Singing His Praises

Darwin and His Theory in Song and Musical Production

By Vassiliki Betty Smocovitis*

ABSTRACT

This essay offers a chronological survey of the range of songs and musical productions inspired by Darwin and his theory since they entered the public sphere some 150 years ago. It draws on an unusual set of historical materials, including illustrated sheet music, lyrics and librettos, wax cylinder recordings, vinyl records, and video recordings located in digital and sound archives and on the Internet. It also offers a characterization of the varied genres and a literary analysis of the forms as a way of understanding the diverse audiences engaging, and indeed "entertaining," Darwin and the implications of his theory. It argues that the engagement with Darwin and his celebrated theory is far more creative than has been appreciated and recommends that historians of science further explore Darwin and his theory as embodied in a fuller range of cultural expressions. This will lead to an understanding of Darwin's "iconic" status that draws on a fuller range of human sensory experience and that also enables us to appreciate his—and his theory's—enduring power to engage the human imagination.

Now the monkey swings by the end of his tail As he flies from tree to tree, Well there may be monkey in some of you guys But there ain't no monkey in me. —Lyrics to "There Ain't No Bugs (On Me)"

One ridicules in order to forget. —Mikhail Mikhailovitch Bakhtin, *The Dialogic Imagination*

INTRODUCTION: DARWIN'S "ICONIC" STATUS

IN HER EXAMINATION OF DARWIN as a celebrity figure, Janet Browne has drawn heavily on images embodied not only in portraits and caricatures but also in material objects like Darwinian bric-a-brac and bibelots as well as sculptures and busts. Exploring

* Department of Botany and Zoology and Department of History, University of Florida, Gainesville, Florida 32611.

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Isis, 2009, 100:590–614 ©2009 by The History of Science Society. All rights reserved. 0021-1753/2009/10003-0007\$10.00 the occurrence, use, and meaning of such images, Browne argues that "there are some kinds of knowledge not based in texts" and that Darwin's visual image was so immediate and powerful, so instantly evocative of his scientific theory, that it became "embedded in a representation of a scientific theory he was believed to be presenting." Browne's visual studies of Darwin have been echoed by students of the history of evolution and American popular culture like Constance Clark. Clark's studies of Darwinian cartoons during the celebrated Scopes "monkey" trial, and her examination of museum exhibits, murals, and other scientific illustrations in an especially contentious period, reinforce the value of Browne's work on visual culture and the figure of Darwin.¹ In exploring how controversies and debates over evolution were fought-and mediated-through rival symbolic forms that carried deeper and often hidden meanings, beyond the ordinary conventions of evolutionary science, Clark brings an enhanced appreciation of what-and how muchwas at stake for varying audiences of viewers. Both Browne and Clark, like other students of visual culture, make a convincing case for the value of such nontraditional sources; they are certainly appropriate for the exploration of iconic status, which, by definition, refers to pictorial or visual representations in a public domain.² Yet Darwin's iconic status went far beyond the visual sensory apparatus; expressions of it were heard as often as they were seen. And the venues were not just formal lectures, readings, or debates involving an increasingly engaged public; Darwin's iconic status was also expressed in musical form-in song, theater, and staged musical productions for wide and varied audiences, some of which the historian of evolution may find surprising. In this brief discussion, I wish to point the way to an extended view of this iconic status, one that includes a fuller range of human sensory apparatus and explores an even fuller range of cultural expres-

² Both Browne and Clark build on the growing literature examining visual cultures and the historiography of science. This literature is now vast, as well as diverse. See the recent Focus section in *Isis* devoted to the subject: "Focus: Science and Visual Culture," Isis, 2006, 97:75–132. For one comprehensive historiographic essay see Jennifer Tucker, Nature Exposed: Photography as Eyewitness in Victorian Science (Baltimore: Johns Hopkins Univ. Press, 2005). Images associated with evolution and natural history have been especially closely studied. See the foundational work by Martin J. S. Rudwick, Scenes from Deep Time (Chicago: Univ. Chicago Press, 1996). See also his earlier work in Rudwick, "The Emergence of a Visual Language for Geological Science, 1760-1840," History of Science, 1976, 14:149-195; and Rudwick, "Encounters with Adam, or at Least the Hyaenas: Nineteenth-Century Representations of the Deep Past," in History, Humanity, and Evolution: Essays for John C. Greene, ed. James R. Moore (Cambridge: Cambridge Univ. Press, 1989), pp. 231-252. See also John Smith, Charles Darwin and Victorian Visual Culture (Cambridge: Cambridge Univ. Press, 2006); Nick Hopwood, "Pictures of Evolution and Charges of Fraud: Ernst Haeckel's Embryological Illustrations," Isis, 2006, 97:260-291; and Charlotte M. Porter, "Essay Review: The History of Scientific Illustration," Journal of the History of Biology, 1995, 28:545-550. For an analysis of visual culture and the natural world as embodied in popular film see Gregg Mitman, Reel Nature: America's Romance with Wildlife on Film (Cambridge, Mass.: Harvard Univ. Press, 1999). For an especially imaginative and powerful analysis of race, gender, and class in visual representations of nature see Donna Haraway, Primate Visions: Gender, Race, and Nature in the World of Modern Science (New York: Routledge, 1989). For another novel approach to the history of evolution that uses unconventional historical sources see James A. Secord, Victorian Sensation: The Extraordinary Publication, Reception, and Secret Authorship of Vestiges of the Natural History of Creation (Chicago: Univ. Chicago Press, 2000). For one of the first explorations of cultural icons in science see Dorothy Nelkin and M. Susan Lindee, The DNA Mystique: The Gene as Cultural Icon (New York: Freeman, 1995). The foundational work for all such studies remains Walter Benjamin, "The Work of Art in the Age of Mechanical Reproduction," in Illuminations, ed. Hannah Arendt, trans. Harry Zohn (New York: Schocken, 1969). See also Vanessa R. Schwartz, "Walter Benjamin for Historians," American Historical Review, 2001, 106: 1721-1943. See also Hayden White, "Historiography and Historiophoty," Ibid, 1988, 93: pp. 1193-1199.

¹ Janet Browne, Science and Celebrity: Commemorating Charles Darwin (The Hans Rausing Lecture, Uppsala University, 2004) (Salvia Småskrifter, 5) (Uppsala: Forfattaren Tryck Wikströms, 2005), p. 12; Browne, "Charles Darwin as a Celebrity," Science in Context, 2003, 16:175–194; and Constance Areson Clark, God—or Gorilla: Images of Evolution in the Jazz Age (Baltimore: Johns Hopkins Univ. Press, 2008).

sions. In this I echo the recent call by scholars of popular culture generally, and of museum studies in particular, like Samuel J. M. M. Alberti, who explore "the range of sensations" involved in museum visits (olfactory, tactile, and aural as well as visual) as well as more recent investigations of cultural forms like dance and choreography.³ I also examine the use of unconventional ephemera like sheet music and historical technologies like "tin-foil" or wax cylinder gramophone recordings, as well as phonographic records, tape recordings, and compact discs, as potential sources for the historian of science, applying the well-known literary theory of Mikhail Mikhailovitch Bakhtin as a way of understanding what I term the "musical" Darwin.⁴ Such exploration, I argue, gives us an enhanced appreciation of the extent to which Darwin and the implications of his theory were creatively engaged, indeed *entertained*, by a much wider and perhaps unexpected set of audiences. It also allows historians of science not just to understand the full extent of reception, but to begin to appreciate the subtle ways that powerful explanatory theories become embodied in cultural forms not usually associated with the history of science.

