to die at ninety. (Pickering 99)

Through her long periods of enforced isolation, again like Darwin, Nightingale worked from a sickbed and maintained a highly productive professional life as a writer and spokesperson for the social causes she supported. In another parallel with Darwin's life, Nightingale spent her invalid decades in relative comfort, which, for her, meant well-appointed flats in Mayfair and similar upscale districts of London. Pickering argues from medical evidence that Nightingale's illnesses, like Darwin's, had psychoneurotic origins, and that she used her illnesses as a weapon to browbeat government officials and keep relatives from interfering with her obsessive work habits (165-177).

The many commonalities in the lives of Darwin and Nightingale were not entirely coincidental. Both descended from families of well born and well-off English gentry who were acquainted and even, on occasion, met socially. In the many ways that Darwin's and Nightingale's lives overlapped, however, the crucial similarity was that both of them refused to be defeated by the infirmities of disability that followed closely upon their youthful successes. Instead, for the most part, they stoically faced their personal ordeals involving pain, seclusion, and intimations of mortality--their personal ontological dichotomies. They even made practical use of their physical and psychological infirmities to assert their independence and satisfy their need for solitude. In such ways, they also managed to transform their extraordinary achievements in youth into something even grander by middle age and beyond, putting their life's work in the service of causes larger than themselves.

The experience of chronic illness, both physical and psychoneurotic, that Darwin and Nightingale endured was not just a personal ordeal but a critical opportunity for reflection on human existence. The chronic suffering of Darwin and Nightingale might be regarded as an "ontological sickness" with a mimetic origin, not between Darwin and Nightingale themselves but between each one of them and certain objects in their separate fields of experience. Mark Anspach, writing as René Girard's editor, cites and interprets observations made by Girard in *Deceit, Desire and the Novel*:

"The sickest persons are always the ones obsessed with the sickness of Others". . . . But the disease that [Girard] diagnoses in his first book is an "ontological sickness"; it is the chronic suffering caused by the deep-seated sensation, endemic to novelistic heroes, that they lack *being*. (Anspach xxxiii)

Darwin and Nightingale, of course, were not self-absorbed heroes of Romantic novels; they were renowned public figures of their day. Nevertheless, their chronic suffering may be seen as an "ontological sickness" that stems from the human condition itself—a persistent tension between the ontological dichotomies of lack and desire, creation and destruction, survival and transcendence. Their intellectual work, produced during their invalid years, was a way of turning a figurative "ontological blade" upon themselves, a transformative act of wisdom and self-sacrifice that elevated their respective disciplines and themselves.

The concept of mimesis, central to Generative Anthropology, finds common ground in the lives of Darwin and Nightingale. As Gans explains, the "positive mimetic moment of pity" arises when one person empathetically identifies with another's suffering, asserting, "To pity someone is to 'feel his pain,' to put oneself in his place" (*The Scenic Imagination* 53). This empathetic identification is evident in both Darwin's reflections on natural life and Nightingale's dedication to nursing. Darwin's observation of animal life and the evolution of species through natural selection was an intellectual act that arose from understanding life's fragility, including his own. Nightingale's commitment to public health and nursing reform was similarly shaped by her intimate knowledge of suffering and mortality from her

years in the Crimean War and her subsequent illness. Darwin's and Nightingale's personal confrontations with the dichotomies of life and death informed their professional commitments to the betterment of human life, echoing Gans's view that the human desire for transcendence is grounded in the representation of life's most fundamental crises.

In the context of their shared interest in sound, Darwin's and Nightingale's "musico-philosophical" perspectives may provide insight into the originary event of music, an act of representation that transcends mere survival. Darwin viewed the animal sounds of the natural world as part of the evolutionary process, where music could promote reproductive success, while noise threatened it. Nightingale, on the other hand, saw music as a tool for healing and viewed harmful noise as anything that threatened the healing process and endangering life. This distinction between music and noise, between sounds that sustain life and those that threaten it, aligns with Gans's broader understanding, through GA theory, of the sacred and the profane in human culture. Music, in this sense, is not just a survival mechanism but a form of transcendent sacrality, linked to the originary event where human beings first came together in a communal act of representation.

Examining the lives and work of Darwin and Nightingale through the lens of Generative Anthropology may bring into sharper focus the ways that their musico-philosophical perspectives lead to a deeper comprehension of the elusive origins of music. Darwin's and Nightingale's reflections on sound, life, and death reveal a shared commitment to the transcendent aspects of human existence, providing clues to the role of music as a symbolic representation that has shaped human culture since its beginnings. As Gans notes, "Generative anthropology is a new way of thinking, but only in the sense that it thematizes an activity that has gone on since the origin" (*Signs of Paradox* 97). Darwin and Nightingale, through their intellectual and personal struggles, contributed to this ongoing inquiry into the origins of culture and the sacred significance of music in human life.

