## Darwin in Caricature: A Study in the Popularisation and Dissemination of Evolution<sup>1</sup>

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N THE YEARS that followed the publication of the *Origin of Species* Darwin became one of the most famous naturalists in the world, "first among the scientific men of England," as Edward Aveling put it, his name inextricably linked with the idea of evolution and with the larger shifts in public opinion gathering pace as the century drew toward a close.<sup>2</sup>

Few other scientific theories have spread as far as Darwin's theory of evolution by natural selection. Within ten years of publication in London of *On the Origin of Species* (1859) there were sixteen different editions in England and America, and translations into German, French, Dutch, Italian, Russian, and Swedish, accompanied by important commentaries, criticisms, and supporting texts. There would be many more to come. Through these means people all over the developed world were able to read Darwin's work in their own languages and, if they wished, participate in what was one of the first truly international scientific debates.

This extraordinary phenomenon has, of course, attracted much scholarly attention. Much of Darwin's prominence was expressed in characteristically nineteenth-century form. Well-established analyses by Thomas Glick, whose admirable volume first opened up the field of comparative reception studies, by Alvar Ellegard on the reception of Darwin's theories in the British periodical press, and Ron Numbers's recent book *Disseminating Darwin*, have long been regarded as standard works. The collected *Correspondence of Charles Darwin*, edited

<sup>&</sup>lt;sup>1</sup>Read 27 April 2001.

<sup>&</sup>lt;sup>2</sup> Edward Aveling, *Students' Magazine of Science and Art*, 2 September 1878, and Thomas Henry Huxley, Charles Darwin, Obituary, *Nature*, 27 April 1882.

by Frederick Burkhardt and Duncan Porter, is furthermore beginning to reveal in marvellous detail the full impact of Darwin's book on the intellectual world.<sup>3</sup> "It is curious how nationality influences opinion," said Darwin, noting the differing responses to his work in France and Germany.

Yet few of these studies delve into non-scientific realms or ask how Darwin's work became part of the richly varied world of nineteenth-century popular culture, flourishing beyond the boundaries of learned journals and professional societies. Studying the popular reception of Darwin's theories has a great deal to tell us about the way science and culture meet at various times in history.<sup>4</sup> Most ordinary people in nineteenth-century Europe and America, after all, usually encountered science through popular culture—through newspapers and magazines, sometimes a museum or art gallery, or through biographies and memoirs. There were plenty of sites of production and consumption in Victorian Britain in which scientific ideas could be found. These included exhibitions, menageries, freak shows, agricultural contests, horticultural displays, music halls, and consumer goods, as well as fashionable crazes that caught the imagination, such as mesmerist displays.<sup>5</sup>

Darwin's theory was no exception. Individuals could, if they wished, acquire a pottery statuette of a monkey contemplating a human skull. The Soviet leader Vladimir Lenin displayed one of these on his Kremlin desk in the 1920s.<sup>6</sup> Or they might pay to gape at Julia Pastrana, the "Missing Link," whose mummified body toured eastern

<sup>&</sup>lt;sup>3</sup>Thomas F. Glick, ed., *The Comparative Reception of Darwinism*, reprinted with a new preface (Chicago: University of Chicago Press, 1988); Alvar Ellegard, *Darwin and the General Reader: The Reception of Darwin's Theory of Evolution in the British Periodical Press*, 1859–1872, with a new foreword by D. L. Hull (Chicago: University of Chicago Press, 1990); Ronald L. Numbers and John Stenhouse, eds., *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender* (Cambridge: Cambridge University Press, 1999); and Frederick H. Burkhardt, Sydney Smith, et al., eds., *The Correspondence of Charles Darwin*, vols. 1–11 (1821–63) (Cambridge: Cambridge University Press, 1983–99). Darwin's letters are summarised in Frederick H. Burkhardt, Sydney Smith, et al., eds., *Calendar of the Correspondence of Charles Darwin*, rev. ed. (Cambridge: Cambridge University Press, 1994).

<sup>&</sup>lt;sup>4</sup>The most authoritative essays summarising modern historical thought about Darwin are still to be found in David Kohn, ed., *The Darwinian Heritage* (Princeton, N.J.: Princeton University Press in association with Nova Pacifica, 1985).

<sup>&</sup>lt;sup>5</sup> From the wide range of literature, see Richard D. Altick, *The Shows of London* (Cambridge, Mass.: Harvard University Press, 1978), and the essays in N. Jardine, J. A. Secord, and E. Spary, eds., *Cultures of Natural History* (Cambridge: Cambridge University Press, 1996).