THE "MUSICAL" DARWIN

Though he himself was thought to be tone-deaf, music filled Charles Darwin's life. His wife, Emma, was regarded as a talented pianist, rumored to have received instruction from the great Chopin himself, though this remains unconfirmed. He listened to her playing on their large family piano as a form of relaxation in the evenings, and he had rather conservative musical tastes, preferring the works of Mozart, Beethoven, and Handel, especially choral pieces. Given his love of music, and his celebrated stature at the time of his death, it was fitting that he was buried to music written expressly for his state funeral at Westminster Abbey on 26 April 1882. Graphically described by James R. Moore, the funeral service included not only the "plaintive strains" of Beethoven and Schubert; there was also an anthem sung by choristers and written for the funeral by the abbey's deputy organist, J. Frederick Bridge, later a composer of patriotic anthems to lyrics by Rudyard Kipling. Bridge drew from the Book of Proverbs to compose "Happy is the man that findeth wisdom, and getteth understanding."⁵ It was an appropriate burial hymn for someone who had obviously become a national icon, though the association of Proverbs with the figure of Darwin may now seem ironic to his many opponents.

The solemn tone appropriate for Darwin's funeral was, however, mostly out of the ordinary for musical representations of Darwin and his theory. The great majority of music and songs in this context were lighthearted, usually comedic in tone, and fell into the genre

³ Samuel J. M. M. Alberti, "The Museum Affect: Visiting Collections of Anatomy and Natural History," in *Science in the Marketplace: Nineteenth-Century Sites and Experiences*, ed. Aileen Fyfe and Bernard Lightman (Chicago: Univ. Chicago Press, 2007), pp. 371–412; and Rae Beth Gordon, *Dances with Darwin, 1875–1910: Vernacular Modernity in France* (London: Ashgate, 2009).

⁴ For a novel use of such recording technologies and their application to language theory see Gregory Radick, *The Simian Tongue: The Long Debate about Animal Language* (Chicago: Univ. Chicago Press, 2007). Radick's examination of the language debate also includes the use of poetry and other doggerel verse that closely resembles the lyrics to many of the contemporary popular songs I analyze here. I draw in general on Mikhail Mikhailovitch Bakhtin, *The Dialogic Imagination: Four Essays*, ed. Michael Holquist, trans. Caryl Emerson and Michael Holquist (Austin: Univ. Texas Press, 1981).

⁵ James R. Moore, "Charles Darwin Lies in Westminster Abbey," *Biological Journal of the Linnean Society*, 1982, *17*:97–113; the musical portion of the funeral is described on p. 105. On Emma Darwin's musicianship see Edna Healey, *Emma Darwin: The Inspirational Wife of a Genius* (London: Headline, 2001). On Emma, the famous family piano, and Darwin's musical tastes see J. F. Derry, "Bravo Emma! Music in the Life and Work of Charles Darwin," *Endeavour*, 2009, *33*:35–38.

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of the parodic. Their purpose was not just to entertain but also to trivialize and subvert a powerful figure and his disturbing scientific theory.⁶ A number of developments in the late nineteenth century contributed to the growth of such music. As leisure time became more widely available, an increasingly prosperous middle class began to look for entertainment. Penny arcades, amusement parks, seaside resorts, popular theater, music halls, and revues began to function as sites of entertainment. Sheet music began to be mass-produced, as Americans and others in similarly prosperous English-speaking nations played music at home on pianos and other musical instruments. Many of these pieces played on nationaland nationalistic-themes. The first song I explore here, dated to 1874, is one of the better-known examples using music and song to link national concerns with Darwinian themes. The music for "Too Thin; or, Darwin's Little Joke" was composed by Grace Carleton, while the lyrics were comedically credited to one "O'Rangoutang" (see Figure 1). The title page to the sheet music features a group of monkeys encircling a figure resembling Abraham Lincoln, who appears to be kneeling in prayer (Lincoln, it will be recalled, was often called a monkey in the popular press). In the background, another group of monkeys seems to be marching with what look like clubs and weapons. Off to the side is a caricatured African-American male, dressed in a ruffled shirt, cutaway tails, and striped pants that resemble those worn by "Uncle Sam"-but he is without shoes. He is holding hands with, or extending his hands to, a larger chimp-like creature of ambiguous gender, likely a female. As well as making apes of African Americans and Irish Americans and raising fears about immigrant hordes, the melding of racial and gendered messages, so clearly represented in this illustration, reveals much about post-Civil War American attitudes to emancipation and dreams of racial and ethnic equality.⁷ The lyrics reflect themes common in most of the songs and caricatures of Darwin and his theory: frequent plays on lower forms of life and on the relationship of humans to monkeys and the outright rejection—in humorous form—of "civilized man's" belief in Darwin's theory of descent with modification (see Appendix 1 for the lyrics). Similar motifs were seen in another popular song, from 1885, by the well-known Australian lyricist Fred Lyster, "Evolution; or, The Darwinian Theory: An Anthropological Rhyme"; it makes humorous reference to animals, to the animal-human relationship, and to the hierarchy in the human social sphere (see Figure 2).⁸ After appearing to support Darwin's celebrated theory, the final verse to the song ends with a common subversive theme that demotes a serious scientific theory into silly verse:

Tis not only as a dish You may see a captive fish For in Auburn one is chained into a lair And in London no one fails To behold the Prince of W[hales] As he rolls down Picadilly with his jog

⁶ For a novel examination of the functioning of parodic representations of Darwin in caricatures and cartoons, in the light of the maintenance or subversion of Victorian respectability, see Gowan Dawson, *Darwin, Literature, and Respectability* (Cambridge: Cambridge Univ. Press, 2007). Dawson's analysis concentrates especially on sexualized implications of Darwin's theory in the context of Victorian attempts to fashion respectability.

⁷ "Too Thin; or, Darwin's Little Joke," copy in the Lester S. Levy Collection of Sheet Music, Box 054, Item 145, Sheridan Library, Johns Hopkins University, Baltimore. This image also supports Dawson's thesis, articulated in *Darwin, Literature, and Respectability*, for American audiences.

⁸ "Evolution; or, The Darwinian Theory: An Anthropological Rhyme," copy in the Lester S. Levy Collection of Sheet Music, Box 054, Item 035, Sheridan Library, Johns Hopkins University, Baltimore.



Figure 1. Sheet music cover illustration to "Too Thin; or, Darwin's Little Joke." Lester S. Levy Collection of Sheet Music, Box 054, Item 145, Sheridan Library, Johns Hopkins University, Baltimore. Reproduced with permission from Special Collections and Archives, Milton S. Eisenhower Library, Johns Hopkins University.

So I have proved I think That we've found the missing link And to creation's scale there is no clog For the theory Darwinian In my humble poor opinion Is the only way to clear the fog.