## 1. Darwin's Perspectives on Music

In relation to Generative Anthropology, Charles Darwin's recognition of the life-sustaining powers of music in nature can be viewed as an exploration of the ways that sound and rhythm contribute to the evolutionary process. Combining biology and musicology, Bernie Krause observes that in *The Descent of Man*, Darwin "imagined the evolutionary connection between human music and emotion, [asserting] that some of the meaning of music is sexual. . . . and seemed to think that music was an evolutionary adaptation" (Krause 118). Steven Mithen takes musico-anthropological matters further, concluding from *The Descent of Man* that music is a product of sexual selection:

Music has long been associated with sex, whether we are dealing with the works of Liszt or Madonna. Is this modern role of music telling us something about how the capacity for music evolved? Charles Darwin thought so: It appears probable that the

progenitors of man, either the males or females or both sexes, before acquiring the power of expressing mutual love in articulate language, endeavoured to charm each other with musical notes and rhythm. (Mithen 176)

Darwin's observations suggest that music plays a role in sexual selection, an insight that reflects the generative anthropological emphasis on the originary event, where human culture, including language and music, emerges to defer violence through representation and shared meaning.

Darwin's insight that music is an evolutionary adaptation, particularly in its role within courtship, implies that music serves not only as an aesthetic or emotional experience but also as a biological necessity for the survival of any species. This view aligns with Eric Gans's theory of the originary event, which posits that human culture—including its aesthetic forms—originated as a means to mediate conflict and ensure communal survival. By associating music with emotional and reproductive success, Darwin is indirectly alluding to the ways that shared cultural experiences, such as music, help to defer rivalry and violence, allowing for the continuity of life.

Throughout *The Descent of Man*, Darwin's descriptions of the musical powers of animals highlight the role of music in courtship rituals across various species, from birds to insects to primates. In his view, these musical behaviors contribute directly to reproductive success, illustrating how music—like language—emerges from the biological drive for survival. Darwin speculated that early human ancestors used musical notes and rhythms as precursors to articulate language, effectively engaging in what could be seen as an early form of symbolic communication. In *Generative Anthropology*, the connections among music, sound, and human communication are pivotal. Music functions as a form of representation that transcends mere survival, establishing a sacred or communal space where individuals negotiate desires and conflicts without resorting to violence. Darwin suggested that “even mice can handle major and minor keys to produce music by controlling musical notes such as C sharp, C natural, D, and B (two flats)” (634), underscoring the biological roots of music across species.

Darwin's descriptions, in his own words, of the “musical powers” of animals in *The Descent of Man* highlight the role of music in courtship rituals across various species, from birds to insects to primates. In his view, these musical behaviors contribute directly to reproductive success, illustrating how music—like language—emerges from the biological drive for survival. For example, Darwin described the insect species Homoptera and Orthoptera (i.e., cicadas and crickets, respectively) attempting sexual selection with their “sound-producing organs” and “musical instruments” which they used “not only for calling the females, but apparently for charming or exciting them in rivalry with other males” (373). Similarly, in birds, he noted that typically a male “charms the female by vocal or instrumental music of the most varied kinds” (407), reinforcing the connection between music and reproduction.

Darwin went even further in *The Descent of Man* to assert that “the males of various birds practice, during their courtship, what may be called instrumental music,” elaborating that “the male hoopoe (*Upupa epops*) combines vocal and instrumental music” in its courtship displays (424-425). Darwin’s examples of musical behaviors across species illustrate how these displays function as a form of communication and attraction, linking music to reproductive success in a way that mirrors the emergence of culture and language in human evolution. From birds to insects, the importance of courtship music in nature is undeniable, Darwin concluded: “From the curiously diversified means for producing various sounds, we gain a high idea of the importance of this means of courtship” (557).