<sup>&</sup>lt;sup>6</sup> Illustrated in Robert Service, *Lenin: A Biography* (London: Macmillan, 2000). There were probably several such statuetttes. A "monkey with Darwin's head" was exhibited in the Darwin Centenary Exhibition, Cambridge 1909. See also Richard Freeman, *Charles Darwin: A Companion* (Folkestone: Dawson, 1978), 98.

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Europe in 1862.<sup>7</sup> British connoisseurs were able to commission an elegant piece of Wedgwood ware decorated by Emile Lessore with cherubs clustering around the tree of life.<sup>8</sup> They could sing a duet at the piano on the "Darwinian Theory," read edifying popular romances such as *Survival of the Fittest*, or give their children nursery primers called *Daddy Darwin's Dovecot*. Spanish gourmets might drink a glass of Anis from a bottle depicting a Darwinian imp: "science says it is the best—and that's the truth," declared the label. And farmers in upstate New York could medicate their livestock with Darwin's unknowing blessing. The agricultural firm of G. W. Merchant, of Lockport, near Rochester, New York, advertised its Gargling Oil with an ape that sang:

If I am Darwin's Grandpa, It follows, don't you see, That what is good for man & beast Is doubly good for me.<sup>9</sup>

All these commercial products made Darwin and his intellectual achievement fully tangible to his own generation and the one that followed him.

Darwin was also one of the few scientists to have been portrayed in an extraordinary variety of printed cartoons, caricatures, humorous songs, and written satire. Indeed it is a little surprising that apart from a number of studies of medical lampoons, <sup>10</sup> Martin Rudwick's account of geological caricature, Jim Paradis's study of Victorian scientific satire, and Patricia Fara's work on the iconography of Isaac Newton and Joseph Banks, caricatures have not featured very much in the history

<sup>&</sup>lt;sup>7</sup> Jan Bondeson, A Cabinet of Medical Curiosities (New York: Tauris, 1997), and Martin Howard, Victorian Grotesque. An Illustrated Excursion into Medical Curiosities, Freaks and Abnormalities Principally of the Victorian Age (London: Jupiter Books, 1977).

<sup>&</sup>lt;sup>8</sup> Illustrated in Robin Reilly, *Wedgwood*, 2 vols. (London: Macmillan, Stockton Press, 1989), 2:130, under the title, "The Darwinian Theory." It was produced by Emile Lessore in 1862. I doubt whether it was ever available in mass-produced form.

<sup>&</sup>lt;sup>9</sup>I am extremely grateful to A. Walker Bingham for providing me with information about this firm and its advertisements. See also Henry W. Holcombe, *Patent Medicine Tax Stamps*. A History of the Firms Using United States Private Die Proprietary Medicine Tax Stamps (Lawrence, Mass.: Quarterman Publications Inc., 1979), 367–77.

<sup>&</sup>lt;sup>10</sup> Standard sources are Mortimer Frank, "Caricature in Medicine," Bulletin of the Society of Medical History of Chicago (1911–16), 1: 47–57; Chauncey D. Leake, "Medical Caricature in the United States," ibid. (1928–35), 4: 1–29, and A. Weber, Tableau de la caricature médicale (Paris: Hippocrate, 1936). More recently, see Fiona Haslam, From Hogarth to Richardson: Medicine in Art in Eighteenth-Century Britain (Liverpool: Liverpool University Press, 1996), and Roy Porter, Bodies Politic: Disease, Death and the Doctors in Britain, 1650–1914 (London: Reaktion Books, 2001).

of science.<sup>11</sup> In fact the visual side of science is often underestimated. Caricatures, for example, vividly present the voice of the people. A humorous cartoon is a unique form of communication between human beings that makes new ideas, or the difficulties inherent in new ideas, obvious. We have only to think of modern cartoons, with their complex juxtaposition of ideas, and the way the humour does not travel very well from country to country, to understand how they are very specific to their own cultural context, each with its predominant concerns. With their free use of stereotypes and topical comments, they provide insights into the way at least some of the nation regards science.