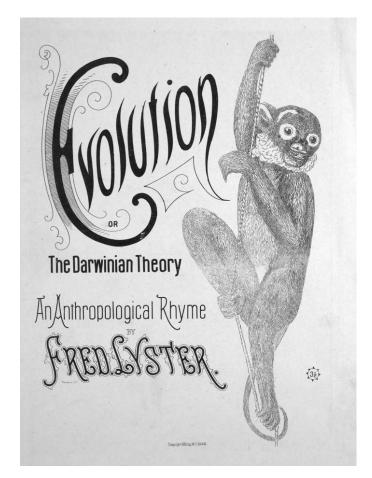


Figure 2. Sheet music cover illustration to "Evolution: or, The Darwinian Theory: An Anthropological Rhyme." Lester S. Levy Collection of Sheet Music, Box 054, Item 035, Sheridan Library, Johns Hopkins University, Baltimore. Reproduced with permission from Special Collections and Archives, Milton S. Eisenhower Library, Johns Hopkins University.

Nor were these silly and subversive musical offerings reserved for adults. The *Scottish Student's Songbook* of 1897 included a popular song titled "The Darwinian Theory," with lyrics by John Young, sung to the air titled "The King of the Cannibal Islands." According to one recent account, Darwin himself had found occasion to refer playfully to the "cannibal" song.⁹ In addition to evoking primitivist images, the lyrics urge caution when walking down the street, since life in Darwin's world was often unseen:

Oh! Have you heard the news of late, about our Great original state? If you have not, I will relate The grand Darwinian theory. Take care as you saunter 595

⁹ Scottish Student's Songbook, 6th ed. (London/Glasgow: Bayley & Ferguson, 1897); a copy is located in the British Library, London. On Darwin's knowledge of the "cannibal" song see Adrian Desmond and James Moore, Darwin's Sacred Cause: How a Hatred of Slavery Shaped Darwin's Views on Human Evolution (New York: Houghton Mifflin Harcourt, 2009), on p. 89.

Across the street, how you tread on the dust beneath your feet. You may crush an embryo sweet, for each Atom may hold a germ complete, Which by some mystical process slow, And selective pow'r, to a monkey may grow. And from that to a man, the truth To show of the grand Darwinian theory.

Darwinian themes also appeared in longer musical plays and light operas. One prominent song, titled "A Lady of Fair Lineage High," appeared in the 1884 production of *Princess Ida*, by W. S. Gilbert and Arthur Sullivan.¹⁰ Satirizing women's education, the increasing rise of feminist movements, and British class structure, the play explicitly linked the politics of the day in Britain with Darwinian evolution. The story tells the tale of Princess Ida, who has forsworn men and turned her castle into a women's college, where the teachings include the view that "man is nature's sole mistake." Ida has been betrothed since the age of two to Prince Hilarion; her rejection of men and marriage leads to a series of comic events. At one point in the story Lady Psyche, sister to Hilarion's friend Florian, and now a feminist professor at the castle/college, warns her brother, who has broken into the castle with Hilarion and another friend disguised as women, of the consequences of their actions should they be discovered—which is likely, as they cannot possibly conceal their male brute nature. She offers a parable about an ape who falls in love with a "high-born" lady and who, though he makes every effort to turn himself into "Darwinian Man," can't fool the discerning "Maiden Fair":

He bought white ties, and he bought dress suits, He crammed his feet into bright tight boots— And to start in life on a brand-new plan, He christened himself Darwinian Man! But it would not do, The scheme fell through— For the Maiden fair, whom the monkey craved, Was a radiant Being, With brain farseeing— While Darwinian Man, though well-behaved At best is only a monkey shaved!

In yet another American musical play, Edward Harrigan's *Last of the Hogans*, dated to 1891, an even more astonishing link is made between the Masonic Knights of the Eastern Star and Darwinism. In a lighthearted spoof of the Masons in a song titled "Knights of the Mystic Star" (in which they are humorously directed to "go west" instead of east), tribalism, civilized human behavior, apes, and the figure of Darwin are all evoked in one verse: "Old Darwin said the monkey was the first to walk and talk, had etiquette and

¹⁰ The opera was based on an earlier "musical farce" written by Gilbert, dated to approximately 1870, that was inspired by Tennyson's poem "The Princess" (Gilbert intended it to be a "respectful operatic perversion"). The poem was written in response to the founding of Queen's College, London, the first college of higher education for women in Britain, in 1847. *Princess Ida*—or *Castle Adamant*, as it was also known—opened at the Savoy Theater, London, on Saturday, 5 January 1884, for a run of 246 performances. Sullivan conducted the first performance. It was not considered a success and was not revived until 1919. A libretto and a 1924 recording, along with a brief history, are available at the Gilbert and Sullivan Archive, http://diamond.boisestate.edu/gas/ princess_ida/html/index.html. See *Princess Ida; or, Castle Adamant*, written by W. S. Gilbert, composed by Arthur Sullivan (London: Chappell, 1884).

manners, and eat soup with a fork. De Rangatang he worn a bang and loved his Pa and Ma. We ape him in our membership, all of the mystic star."¹¹

A somewhat later song, dated to 1908, makes only an oblique reference to Darwin—in pictorial form on the sheet music cover. It suggests the extent to which a Darwin-like face had become associated with scientific theory, since the face shown resembles Darwin's (though his characteristic nose is missing). Clearly evocative of science, with its inclusion of glassware, scientific texts, scientists' and philosophers' names (many of them in Greek), a blackboard, the gowned scientist, and word-equations, much of this cover seems inaccurate or "off" when studied closely (see Figure 3).¹² Even stranger is the near absence of match between the cover and the lyrics to a song called "After All!" that has little do with science; yet it does tell us that images of science—and a Darwin-like visage—were to be found in unexpected places and not always associated with humor.

"IN MONKEYLAND": DARWIN AND HIS THEORY IN SONG AT THE TURN OF THE CENTURY

The turn of the century witnessed an efflorescence of songs and musical productions that evoked Darwin and his theory. The fact that they were no longer considered so new or shocking, but in fact daring and even risqué, fueled the appropriation of Darwinian themes for popular audiences who thrilled to scenes of monkeys, jungles, and humans in a more primitive "natural" state. Formal museums of natural history like the American Museum of Natural History both employed and transmitted these Darwinian images and motifs, but so too did the increasing popularity of sciences like geology, paleontology, and anthropology, which were associated in the press and in illustrated magazines with exciting, adventurous lifestyles and with the explorations of "exotic" locales in Africa, Mongolia, South America, and Polynesia.¹³ Such themes also played themselves out in theater, vaudeville, and even burlesque, but especially in Broadway musical productions, which boomed in the early decades of the twentieth century. The background music was spread thanks to the increasing use and refinement of recording technology, first in "tin foil" and later wax cylinder recorders or "talking machines," then through gramophone or phonograph recordings of the music and songs written for theatrical productions. Later, after the advent of radio, many of these songs made their way into home life directly.¹⁴ Obsessed

¹¹ "Knights of the Mystic Star," from *Last of the Hogans*, words by Edward Harrigan, music by Dave Braham, published by William A. Pond & Company, 1891; copy in the Lester S. Levy Collection of Sheet Music, Box 072, Item 072.047, Sheridan Library, Johns Hopkins University, Baltimore.

¹² For the role of photography in emphasizing or drawing attention to Darwin's face see Browne, *Science and Celebrity* (cit. n. 1); and Browne, "Charles Darwin as a Celebrity" (cit. n. 1). The names listed include Socrates, Plato, Aristotle, Heraclitus, Dimitrios, Nostradamus, Hermes Trismegistus (translated from the Greek), Keppler [*sic*], and Copernicus. The inclusion of Nostradamus in this list is notable, as is that of Dimitrios—though the latter may have been intended to be Democritus. Clearly the artist was no expert in the history of science. "After All!" has lyrics by James O'Dea, music by Anna Caldwell, and was published by Jerome H. Remick, 1908; see Historic American Sheet Music Project, Item a2396, Rare Book, Manuscript, and Special Collections Library, Duke University, Durham, North Carolina.