In the section of *The Descent of Man* which is aptly titled “Voice and Musical Powers,” Darwin presented copious data about music as an evolutionary force across an immense range of species from fish to mammals, culminating in observations about the distinctive music of the higher primates and implying a bridge between these creatures and humans. Darwin claimed that “the gibbon has an extremely loud but musical voice” (633) and cited among his concurring experts a certain Dr. Waterhouse who noted:

It appeared to me that in ascending and descending the scale, the intervals were always exactly half-tones; and I am sure that the highest note was the exact octave to the lowest. The quality of the notes is very musical; and I do not doubt that a good violinist would be able to give a correct idea of the gibbon’s composition, excepting as regards its loudness. (633)

For corroboration, Darwin cited another fellow researcher: “Professor Owen, who is a musician, confirms the foregoing statement, and remarks, though erroneously, that this gibbon ‘alone of brute mammals may be said to sing’” (633). As Darwin concluded, “It is probable that it [the gibbon] uses its musical powers more especially during the courtship” (634). In Darwin’s musico-philosophical view, the essentially blind operation of natural selection is the site of the evolutionary drive for reproductive success--which, while not exactly love, is nevertheless a process that takes center stage in the originary scene of music derived from the natural world.

Darwin’s observations on the distinction between noise and music further contribute to a generative anthropological framework. In *The Descent of Man*, Darwin explored how musical sound is distinct from mere noise, which is chaotic and potentially life-threatening:

A critic has asked how the ears of man, and he ought to have added of other animals, could have been adapted by selection so as to distinguish musical notes. But this question shows some confusion on the subject; a noise is the sensation resulting from the co-existence of several aerial ‘simple vibrations’ of various periods, each of which intermits so frequently that its separate existence cannot be perceived. It is only in the want of continuity of such vibrations, and in their want of harmony inter se, that a



noise differs from a musical note. (634)

In effect, Darwin argues, music can be distinguished from mere noise, and with significant consequences. The “powers of music” serve the evolutionary process of natural selection by favoring individuals that produce more harmonious rhythms than their rivals. This seems to be the determinate explanation of musical courtship rituals in the copious examples of many species that Darwin documents. Darwin’s reflections on music in nature, with animal courtship as an implied correlative to human cultural behavior, can be understood through the lens of Generative Anthropology as an exploration of how music—in both nature and human culture—originated as a deferral of conflict and a mechanism for survival. The next section considers how the crucial distinction between noise and music operates in the world of human culture, specifically in nursing care, with music again providing a deferral of conflict that allows harmony and social cohesion to emerge.

## **2. Nightingale’s Perspectives on Music**

While Darwin attended to music in the natural world, Nightingale focused her musical interests on the concert hall and the hospital ward. Nightingale loved orchestral music and was especially fond of opera. Indeed, it is fair to say that her love of opera contributed materially to the founding, in 1860, of Nightingale’s training school for nurses, a pioneering project in its time which still exists in expanded form in London today. Prominent among her nursing school’s original fundraising efforts were the heavily attended benefit concerts given by Nightingale’s friend and patron Jenny Lind, the internationally celebrated opera singer known as the “Swedish Nightingale.” (The epithet referred to Lind’s exceedingly beautiful voice that was widely praised for rivalling melodious birdsong. Lind’s epithet was only coincidentally the same as Florence Nightingale’s surname--though the happy coincidence surely strengthened the bonds between the two women.)

In the context of Generative Anthropology, it is possible to interpret Florence Nightingale’s engagement with music, particularly in the therapeutic settings of hospitals, as a reflection of the human capacity to transform basic evolutionary instincts—such as those described by Darwin—into cultural practices that serve higher purposes, particularly healing and care. While Darwin explored music’s evolutionary role in the natural world, emphasizing its connection to courtship and survival, Nightingale exemplified how cultural appropriation of this biological phenomenon extends into human society, particularly in the realms of health and empathy.

Generative Anthropology proposes that human culture originates from the deferral of violence through symbolic representation. In this light, for both Darwin and Nightingale, music can be seen as a key element in the origin of human communication, evolving from its primal forms into more complex structures that foster community, cooperation, and wellbeing. Darwin observed that animals use music-like behaviors in courtship rituals,

suggesting that these sounds evolved to communicate emotions and intentions, ultimately enhancing survival and reproduction. This “originary scene” of music in nature parallels Nightingale’s practical use of music in hospitals, where she transformed primal noise into a healing force—helping patients recover, both physically and mentally.