It is not possible to dwell on the rich and well-documented history of satirical tradition except for a word or two of definition. <sup>12</sup> Caricatures, as the term's origin indicates, tended to emphasise prominent features of a person's character, often with cruel intent. Cartoons became popular as a specially English device in 1843 with John Leech's drawings in *Punch*—although this form of line drawing was evidently known much earlier. These were altogether milder, a more gently humourous form of topical comment than the biting political satire of Rowlandson or Gillray at the end of the eighteenth century. Dramatic changes in printing technologies in Europe and America, and the diversification of audiences for all forms of periodical literature in the first half of the nineteenth century, created a real expansion in the numbers of people ready to engage with the new wave of illustrated

<sup>&</sup>lt;sup>11</sup> M.J.S. Rudwick, "Caricature as a Source for the History of Science: De la Beche's Anti-Lyellian Sketches of 1831," *Isis* 66 (1975): 534–60; idem, "The Emergence of a Visual Language for Geological Science, 1760–1840," *History of Science* 14 (1976): 149–95; James G. Paradis, "Science and Satire in Victorian Culture," in Bernard Lightman, ed., *Victorian Science in Context* (Chicago: University of Chicago Press, 1997), 143–75; Patricia Fara, "Faces of Genius: Images of Newton in Eighteenth-Century England," in Geoffrey Cubitt and Allen Warren, eds., *Heroic Reputations and Exemplary Lives* (Manchester: Manchester University Press, 2000), 57–81, and idem, "The Royal Society's Portrait of Joseph Banks," *Notes and Records of the Royal Society* 51 (1997):199–210. See also Janet Browne, "Squibs and Snobs: Science in Humorous British Undergraduate Magazines around 1830," *History of Science* 30 (1992): 165–97.

<sup>&</sup>lt;sup>12</sup> Mark Hallett, *The Spectacle of Difference: Graphic Satire in the Age of Hogarth* (New Haven: Yale University Press, 1999); M. L. Townsend, *Forbidden Laughter: Popular Humour and the Limits of Repression in Nineteeenth Century Prussia* (Ann Arbor: University of Michigan Press, 1992); and J. Weschler, *A Human Comedy: Physiognomy and Caricature in Nineteenth Century Paris* (London: Thames and Hudson, 1982). See also M. D. George, *English Political Caricature: A Study of Opinion and Propaganda* (Oxford: Clarendon Press, 1959). An interesting sidelight is cast on Goethe in David Kunzle, "Goethe and Caricature: from Hogarth to Topffer," *Journal of the Warburg and Courtauld Institute* 48 (1985): 164–88. The roots of celebrity caricature are explored in Wendy Wick Reeves, *Celebrity Caricature in America* (New Haven: Smithsonian Institution in association with Yale University Press, 1998).

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material.<sup>13</sup> Harper's Weekly, Punch, Fun, and illustrated journals like Household Words were widely distributed from 1850 onwards. At W. H. Smith's, a newsagent in the Strand, in London, in the 1860s, there were 150 different periodicals for sale. Similarly, at Mudie's Circulating Library, a reader could have found mass-circulation editions of Dickens's novels illustrated by Hablot Brown (Phiz). These were domesticated line drawings, relying on familiar stereotypes and middle-class values. In the hands of John Doyle ("HB") and his son Richard Doyle, then Sir John Tenniel, Edward Linley Samborne, Ernest Griset, and Charles Keene, cartoons, especially in England, came to express broadly middle-of-the-road opinion.<sup>14</sup>

Victorian humorists grabbed their chance when the *Origin of Species* was published. "Am I a Man and a Brother?" asked a gorilla in the May 1860 number of *Punch*, echoing the popular perception of Darwin's work. Although Darwin did not mention human evolution or the possible ancestry of mankind in the *Origin of Species* this was the controversial subject that dominated debate after publication. The notorious confrontation between Bishop Samuel Wilberforce and Thomas Henry Huxley at the British Association for the Advancement of Science meeting in Oxford, in July 1860, made the point obvious. Apes and angels quickly became the issue on which Darwin's and Wallace's theories were hotly debated, a good example of the public wishing to discuss themes that were not present in the scientific work presented to it. The cartoon plays specifically on the British anti-slavery campaign of the 1830s, taking up the well-known motto of the crusade, and Paul Du Chaillu's accounts of ferocious gorillas in west Africa.<sup>15</sup>

Am I satyr or man? Pray tell me who can, And settle my place in the scale. A man in ape's shape, An anthropoid ape, Or monkey deprived of his tail?