¹³ See Clark, *God—or Gorilla* (cit. n. 1), for an elaboration of many of these themes. See also Haraway, *Primate Visions* (cit. n. 2); and Radick, *Simian Tongue* (cit. n. 4).

¹⁴ Andre Mullard, America on Record: A History of Recorded Sound (New York: Cambridge Univ. Press, 1995); David Morton, Off the Record: The Technology and Culture of Sound Recording in America (New Brunswick, N.J.: Rutgers Univ. Press, 2000); and Oliver Read and Walter L. Welch, From Tin Foil to Stereo: Evolution of the Phonograph, 2nd ed. (Indianapolis: Sams, 1976). For a novel examination of science in radio and television see Marcel Chotkowski LaFollette, Science on the Air: Popularizers and Personalities in Radio and Early Television (Chicago: Univ. Chicago Press, 2008).

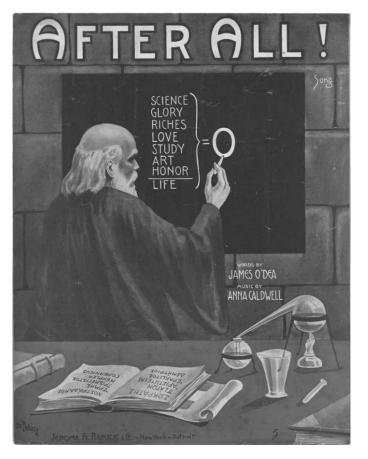


Figure 3. Sheet music cover illustration to "After All!" by James O'Dea, lyricist; Anna Caldwell, composer; Jerome H. Remick, Publisher, New York, 1908. Collection call number A-2396, Historic American Sheet Music, Duke University. Reproduced with permission from the Rare Book, Manuscript, and Special Collections Library at Duke University.

with African themes and with primitivist motifs that played on attitudes about race, gender, and ethnicity, popular audiences were entertained by fantasy worlds like "Monkeyland," where anthropomorphic Africanized monkeys frolicked, canoodled and spooned, or otherwise engaged in sexualized "monkey business" under the bamboo, coconut, or banyan trees (see Figures 4 and 5).¹⁵ Such anthropomorphic renderings of monkeys, chimps, and apes, which deliberately evoked African humans, enabled popular audiences, especially in America, to entertain racist notions in a more oblique manner appropriate at the time (see esp. Figure 6).¹⁶ Such simian motifs were so heavily used that

¹⁵ "In Monkeyland" and "In Darkest Africa," both dated to 1907, are good examples; recordings are available at www.tinfoil.com. See also Dawson's analysis of sexualized renderings of the implications of Darwin's theory and Darwin cartoons in *Darwin, Literature, and Respectability* (cit. n. 6).

¹⁶ Donna Haraway has presented the most extensive examination of how gender, race, and class operate in narratives of the natural world, especially in America in this period. See Haraway, *Primate Visions* (cit. n. 2). "Blackface" refers to theatrical makeup that evoked African-American stereotypes; it began in America but spread rapidly to Britain and to other parts of the world. It was an important theatrical tradition, originating

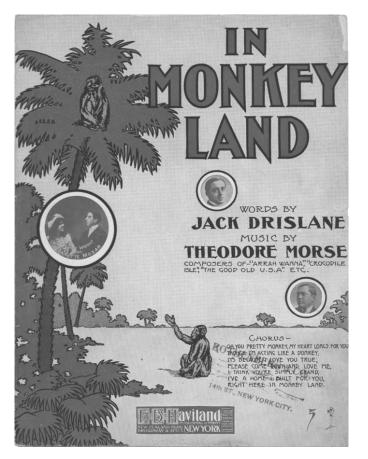


Figure 4. Sheet music cover illustration to "In Monkeyland," by Theodore F. Morse, composer; Jack Drislane, lyricist; F. B. Haviland, Publisher, New York, 1907. Collection call number B-720, Historic American Sheet Music, Duke University. Reproduced with permission from the Rare Book, Manuscript, and Special Collections Library at Duke University.

the mere mention of Darwinian monkeys became coded for a racist attitude that gained widespread acceptance among growing popular audiences who avoided more explicit slurs. One of the finest examples of Africanized monkey-love in a Darwinian vein is titled "In Zanzibar"—also known as "My Little Chimpanzee"—which dates to 1904 (see Figure 7):

In Zanzibar, great land of glory A monkey Czar, so runs the story Came from afar with love o'er laden To win and woo a monkey maiden—with twang Darwinian Sang this opinion.

sometime in the 1830s and usually associated with minstrel shows. See John Strausbaugh, *Black Like You: Blackface, Whiteface, Insult, and Imitation in American Popular Culture* (Los Angeles: Starcher, 2007); and Annemarie Bean, James V. Hatch, and Brooks McNamara, eds., *Inside the Minstrel Mask: Readings in Nineteenth-Century Blackface Minstrelsy* (Middletown, Conn.: Wesleyan Univ. Press, 1996). See also Edward Le Roy Rice, *Monarchs of Minstrelsy from "Daddy Rice" to Date* (New York: Kenny, 1911).

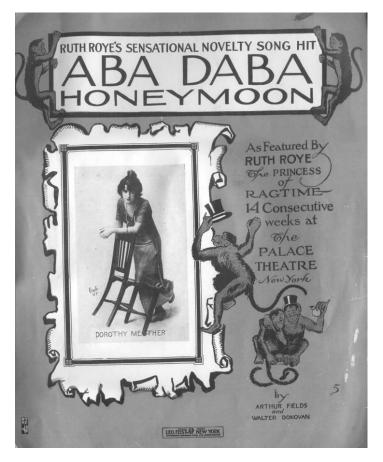


Figure 5. Sheet music cover illustration to "Aba-Daba Honeymoon," by Arthur Fields and Walter Donovan; Leo Feist, Publisher, New York, 1914. Courtesy Mary Lynn, Skidmore College, Saratoga Springs, New York.

Chorus: My little Chimpanzee, you're all this world to me A branch I'll find for thee in my own fam'ly tree No monkey shine for me A wedding fine there'll be In high society—In Zanzibar.¹⁷

POPULIST SONGS OF PROTEST: SONGS OF THE SCOPES "MONKEY" TRIAL

Unsurprisingly, the monkey and jungle themes were also used heavily against evolutionists by moralists and religious leaders like Billy Sunday and John Roach Straton, who called evolution "the jungle theory." The same Darwinian monkeys were featured prominently again in musical-comedic form during and after the celebrated Scopes "monkey" trial of 1925 in

¹⁷ J. W. Myers, "In Zanzibar," lyrics by Will D. Cobb, music by Gus Edwards, Columbia Records, 1904; recording available at www.tinfoil.com.

FOCUS-ISIS, 100:3 (2009)



Figure 6. Sheet music cover illustration to "Listen to That Jungle Band," by James Kendis and Herman Paley, composers; Al Bryan, lyricist; Maurice Shapiro, Publisher, New York, 1910. Performed by Clarence Marks, "Honey Boy," in George Evans's Minstrels. Collection call number B-0829, Historic American Sheet Music, Duke University. Reproduced with permission from the Rare Book, Manuscript, and Special Collections Library at Duke University.