Nightingale’s rejection of unnecessary noise and her advocacy for soothing, harmonious sounds in hospitals are prime examples of the human capacity for creating peace and harmony out of chaos. As Nightingale explained in *Notes on Nursing*, in her practice of nursing she recognized that noise could trigger stress, anxiety, and even death, thereby likening discordant sounds to a form of violence that must be controlled or deferred:

Unnecessary noise, or noise that creates an expectation in the mind, is that which hurts a patient. . . . Such unnecessary noise has undoubtedly induced or aggravated delirium in many cases. I have known such. In one case death ensued. . . . [Noise] is a long whispered conversation, within sight of the patient. (71-73)

The precise and metaphorically truthful representation of extended noise as “a long whispered conversation” is especially telling, as it reveals Nightingale’s formidable capacity for empathy, her ability to get inside the heads of her patients and understand them and their needs in ways that could fairly be described as “phenomenological.” Ever pragmatic in the lessons that she drew from experience, Nightingale asserted:

A good nurse will always make sure that no door or window in her patient’s room shall rattle or creak. . . . Unnecessary noise is the most cruel absence of care which can be inflicted either on sick or well. . . . [and] injures a sick person much more than necessary noise. (74-75)

At a time in the history of medicine when germ theory was still not yet understood, Nightingale showed a highly sympathetic understanding of the need to protect patients from invasive harms that *could* be detected and against which countermeasures could be taken to improve patients’ chances of recovery. Accordingly, Nightingale declared that a nurse must be a master of all kinds of sounds, as sound is a condition of hospitals and sickrooms that can be observed and ameliorated by alert and capable nursing. Such attention to the small but significant details of patients’ wellbeing--details that literally can bear on matters of life and death--indicate the extent to which Nightingale regarded nursing as a sacred art. This sacrality flowed from a charitable love for one’s fellow creatures, a conviction arising from Nightingale’s most deeply held religious principles of Christian *caritas*.

Nightingale knew from experience that certain noises could kill patients. (As a meaningful side note, lethal “obstacle noises” appear in the literary works of subsequent twentieth-century British writers--the life-denying cacophony in Anthony Burgess’s *1985* (1978) and the ambiguous echoes in caves that destroy human relations in E. M. Forster’s *A Passage to India* (1924)--as mentioned in previous GASC presentations of mine.)

Conversely, Nightingale found that music, particularly continuous and melodious sounds, could act as a tool for deferring this violence, promoting healing by regulating patients' environments and mental states. Nightingale's observations on the therapeutic value of music in patient care are consistent with the generative anthropological notion that symbolic systems--music, here--can mitigate conflict and support the community's well-being. She wrote in *Notes on Nursing*:

The effect of music upon the sick has been scarcely at all noticed. . . . Wind instruments, including the human voice, and stringed instruments, capable of continuous sound, have a generally beneficent effect--while the piano-forte, with such instruments as have no continuity of sound, has just the reverse. The finest piano-forte playing will damage the sick, while an air, like "Home, Sweet Home," or "Assisa a' piè d'un salice" on the most ordinary grinding organ will sensibly soothe them--and this quite independent of association. (82)

In her views on the therapeutic value of music, as in many other ways, Nightingale showed herself to be ahead of her time. For many decades now, musical therapy has been recognized as an effective supplemental treatment to promote healing. Trained and licensed musical therapists can be seen and heard in modern hospitals. They perform musical selections that have been chosen specifically to treat their patients' ailments, much as medical doctors prescribe exactly measured doses of medicine.

Well before the luxury of customized musical therapy became available, Nightingale understood the general value of music for patients in her own most active years of nursing in the 1850s--long before musical recordings played by phonograph had even been imagined:

Music, to the well, who ought to be active, gives the enjoyment of active life, without their having earned it. Music to the sick, who cannot be active, gives the enjoyment and takes away the nervous irritation of their incapacity. (82)

Just as Darwin emphasized the evolutionary role of music in sexual selection, contributing to the propagation of life, Nightingale recognized music's therapeutic powers through its role in sustaining life. Her use of music in hospital settings reflects the transformation of a natural, evolutionary impulse into a culturally mediated practice aimed at improving health and extending life—a kind of cultural adaptation that serves the broader human community.

Nightingale's views of Darwin's theory of evolution itself, however, were highly critical early on, though they evolved over time. Nightingale's biographer and editor Lynn McDonald observes that "Nightingale late in life used the expression 'evolution theory' in a much broader sense than the Darwinists" (*Society and Politics* 653), suggesting her eventual acceptance of the principle of evolution, albeit with modifications:

Nightingale was interested in the history of science and had a reasonable lay person's acquaintance with the scientific issues of her time. She made frequent references to scientists in her unpublished notes, especially of physicists Isaac Newton and Michael Faraday. Her disapproval of Charles Darwin, whose *Origin of Species* was published in 1859, was based not on any conventional objections to the theory of evolution, but on a disagreement as to the facts: "Darwin has got no true principles because he had only one true fact and [a] hundred false ones." (McDonald, *First Hand* 30)

Nightingale's views on Darwin, however, were not entirely static. As McDonald explains, "Initially, Florence Nightingale entertained some highly negative views of Charles Darwin, but as she gradually came to appreciate his work, including his views on music, she 'relented on Darwin later in life'" (*Society and Politics* 652). Yet, as revisionist biographer Hugh Small observes, Nightingale's opposition was also rooted in deeper philosophical differences: "Charles Darwin believed in the inheritance of acquired characteristics and favoured the annihilation of inferior races. That was not what Nightingale believed with her well-developed social conscience and her religious faith in the perfectibility of the common man" (93).