Dayton, Tennessee, and contributed to the carnivalesque or circus-like atmosphere associated with it.¹⁸ Songs like "You Can't Make a Monkey Out of Me" were played on the radio, recorded, and made available in sheet music for wider audiences to play at home. More than any other of the songs pertaining to the Scopes trial, perhaps, this one entered the American musical repertoire in the middle decades of the twentieth century. Its lyrics tell the tale of the trial, the famous metaphor of the house built on sand, and the struggle between science and religion:

Then to Dayton came a man With his ideas new and grand 601

¹⁸ These songs are archived as recordings in the archives of Bryan College, Dayton, Tennessee. They are available for public use on the Public Broadcasting System's Web site for the *American Experience* documentary film titled *Monkey Trial*; see www.pbs.org/wgbh/amex/monkeytrial/sfeature/sf_music.html. For more on Sunday and Straton's attacks on evolution at this time see Clark, *God—or Gorilla*? (cit. n. 1).



Figure 7. Sheet music cover illustration to "In Zanzibar," by Gus Edwards, composer; Will D. Cobb, lyricist; Shapiro, Remick & Company, Publishers, New York, 1904. Collection call number B-0738, Historic American Sheet Music, Duke University. Reproduced with permission from the Rare Book, Manuscript, and Special Collections Library at Duke University.

And they said we came from monkeys long ago. But in teaching his belief Mr. Scopes found only grief For they would not let their old religion go.

You may find a new belief It will only bring you grief For a house that's built on sand is sure to fall. And wherever you may turn There's a lesson you will learn That the old religion's better after all.

Other musical pieces inspired by the trial include a "monkey-song" titled "Can't Make a Monkey of Me" (with very similar motifs, though with different lyrics and music), "Monkey Business" (with a simpler set of lyrics, but a very catchy tune), and "There Ain't No Bugs (On Me)," whose chorus included the lyrics And there ain't no bugs on me. There ain't no bugs on me. There may be bugs on some of you mugs But there ain't no bugs on me.

Finally, a song titled "Bryan's Last Fight" referred directly to the celebrated trial and mythologized the figure of William Jennings Bryan, who died immediately after its conclusion. In literary parlance, it represented the apotheosis of Bryan:

When the good folks had their troubles Down in Dayton far away Mr. Bryan went to help them And he worked both night and day. Then he fought for what was righteous And the battle it was won. Then the Lord called him to heaven. For his work on earth was done.¹⁹

Clearly, some of these songs were designed not just to offer lighthearted entertainment but also to arouse populist sentiments among the opponents of evolution. "There Ain't No Bugs (On Me)," for example, reminds us of how some populist movements in America linked race with religion and antievolution sentiments while at the same time playing on clichés evoking "dark and stormy" nights:

Now the night was dark and stormy The air was filled with sleet. Pa, he joined the Ku Klux And ma, she lost her sheet.

African-American voices were not silent on the subject of evolution either. They responded with songs like "Evolution Mama," written and performed by Eddie Heywood and "Doc" Basher, that fell into an early jazz/blues genre. It too played on the theme that "you can't make a monkey of me," though in this case the protest was clearly against female romantic control. The voice here is distinctively African American, since peanut vendors in America were usually African American:

¹⁹ "Bryan's Last Fight" includes the following verses: Listen now all you good people And a story I will tell. About a man named Mr. Bryan A man that we all loved so well.

He believed the Bible's teaching And he stood for what was right. He was strong in his conviction And for them he'd always fight.

Now he's gone way up in heaven Where he'll find an open door. But the lesson that he taught us It will live forevermore. He said, Evolution Mama, Evolution Mama He says, Honey Lamb don't you make a monkey out of me 'Cause Evolution Mama don't you think you've got me up a tree I remember the time you had me nice and tame And I was eating right out of your hand But some sweet day I'm going to take dead aim And knock that peanut whistle right off your stand.²⁰

THE DARWINIAN PASSION: SONGS OF CELEBRATION AND COMMEMORATION

Not all Darwinian songs were written as subversive parodies intended for popular middle-class audiences or could be classed as comedic songs of protest intended to arouse populist sentiments. Some were meant to serve celebratory and commemorative functions not only for a narrow circle of academics and elite liberals but also for popular audiences who had accepted Darwin's theory. As the middle decades of the twentieth century approached, and as Darwin and his theory gained not only acceptance but considerable status and legitimacy, they were featured in genres of music with a new, celebratory purpose.²¹ Instead of parodying Darwin, they served to mythologize him further. This was nowhere more evident than during the events commemorating the 100th anniversary of the publication of On the Origin of Species and the 150th year of his birth in 1959. Celebrations in honor of Darwin and his theory were held far and wide, usually spearheaded by the growing numbers of evolutionary biologists. In addition to serious reflection on Darwin's achievements as they were understood by contemporary science, the celebrations and commemorations also featured cartoons, caricatures, films, and lighthearted plays on Darwin and his theory that were intended to amuse scientific audiences. This was certainly the case at the largest celebration of all, held at the University of Chicago in 1959. Elsewhere, I have explored the varied interests and functions served by this and other Darwin commemorative celebrations. Music played a prominent part in the Chicago celebration. The academic procession to Rockefeller Chapel was accompanied by a "carillon concert and swinging peal," and the convocation service held therein included Bach's organ masterpiece "Passacaglia and Fugue in C Minor," appropriate to the pomp and pageantry of the event, which took place on Thanksgiving day; nationalist themes appeared with the playing and singing of "America," led by Chancellor Lawrence Kimpton. In the evening hours, however, celebrants were treated to a lighthearted musical rendering of Darwin's life titled Time Will Tell. Modeled after big-hit musical productions like Oklahoma, it was intended to serve as a serious but also festive reenactment of Darwin's life story, appropriately adapted to the Midwestern context of the time. An elaborate production, fully staged and complete with a large cast in original costumes, Time Will Tell was widely publicized with posters, flyers, and even mobiles of replicas of the H.M.S. Beagle. A two-volume vinyl record album of the musical was eventually cut and made available for purchase.²² For our purposes here, two things are especially

²⁰ Adapted with somewhat altered lyrics, the same song was played in "big band" form by Carl "Deacon" Moore, who sang it with a "hillbilly twang." It was subsequently reinterpreted by San Francisco Dixieland trombonist Turk Murphy in the 1950s and again by the short-lived Even Dozen Jug Band in 1964. See Robert W. Harwood, *I Went Down to St. James's Infirmary* (Kitchener, Ont.: Harland, 2008), for one discussion of the history of the song.

²¹ Vassiliki Betty Smocovitis, Unifying Biology: The Evolutionary Synthesis and Evolutionary Biology (Princeton, N.J.: Princeton Univ. Press, 1996).

²² On the service in Rockefeller Chapel see the Convocation Program, Box 7, Folder 1, Darwin Centennial

noteworthy: the fact that it was the first such large-scale reenactment of Darwin's life story; and the fact that the same parodic elements seen in earlier Darwin songs still operated—but in different ways, here targeting rivals or opponents of evolution.

The reenactment followed the traditional biographical narrative popular at the time. It presented a number of what we might view as the recurring or essential elements of Darwin's life story: his education and early scientific pursuits like geology; the voyage of the H.M.S. *Beagle*; his marriage to Emma; the publication of *On the Origin of Species*; the meeting of the British Association for the Advancement of Science and the Oxford debate, featuring Bishop Wilberforce, John Stevens Henslow, Joseph Hooker, and Thomas Henry Huxley; reflections on the conflict between science and religion, featuring John William Draper; the facts of evolution (as revealed by Huxley); Darwin's popular reception; and a final historical reflection on the importance of Darwin's theory to future generations.²³ The lyrics are for the most part comedic and lighthearted, like the songs "Marry, Marry, Marry," and "Trilobite" (see Figures 8 and 9), though some, like "Homeward Plows the Beagle," and "Only Time Will Tell," are more dramatic.²⁴ As a reenactment, it allowed audience participants to witness collectively an interpretation of the series of events associated with Darwin and the establishment of his theory and at the same to partake in the narrative indirectly, facilitating their identification with Darwin and with the creation and acceptance of a mythologized "founding father" figure. In this, it was not unlike the reenactments associated with annual Christian passion plays like that held in Obberammergau, or with the Civil War battle recreations held in the United States, or with the plays and pageants that facilitate the creation of nationalist identities in schoolchildren all over the world.²⁵ The audience was primarily made up of supporters of Darwin and his theory; plays such as this became part of the rituals of identification and belonging for the growing community of evolutionists identified with the new scientific discipline called evolutionary biology.²⁶ The grand finale of *Time Will Tell* elevates Darwin to the status of giant, at the very pinnacle of the process he knew to be true, and his theory is made into one of the great discoveries in the history of science:

Was there ever such a wondrous tale? What an awesome height for a man to scale. Just a humble youth on a five year cruise, But he saw the truth and made it headline news!

Papers, Department of Special Collections, Joseph Regenstein Library, University of Chicago. On the 1959 commemoration more generally—and particularly for details on the musical production—see Vassiliki Betty Smocovitis, "The 1959 Darwin Centennial Celebration in America," in *Commemorative Practices in Science: Historical Perspectives on the Politics of Collective Memory*, ed. Pnina G. Abir-Am and Clark A. Elliot, *Osiris*, 2nd Ser., 1999, *14*:274–323.

²³ For more on such essential narrative elements and "archetypal" hero figures see Misia Landau, *Narratives of Human Evolution* (New Haven, Conn.: Yale Univ. Press, 1992). Landau bases her analysis on the literary theory of Vladimir Propp, particularly his *Morphology of a Folk Tale*, trans. Laurence Scott, ed. Louis A. Wagner (Austin: Univ. Texas Press, 1968).

²⁴ The directions for the song "Marry, Marry, Marry" are in German and instruct the performer to play it "nicht zu schnell." The directions for "Trilobite" are to play it "affectedly," and the singers achieve this effect by using faux English accents. The musical score and lyrics to *Time Will Tell* are located in the Darwin Centennial Papers, Department of Special Collections, Joseph Regenstein Library, University of Chicago.

²⁵ The foundational work on such "invented traditions" remains Eric Hobsbawm and Terence Rainger, eds., *The Invention of Traditions* (Cambridge: Cambridge Univ. Press, 1983). See also John R. Gillis, ed., *Commemorations: The Politics of National Identity* (Princeton, N.J.: Princeton Univ. Press, 1993); Abir-Am and Elliott, eds., *Commemorative Practices in Science* (cit. n. 22), pp. 274–323; and Marsha L. Richmond, "The 1909 Darwin Celebration," *Isis*, 2006, 97:447–484.

²⁶ Smocovitis, Unifying Biology (cit. n. 21).



Figure 8. Musical score and lyrics to "Marry, Marry, Marry," from the musical production Time Will Tell. Darwin Centennial Papers, Department of Special Collections, Joseph Regenstein Library, University of Chicago. Reproduced with permission from Special Collections Research Center, University of Chicago Library. The composition is marked at the top to be played "nicht zu schnell."

With his solemn dedication and his self-reliance He has earned a place of eminence among the giants, And his theory will go ringing through the halls of science Like a chiming bell— And someday you'll see All the people agree That the subject of this biography Should be called the man of the century— Surely time will tell, Time will tell!

In contrast, Darwin's opponents were the subjects of parodic mockery, their concerns with evolutionary theory trivialized. Unsurprisingly, Bishop Wilberforce is depicted as a small-minded fool. His "Sermon on Evolution," sung just before he poses his infamous



Figure 9. Musical score and lyrics to "Trilobite," from the musical production Time Will Tell. Darwin Centennial Papers, Department of Special Collections, Joseph Regenstein Library, University of Chicago. Reproduced with permission from Special Collections Research Center, University of Chicago Library. The composition is marked at the top to be played "affectedly."

question to Huxley on his descent, includes silly lyrics with references to Darwin's bumble-bees, humble-bees, and flowers. Wilberforce sings:

Though this is scarcely new, it's useful information But what has it to do with species variation? The argument is clever and the presentation strong, It's an excellent theory, but it happens to be wrong!

It is not only the lyrics given to Wilberforce that make him sound like a fool; this is also conveyed by the singer's voice. Instead of the booming baritone we might expect for an orator known as "Soapy Sam," we hear a sniveling tenor. John William Draper is similarly cast in a negative light. His voice is that of a pretentious bore, not a sober intellectual; and the lyrics given his character are boring indeed. The entire Oxford debate is played as farce, resembling

comedic opera rather then an important historical event; only Darwin's inner circle, led by Huxley, accurately conveys the "facts" of evolution—in a song that is simply called "The Facts."

Taken as a whole, *Time Will Tell* was a cleverly staged production that carefully recrafted Darwin's biographical narrative and dismissed historical objections to his theory—all in the guise of lighthearted musical entertainment for the Darwin centennial celebrants. The final song in Act II, Scene 2, titled "All Sensible People" and sung by a "decet of ladies," says it all:

All sensible people have long been aware That Darwin's conclusions are true— If you don't believe it, If you can't conceive it, There must be something wrong with you.

SONGS OF EVOLUTIONARY BIOLOGY BY AND FOR BIOLOGISTS

These were not the only songs intended primarily for scientific audiences. As the numbers of biologists with evolutionary interests increased, and as they took to field and laboratory sites and attended conferences at places like the Marine Biological Laboratory (MBL) at Woods Hole, Cold Spring Harbor Laboratories, and the Naples Zoological Station, often combining research visits with their summer holidays, a new genre of lighthearted musical song emerged-what I will here call songs of biology, by biologists, sung for themselves, by themselves. Many had lyrics only a biologist would understand, filled with what we might consider exclusive or in-house jokes, and they were usually fitted to tunes adapted from other well-known songs, especially since few of their creators had good compositional skills. They grew so popular that the MBL printed up a series of very small songbooks, beginning in 1921. By 1939, a small book titled Songs of Biology was officially published. It went through multiple editions, the most recent of which dates to 1965; it was published by the Beta Beta Beta Biological Society and was reprinted by the MBL in 1978. One of the earliest and best-known songs in this genre is titled "The Amphioxus Song." Referring to one of the most popular model organisms in experimental evolutionary biology and sung to the tune of "It's a Long Way to Tipperary," it has an explicitly evolutionary theme.

A fish-like thing appeared among the annelids one day. It hadn't any parapods or setae on display It hadn't any eyes or jaws, or ventral nervous cord, But it had a lot of gill slits and it had a notochord!