In GA terms, the hospital ward becomes a microcosm of society's larger efforts to defer violence through structured, harmonious activity, where the powers of music are harnessed to maintain peace, order, and life itself. Nightingale's insights, like Darwin's, help illustrate how deeply intertwined music is with human evolution and culture, offering a bridge between the biological imperatives of survival and the cultural creations that enrich human life. Music, whether in courtship or in healing, operates as a symbolic force that defines and strengthens human bonds between individuals and across communities, working to defer the threats of disorder and violence inherent in both nature and society.

### **3. Music in Darwin and Nightingale: Further Generative Anthropological Perspectives**

In the previous sections, the musico-philosophical views of Darwin and Nightingale have been interpreted through the lens of Generative Anthropology, particularly regarding the ontological dichotomies central to their thoughts. Darwin's emphasis on the evolutionary significance of music and Nightingale's belief in its therapeutic value both arise from existential tensions—matters of life and death that they both confronted personally. These unresolved dichotomies risked the emergence of polarizing, even violent, reactions to Darwin's theory of evolution, such as those that strained the relationship between Darwin and Nightingale for years.

This notion of dichotomy is echoed in other cultural spheres. Eric Gans, in "Art and Entertainment" (1994), critiques the high art/popular entertainment divide, noting that this false dichotomy rests on sociological constructs. He asserts that the division between mass

and elite culture mirrors the ontological dichotomy within individuals, and its resolution depends on “an ongoing process of freedom through self-understanding” (51-52). Gans suggests that resolving such dichotomies involves an inward psychological transformation, an honest reflexivity leading to greater self-understanding. This internal resolution may require an outward mediation, informed by deep self-assessment and openness to change.

Revisiting the lives of Darwin and Nightingale, both figures faced existential crises—balanced on the edge separating life and death—that transformed formerly abstract dichotomies into personal, daily realities. Being separated from the world in which they had once thrived was an especially cruel irony. Both suffered prolonged bouts of what would now be diagnosed as clinical depression, but from this suffering emerged a deepened self-understanding that contributed to the composition of their major published works. Darwin’s reflections on the evolutionary role of music in *The Descent of Man* and Nightingale’s observations on the healing powers of music in *Notes on Nursing* are important insights in these landmark works that integrate their experiences of private seclusion, illness, and philosophical introspection. Nightingale’s conviction that human beings must remain faithful and subservient to God informs her understanding of nursing as a divine calling, but her contribution to medical science also reveals a profound self-transformation, aligning music with a new psychological dimension of care. For Nightingale, music in nursing could assist, much like a midwife, at a patient’s transformation into a “new self” by alleviating the invisible fears and torments caused by noise.

Both Darwin and Nightingale, in their own ways, struggled with the internal noise of their own minds—voices they wished to speak but could not. Over time, both figures overcame these inner torments and transcended their existential dilemmas, finding “life” within the ontological dichotomy. Gans, in *The End of Culture*, identifies the zero-sum dynamic at the heart of social change, which echoes Darwinian concepts of survival: “Because social evolution takes place in a universe of competing societies, it may be explained on the basis of the Darwinian ‘null-hypothesis’ of the survival of the fittest” (147). This principle of competition, where one side’s gain is another side’s loss, can also be applied to the division between music and noise. If music and noise are considered from this Darwinian perspective, they can be understood as metaphysical representations of life and death. The musico-philosophical perspectives of Darwin and Nightingale thus reflect a deeper existential struggle between these dichotomies.

Following Nightingale’s principles, contemporary medical professionals apply music therapy to heal both the physical and psychological divides in their patients, using sound to restore health by resolving ontological tensions. The French psychiatrist Jean-Michel Oughourlian observes that music “attracts attention” (114), and this automatic human response suggests that our reaction to sound is hardwired. Nevertheless, the ability to hear is not the same as the ability to listen—a dichotomy that can lead to miscommunication and potential conflict in human relationships. Greater harmony, as Darwin and Nightingale pursued in their

thinking and writing, requires an ongoing effort to defer violence and maintain balance, whether in biological evolution, therapeutic practices, or personal relationships.