Chorus: It's a long way from Amphioxus. It's a long way to us. It's a long way from Amphioxus. To the meanest human cuss. Good-bye fins and gill slits, Welcome lungs and hair. It's a long, long way from Amphioxus But we came from there.²⁷

²⁷ The song traces its origins to Cold Spring Harbor Laboratories in the 1920s. Credit is generally given to Philip H. Pope from Whitman College, though it is unclear how much he drew on lyrics from students heard singing their own versions of the chorus during summer study. It has been sung by zoologists, with varying

SINGING HIS PRAISES: DARWIN AND HIS THEORY IN CONTEMPORARY POPULAR CULTURE

In the second half of the twentieth century, songs associated with Darwin and his theory continued to appear in new musical genres, from rock and roll, to punk rock and new wave, to more traditional and standard folk songs, to the blues. (See Appendix 2 for some titles.) Themes of love can be found (without the veiled racism) in songs like "Evolution Blues," by Sam Price and Joseph Pleasant (based on an earlier version this century), whose male protagonist sings that "it took a beautiful woman to make a monkey out of me." Relations to monkeys and lower forms of life continue to dominate as well, as in the lyrics to songs like "Evolution Rag," by the Incredible String Band, "Apeman," by the Kinks, and "Jocko Homo," by Devo—as well as the musical parody of that song by Al Yankovich. Unlike popular songs in the preceding century, some of these not only accept the fact of evolution and human relations to other animals but explicitly remind us that we

It wasn't much to look at and it scarce knew how to swim, And Nereis was very sure it didn't spring from him. The Molluscs wouldn't own it, and the arthropods got sore, So the poor thing had to burrow in the sand along the shore. [Chorus]

It wriggled in the sand before a crab could nip his tail; It said, "Gill slits and myotomes are all of no avail. I've grown some metapleural folds, and sport an oral hood, But all these fine new characters don't do me any good." [Chorus]

lyrics, to the recent present. The lyrics I provide here are taken from the fourth edition of the songbook; see *Songs* of *Biology*, 4th ed. (Mount Vernon, Iowa: Beta Beta Beta Biological Society, 1953). See also a song titled "Evolution," sung to the tune of "Coming thru' the Rye"; "Kin," sung to the tune of "Trees"; and "Evolution— Never!" sung to the tune of "God Save the King" (all in the 1953 edition). The remaining lyrics to "The Amphioxus Song" are

It sulked a while down in the sand without a bit of pep. Then it stiffened up his notochord and said "I'll beat 'em yet, I've got more possibilities within my slender frame Than all these proud invertebrates that treat me with such shame." [Chorus]

[&]quot;My notochord shall turn into a chain of vertebrae; As fins my metapleural folds will agitate the sea; This tiny dorsal nervous tube shall form a mighty brain And the vertebrates shall dominate the animal domain." [Chorus]

²⁸ These songs were written by Hy Zaret and Lou Singer and are available for public use at http:// www.openscience.org/blog/?p=98=1. The use of songs for didactic purposes continues; see the Web site titled *Science Songs for Teaching: Astronomy, Biology, Botany, Physical Science, and Earth Science*: www.songsforteaching .com/sciencesongs.html.

are unable to transcend that past; in some, like Elvis Costello's "Monkey to Man," a strong antireligious and antihumanist attitude is expressed:

Every time man struggles and fails He makes up some kind of fairytales After all of the misery that he has caused He denies he's descended from the dinosaurs.

And later:

In the fashionable nightclubs and finer precincts Man uses words to dress up his vile instincts Ever since we said it He went and took the credit It's been headed this way since the world began When a vicious creature took the jump from Monkey to Man.

Explicit reference to antihumanist sentiment is also made in the music video production by the grunge group Pearl Jam titled "Do the Evolution." The lyrics are accompanied by a disturbing graphic animation of historical realities like the Holocaust, the Ku Klux Klan, slavery, smallpox epidemics, and the stock market crash of 1929, among other dark moments in human history. In Pearl Jam's view, *Homo sapiens*—part beast and part man—evolved in a nature "red in tooth and claw" into one of nature's great killing machines. In "Evolution," a music video by the heavy metal rock group KoRn, a similar view is combined with biting contemporary political satire: at one point, a startling comparative message is sent by the image of a chimpanzee alongside a comparable image of an unpopular American president, George W. Bush.

In yet others, the evolutionary past is proudly embraced and indeed celebrated, as in the song titled "Part Man, Part Monkey," by Bruce Springsteen, which also mixes themes of love and rebellion with antireligious sentiment. Referring directly to the tragic events at the Dayton trial and to the religious hypocrisy displayed there, the lyrics intentionally shock: "Tell them soul-suckin' preachers to come on down and see part man, part monkey, baby that's me."

Since songs by the Kinks, Costello, Springsteen, Pearl Jam, and Devo represent genres of rock and roll or punk, grunge, or new wave, we might appropriately view them as being "counterculture" by definition. But even more popular folk singers like Chris Smithers favor Darwin and his theory in songs like "Origin of Species," written at the peak of the intelligent design dispute in 2006:

Charlie Darwin looked so far into the way things are He caught a glimpse of God's unfolding plan God said "I'll make some DNA, they'll use it any way they want From paramecium right up to man."

And later on:

Yes, you and your cat named Felix Are both wrapped up in that double helix It's what we call intelligent design. Even more telling of an attitudinal change to Darwin and his theory in recent American popular culture is a song written in 2001 by the well-known folk singers/songwriters Dave Carter and Tracy Grammer, "Gentle Arms of Eden," which celebrates the evolutionary origin of life on earth:

Then the day shone bright and rounder till the one turned into two And the two into ten thousand things and old things into new And on some virgin beach head, one lonesome critter crawled And he looked about and shouted out in his most astonished drawl.

In addition to serving as the theme for a documentary on the rebuilding of New York City after 9/11, "Gentle Arms of Eden" was added to a hymnal in at least one Unitarian Universalist congregation. Though it by no means reveals a complete acceptance of Darwin and his theory, the perceived appropriateness of songs like this to mark occasions for national mourning, for rebuilding, and for divine inspiration certainly makes us realize that our understanding of what makes Darwin "iconic," what—precisely—that means, and to whom, has shifted appreciably over the century and a half since he formulated his celebrated theory.²⁹

CLOSING THOUGHTS

In this brief essay I have offered a chronological survey, a kind of sampler, of the range of songs and musical productions inspired by Darwin and his theory since they entered the public sphere some 150 years ago. I have also drawn on what to a preceding generation of historians of science would have seemed an unusual set of historical materials: illustrated sheet music, lyrics and librettos, wax cylinder recordings, phonograph records, compact discs, and videos located in traditional archives, digital archives, and sound archives on the Internet—all places where music is written, recorded, or otherwise expressed. Is there novelty in these sources? And what, if any, general conclusions can we draw from such an approach to Darwin studies and the history of evolution?