### **A Harmonious Conclusion: Darwin, Nightingale, and the Music of Human Freedom**

Florence Nightingale's longstanding disapproval of Charles Darwin's theory of evolution through natural selection can be understood through the lens of Generative Anthropology, particularly through the perspectives that GA offers into the relationships among language, culture, and human origin. Nightingale's perplexity with "Darwinism" arose from the tensions between old religious faith and new scientific thinking that divided many people in the Victorian Age. Nightingale's eventual acceptance of Darwin's contributions to science came about--paradoxically, in a way--through another long-running condition of nineteenth-century British society and culture, the proliferation of social reform movements in that age. Prominent among them was the abolitionist movement to end slavery and the successive waves of progressive reform causes that aimed to improve the conditions of the "lower classes" in Britain and the "savage races" of the rest of the world. As these examples suggest, the language chosen by many reform causes seems deeply condescending by today's standards, but a common belief animating these causes, at least in principle, was that all people shared a common humanity. This belief was one in which a highly devout but also radically free-thinking Christian like Florence Nightingale could find common ground with a self-professed "agnostic" scientist like Charles Darwin.

Nightingale's changing views on Darwinian thinking developed within the broader context of the times in which Darwin's announcement of the theory of evolution to the world had provoked what might be called the faith/science dichotomy. Evolutionary theory initially met with the scandalized objections of religious-minded academics, clergymen, and members of the general public, mixed with the enthusiastic embrace of science-minded readers who quickly bought out the first and subsequent editions of *On the Origin of Species* from its first appearance in 1859. As the biographer and religious historian Val Webb observes:

One can see how Darwin's thesis thrown into this cocktail would ignite the Victorian world. Prior to Darwin, more and more theological gymnastics were required to explain the biblical creation stories in light of scientific observation. Darwin would finally voice what lurked in many minds. Should the discussion of humanity begin not with the biblical story, but with anthropological evidence in nature itself? (52)

Darwin provoked such a wide range of extreme responses, in part, because he had expressed in words, more clearly than anyone had before, the very things that many people were thinking privately but were largely keeping to themselves. Initially, though, like many orthodox believers, Nightingale rejected Darwin's theory, not because of its scientific content but due to its perceived exclusion of a divine presence from the design of life. This can be seen as Nightingale's reluctance to accept the removal of the sacred center, holding

intuitively to the principle that GA proposes, namely that human culture originated from a collective deferral of violence, mediated by the sacred.

In fact, Nightingale's religious and ethical views had developed early and were largely formed by the time she was in her late teens. Nightingale described how those views dominated her thinking while traveling as a young woman in Egypt, though she published her account of the trip over thirty years after it took place--as well as more than twenty years after she had gained fame as a nurse and a nursing supervisor during the Crimean War. As Webb recounts:

In an 1878 article by Florence entitled *Who is the Savage?* Florence identified herself on the side of the "improvability" of all the human race made in God's image, something she worked for all her life and which came from her theological belief that God's laws of progress were discoverable in the universe. The startling title of her article suggests a discussion about some "foreign" shores, but Florence discusses instead the degraded state of many of the poor "savages" in English villages through drunkenness, street brawls, and prostitution, far worse than any of the supposedly "uncivilized" Hindu peasants whom Florence worked so hard in her later years to help, even supporting their desire for independence from Britain. (52-53)

Deep religious faith impelled Nightingale even beyond the good works of the Social Gospel movement that started in late nineteenth-century America; her faith moved her to engage in projects that resembled the liberation theology that arose in the 1960s in Latin America. From the late 1870s (in fact, even earlier, from the early 1860s), Nightingale labored from her sickbed as she engaged intensely in social reform--through her ongoing efforts to professionalize nursing, her promotion of public health measures in Britain and in India, and her heavy, self-imposed publishing load.

Nightingale's initial resistance to Darwin was rooted in her concern that removing God from the center of creation would destabilize the moral and ethical foundations of society. In Gans's ordinary thinking, the presence of a sacred center is essential for maintaining social order. Nightingale's religious views, steeped in a belief in Christian *caritas*, emphasized the perfectibility of the common man and the entire social order under God's guidance. This is where Nightingale's divergence from Darwin was most evident: While Darwin argued that natural selection was a "blind" process, Nightingale believed in a divinely orchestrated evolution of human potential, driven by moral and social progress.

Gans notes that "the most fundamental and consequentially the most dangerous kind of thought, reflection on human origin, has historically been confined to established religion where speculation on anthropology is constrained by theological dogma" (*Signs of Paradox* 101). Nightingale's views, formed early in life, were deeply influenced by her experiences of the world's inequalities, as seen in her work for the poor and her engagement in public

health reforms. Her theological belief in the “improvability” of all human beings created a bridge between the religious and scientific views of her time. Nightingale’s gradual acceptance of Darwin, albeit tempered by her faith, can be interpreted as her evolving understanding of how evolutionary theory could coexist with her belief in the sacred dignity of every individual.

In fact, by the late 1870s, Nightingale’s reconciliation with Darwin’s ideas, particularly in the context of social reform, reflected a broader acknowledgment of a shared human origin. Her commitment to social justice, rooted in Christian charity, found an unexpected harmony with Darwin’s scientific work, particularly in the ways that both Darwin and Nightingale recognized the shared humanity of all people, regardless of race or class. This convergence aligns with certain principles implicit in GA—that humanity, through language and cultural forms, is fundamentally unified by the capacity for symbolic thought, which defers violence through shared representations of the sacred.

Nightingale’s reconciliation with Darwin may be seen as resting on implied principles made explicit by GA theory, as Gans observes:

Generative anthropology, which is originary thinking founded on hypothesis rather than revelation, explicitly locates the deconstruction of the object of thought within the minimal configuration of the originary scene. It thereby comes qualitatively closer than its predecessors to the unreachable ideal of intellectual self-generation: to be a way of thinking that includes paradoxically within itself the content of any conceivable metathinking about it. (*Signs of Paradox* 101)

In Darwin’s view, life evolves from a single, shared source, with music and beauty emerging as expressions of this evolution. Nightingale, in turn, located the sacrality of life in a transcendent order—the source of all earthly blessings, including the therapeutic powers of music and sound which she saw as vital to healing. Her focus on nursing and public health can be interpreted as a way of managing and deferring the violence inherent in human suffering, much as GA describes the function of ritual and culture in deferring social violence.

In *Notes on Nursing*, Nightingale’s insistence on the careful regulation of sound in hospital wards reflects her profound understanding of the phenomenology of care, which aligns with GA’s focus on the deferral of violence through cultural attention to the sacred center. Nightingale saw sound, like ritual, as capable of maintaining or disrupting the balance between the dichotomies of life and death, health and suffering. Music, for her, was not only a source of comfort but also a means of sustaining life, a perspective that echoed Darwin’s appreciation of music’s role in the evolutionary process.

Nightingale’s eventual embrace of at least some aspects of Darwin’s theory did not diminish her belief in a divine source of creation. Instead, she integrated Darwinian evolution into



her worldview by emphasizing the moral and social progress of humanity, a perspective that aligns with GA's emphasis on the evolution of symbolic representation as central to human culture. Darwin's recognition of the unity of all human beings, a theme that Nightingale also championed, can be seen as a reaffirmation of the sacred value of life—a concept central to both of their legacies.

In her reading of *On the Origin of Species*, Nightingale could not have failed to appreciate its concluding lines about the beauty of creation:

There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved. (459–460)

Moreover, Nightingale surely approved of the reference to “the Creator” that Darwin included from the 1860 second edition onwards so that the final sentence begins, “There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; . . .” This was among several references to possible divine sources of creation that Darwin included in *On the Origin of Species* as a way of mollifying tradition-minded readers, including several of his own professional colleagues (“On the Origin of Species”). Significantly, however, the phrase “by the Creator” in the final sentence is seldom found in editions that are reprinted today, as most modern reprints rely on the original 1859 edition.

Darwin died in 1882, and Nightingale survived him by twenty-eight years. McDonald observes: “Late in life [Nightingale] gave books to friends and schoolchildren on Darwinism, or ‘Darwinianism’ as she called it. Clearly her views on evolution and natural selection mellowed” (*First Hand* 31). In such ways, Nightingale's reconciliation with Darwin was fulfilled.

Much of Nightingale's work from the 1860s onward was driven by her two compelling interests—religious faith and social reform. She was preoccupied with what Webb described as one of the most highly consequential questions of the Victorian world: “Did the ‘savage’ have a soul to save?” (52). Nightingale, guided by her duties to faith and justice, would have surely answered “Yes,” most likely following with “Amen.” While Darwin may have avoided speculation on the existence of the soul in a strict Christian sense, he might well have been comfortable with such notions as the sacrality of life and the sacred dignity of the human spirit that were inherent in Nightingale's faith.