For one thing, notable parallels can be drawn with other indicators of iconic status. In much the same way that visual images like caricatures, cartoons, and even material objects satirized or parodied Darwin and his theory, so too did songs and musical productions, certainly initially and indeed well into the twentieth century. Similar themes prevail: the human/ape relationship (and resemblance) and, along with it, the challenge to an anthropocentric view of the world; the parallels between social hierarchy and biological hierarchy; and, finally, the challenge to biblical accounts of creation and human origins and, ultimately, of a progressive and purposeful life. This music may not tell us much that is new about the Darwin figure, his life and work, or even the development of his important theory, but it does reveal a far more extensive creative engagement with evolution by a

²⁹ I recognize the existence of an additional class of songs, currently sung in Christian fundamentalist churches and Christian youth groups, that are explicitly antievolutionist, but I have not included them in this discussion because they replicate many of the conservative populist themes I have already explored and are targeted to very specific audiences. For similar reasons—namely, that they fall into a celebratory genre I have examined previously—I have not included the imaginative songs of Richard Milner, who has entertained fans of Darwin for the last two decades, or the many songs and musical productions about Darwin and his theory that have just been written in honor of the 200th anniversary of his birth and the 150th anniversary of the publication of *On the Origin of Species*. A fuller analysis would ideally include all of these.

much wider and sometimes unexpected popular audience.³⁰ To be sure, not all audiences held a similar understanding of evolutionary theory; but they did not necessarily seek to understand more, at least not on the terms that appealed to scientists, philosophers, or theologians. The attendees at Broadway musicals and other such shows sought to be entertained, not necessarily taught; but in watching and listening to parodies of Darwinian themes, they also came to entertain, both literally and figuratively, the implications of his theory.

Such "entertainment" was of course rendered palatable in the lighthearted and comedic tone employed by the majority of such productions. This comedic tone allowed audiences not just to come to terms with the disturbing aspects of Darwin's theory but to do so by simultaneously engaging and subverting it. The fact that the majority of these songs and musicals were parodies, with ephemeral or silly lyrics, images, and characters, reveals a great deal about the popular reception of Darwin and his theory by varied audiences; they were in fact symptomatic of resistance and of a dialogical process embodied therein. As Bakhtin has argued, satire and parody involve ridicule, and ridicule or laughter serves to trivialize, to dismiss, and to subvert the object of the parody. In this way, the powerful and disturbing may be rendered "forgettable."³¹

Popular audiences could thus be treated to shows and songs that made fun of, or had fun with, ephemeral images that played on Darwinian themes, but they were able to do so in part because those same themes embodied the anxieties of the modern period; this was one way to confront and defuse them. That such songs remained a feature of popular culture for so long speaks to the deeply unsettling implications of Darwin's theory. Over time, the silliness in Darwin songs began to diminish or disappear-or, alternatively, was directed instead at critics of Darwin and nonbelievers; popular audiences came to terms with Darwinism and confronted other demons as they entered the twenty-first century, and elite academic audiences had long since accepted the theory. For such audiences, Darwin songs not only celebrated the legitimacy of the theory but also elevated its-and his-status at the same time that they facilitated the creation of a shared community of scientists who identified with Darwin, frequently represented as an idealized, mythologized figure. Fittingly, mockery or parody in these songs was directed at opponents of this important figure. In much the same way that opponents and proponents employed-and deployedrival symbolic forms and genres in visual images and illustrations, so too were they similarly embodied in music and song.

As we have also seen, such ephemeral songs could serve a multiplicity of purposes in and for different audiences. They could be used as straightforward songs of protest or populist weapons against liberal elites, as was the case in the songs written for the Scopes trial of 1925, but they could also be used later, by students and teachers of biology, as a way of entertaining and indoctrinating students while simultaneously excluding nonbiologists from the community. Equally notable is the fact that the same songs frequently engaged political themes: they made monkeys out of political leaders, and in so doing questioned their evolutionary stature, or played on nationalist or even imperialist themes. Such political treatments often sought to elevate "civilized" European races at the same time that they subordinated "primitive" Africans and others, and they were often linked with themes of love that made monkeys out of males, especially African Americans.

³⁰ See Secord, *Victorian Sensation* (cit. n. 2), for a similar treatment of the diverse audiences "reading" and engaging Robert Chambers's *Vestiges of the Natural History of Creation*.

³¹ Bakhtin, *Dialogic Imagination* (cit. n. 4), p. 23.

613

Heavily gendered images and lyrics were thus often linked with race and class, but these ties were usually hidden or obscured by representations of frolicking sexualized Africanized monkeys in fictional places like "Monkeyland."

Silliness seemed to diminish or disappear in popular genres in the late twentieth century, as Darwin and the implications of his theory were not just accepted but had come to seem inevitable. At times, the response took the form of a frustrated or even angry antihumanism, but it could also take the form of an inspirational and edifying acknowl-edgment of humanity's humble origins. The fact that Darwin and his theory could serve as divine inspiration in some communities clearly speaks to the diverse reception of Darwinian themes in the late twentieth century.

To conclude: what my brief analysis here has done is argue that engagements with Darwin and his theory took place on a much greater scale than we have thought and that they were expressed, and continue to be expressed, in a number of unexpected cultural forms, including song, music, and musical productions. This is exactly what we might expect with a figure who was, and still is, considered "iconic" and with a powerful explanatory theory that has excited and continues to excite the human imagination. What I have also argued, although perhaps not directly, is that historians have much to gain from a historiographic perspective that views science as discourse and culture, that enables us to examine different historical sources, ask novel questions, disrupt the notion of and boundaries between elite and popular culture, and adopt productive techniques of cultural analysis from literary theorists like Bakhtin.

APPENDIX 1

Full lyrics to "Too Thin; or, Darwin's Little Joke: A Humorous Song" Words by Grace Carleton, Music by O'Rangoutang, Published by Wm. A. Pond & Co., New York, 1974

1.

Upon my life the strangest things Now come to pass each day; One Darwin to a fellow brings Our ancesters [*sic*] so gray! It's very funny, odd and queer, He says this manly shape, This form to all the girls so dear Descended from an Ape!

Chorus: It certainly is most absurd, The fact can never be! My great grand daddy never was A "Monkey" up a tree!

2.

He tells us, years and years ago That we were only Fleas! That ev'ry fellow had to grow From wretched bugs like these. Then we were Ostriches and Rats When this old world was new, And Elephants and Thomas-cats, Likewise a Kangaroo!

3.

Now if it should be true that we Were "Croton Bugs" and "Flies," One may be a "Managerie" [*sic*] Before a fellow dies!— A "Lapdog" for the girls to pet, A "Porpoise" or a "Frog"; Who knows that I may not be yet A festive "Polliwog"!

4.

What Darwin says may all be true, Though very rough on us; Who wants to be related to A "Hippopotamus"? I choose to be a daisy bright, And I'll be that alone. All other relatives, in spite of Darwin I disown!

APPENDIX 2

Some Popular Contemporary Songs, in Various Genres, with Darwinian Themes

"Charles Robert Darwin," by Artichoke (rock)

"Transparent Species," by Front Line Assembly (techno/rock)

"Dance Like a Monkey," by the New York Dolls (rock)

"Evolution," by Motorhead (rock)

"I Come from Water," by the Toadies (alternative)

"The Word of God," by Echo's Children (sci-fi folk)

"Evolution," by Just-Truckin (blues)

"Darwin's Children," by Edwin McCain (pop)

"Mammal," by They Might Be Giants (alternative)

"Foetal," by C-Tec (electronic)

"Evolution," by FilSonik (electronic)

"Zeroes and Ones," by the Mekons (alternative, punk)

"Agent of Evolution," by Dying Punks and Current Value (dance)

"@#\$% the Creationists," by M. C. Hawking (hip-hop, gangsta rap)