The musico-philosophical perspectives of Darwin and Nightingale were shaped in large measure by the major dichotomies of their times: savagery/civilization, slavery/freedom, and faith/science. Against the backdrop of these cultural tensions, Darwin and Nightingale pursued their immense projects—Darwin's concern for the origins and replication of life

through natural selection, and Nightingale's interests in the preservation of life through nursing care and public health measures. From these great matters, a common point of interest in music emerged. For Darwin, music could be heard in the ways that the diverse species reproduce themselves; for Nightingale, music (and, more generally, sound) could be directed in ways that heal the sick. The musico-philosophical perspectives of Darwin and Nightingale took music to its originary scene, confirming life's essential sacrality. It was the same sacrality that arose from the Christian hymns of Darwin's and Nightingale's abolitionist ancestors. The Wedgwood dynasty, from whom both Darwin and his wife descended, were the great pottery makers who produced the famous medallion depicting a slave in chains, with the plaintive caption, "Am I not a man and a brother?" Beethoven's *Ninth Symphony* answered this question in a transcendent affirmative, with a soaring musical arrangement of Schiller's "Ode to Joy" that proclaimed, "All men become brothers" and affirmed Darwin's and Nightingale's mutual conviction that all people share a common humanity.

In conclusion, the evolving views of Nightingale and Darwin represent a common search for the sacrality of life, whether through faith or science. Their shared musico-philosophical perspectives illustrate how music, in its origins, holds a central place in both the natural world and human culture. Nightingale's care for the sick, informed by her understanding of sound's life-affirming properties, parallels Darwin's recognition of music's role in the survival and reproduction of species. Considered in a GA perspective, music provides ways to defer violence and serves as a conduit to sacral transcendence. Seen in such ways, music affirms the shared, common humanity that underpins both the theory of evolution and the principles of modern nursing care.

### Works Cited

Anspach, Mark R. "Editor's Introduction: Imitating Oedipus." *Oedipus Unbound: Selected Writings on Rivalry and Desire*, by René Girard, edited and with an introduction by Anspach, Stanford UP, 2004, pp. vii-liv.

Darwin, Charles. *The Descent of Man, and Selection in Relation to Sex*. 1871. Penguin Books, 2004.

—. *On the Origin of Species by Means of Natural Selection, or The Preservation of Favoured Races in the Struggle for Life*. 1859, 1860. Edited with an introduction by J. W. Burrow, Penguin Books, 1968, 1985.

Gans, Eric. "Art and Entertainment." *Perspectives on Musical Aesthetics*, edited by John Rahn, W. W. Norton, 1994, pp. 40-53.

—. *The End of Culture: Toward a Generative Anthropology*. U of California P, 1985.

- . *The Scenic Imagination: Originary Thinking from Hobbes to the Present Day*. Stanford UP, 2008.
- . *Signs of Paradox: Irony, Resentment, and Other Mimetic Structures*. Stanford UP, 1997.
- Krause, Bernie. *The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places*. Little, Brown, 2013.
- McDonald, Lynn. *Florence Nightingale at First Hand*. Continuum, 2010.
- . Ed. *Florence Nightingale on Society and Politics, Philosophy, Science, Education and Literature: Volume 5 of the Collected Works of Florence Nightingale*. Wilfrid Laurier UP, 2003.
- Mithen, Steven. *The Singing Neanderthals: The Origin of Music, Language, Mind, and Body*. Harvard UP, 2007.
- Nightingale, Florence. *Notes on Nursing: What It Is, and What It Is Not*. 1859, 1860. Annotated Nursing-Student Edition, 4th ed. Edited by Michele G. Kunz et al., Dickson Keanagham, LLC, 2021.
- "On the Origin of Species." "Content: Concluding Remarks," *Wikipedia*, n.d. [https://en.wikipedia.org/wiki/On\\_the\\_Origin\\_of\\_Species#cite\\_note-173](https://en.wikipedia.org/wiki/On_the_Origin_of_Species#cite_note-173)
- Oughourlian, Jean-Michel. *The Puppet of Desire: The Psychology of Hysteria, Possession, and Hypnosis*. Stanford UP, 1991.
- Pickering, George. *Creative Malady: Illness in the Lives and Minds of Charles Darwin, Florence Nightingale, Mary Baker Eddy, Sigmund Freud, Marcel Proust, Elizabeth Barrett Browning*. George Allen and Unwin, 1974.
- Small, Hugh. *A Brief History of Florence Nightingale and Her Real Legacy, a Revolution in Public Health*. Robinson, 2017.
- Webb, Val. *Florence Nightingale: The Making of a Radical Theologian*. Chalice Press, 2002.