<sup>&</sup>lt;sup>13</sup> Richard D. Altick, *The English Common Reader: A Social History of the Mass Reading Public*, 1800–1900 (Chicago: University of Chicago Press, 1957), and John Feather, *A History of British Publishing* (London: Croom Helm, 1988). For reader response theory, see U. Eco, *The Role of the Reader: Explorations in the Semiotics of Texts* (Bloomington: Indiana University Press, 1979). A useful account of the rise of illustrated texts is by J. R. Harvey, *Victorian Novelists and Their Illustrators* (London: Sidgwick and Jackson, 1970).

<sup>&</sup>lt;sup>14</sup>Richard Price, *A History of Punch* (London: Collins, 1957). The magazine *Punch* was particularly noted for its exhaustive chronicling of Benjamin Disraeli's ascendency. Representations of Darwin, and of science in general, form only a very small proportion of the visual imagery in the magazine.

<sup>&</sup>lt;sup>15</sup> Punch 40 (18 May 1861): 206. For Du Chaillu, see Stuart McCook, "'It May Be Truth, But It Is Not Evidence': Paul Du Chaillu and the Legitimation of Evidence in the Field Sciences," Osiris 11 (1996): 177–97.

Irresistibly, the *Punch* cartoonists indicated that apes were more intelligent than humans because they at least knew when to keep silent. A Mr. G-G-G-O-O-rilla, beautifully dressed in evening clothes, was pictured arriving as a guest at a high-society party. Typological satire flooded its pages, linking the Irish political question against appearances from Mr. O'Rilla, contributing to *Punch*'s long-running attack on the Irish nation, which even before Darwin's writings occasionally included the simianisation of Irish facial features. Appreciative of the public taste for apes, *Punch* dedicated its 1861 Christmas Annual to the gorilla, and showed Mr. Punch playing leapfrog with his alter-ego for the year.<sup>16</sup>

Another set of cartoons by Charles Bennett, published in 1863, showed transformations from inert objects like a leg of mutton into humans. Circularity as a motif also came over very strongly in Henry Woolf's full-page cartoon in *Harper's Weekly* of "The Darwinian Student's After-Dinner Dream," in which knives and forks metamorphosed into the girl the student wishes to marry. The shift towards these circular images of evolutionary progression is interesting when compared with Darwin's more linear branching tree. In the *Origin* Darwin took pains to emphasise that evolution was neither progressive nor circular.

The British magazine *Fun* also ran cartoons of Darwin. When Princess Louise, the oldest daughter of Queen Victoria, married the Marquis of Lorne in 1874, *Fun* parodied the wedding procession by including the figures of "Dr. Darwin and our distinquished ancestor" among the trumpeters and royal guests—a drawing of Darwin escorting an ape down the aisle. A representation of Darwin similarly appeared in the pages of the London edition of *Figaro* politely inviting an ape to contemplate its future in a hand-mirror, supported by appropriate quotations from Shakespeare. These cartoons parodied the point whether humans were descended from apes. While drawing on age-old themes of metamorphosis and the beast that invariably resides in mankind, they created a genuinely alternative way of commenting on the implications of Darwin's theory.<sup>18</sup>

Such visual commentaries were not confined to Britain. Talented caricaturists like "André Gill" in *La Charivari* (1832), Wilhelm Busch

<sup>&</sup>lt;sup>16</sup> Discussed in Paradis (note 11), 158.

<sup>&</sup>lt;sup>17</sup>Republished in album form in Charles H. Bennett, *Character Sketches*, *Development Drawings and Original Pictures of Wit and Humour* (London, 1872). The evolutionary cartoons run under the subtitle "The Origin of Species Dedicated by Natural Selection to Charles Darwin." For Woolf, see *Harper's Weekly*, 23 December 1871, 1209.

<sup>&</sup>lt;sup>18</sup> Fun, "The Wedding Procession," 25 March 1871; Figaro (Figaro's London Sketch Book of Celebrities), "Prof. Darwin. This is the ape of form," 18 February 1874.

FIGURE 1. The first and most famous of *Punch*'s images to display the implications of evolutionary theory. The cartoon also plays on contemporary anti-slavery movements in Britain. From *Punch*, 18 May 1861. Courtesy Wellcome Library London.

FIGURE 2. Thomas Nast, the crusading American cartoonist, contributed several politicised gorilla sketches to *Harper's Weekly* during the 1870s. The caption: "The Defrauded Gorilla. 'That *Man* wants to claim my Pedigree. He says he is one of my Descendants.' Mr. Bergh. 'Now, Mr. Darwin, how could you insult him so?'" From *Harper's Weekly*, 19 August 1871. Courtesy British Library.

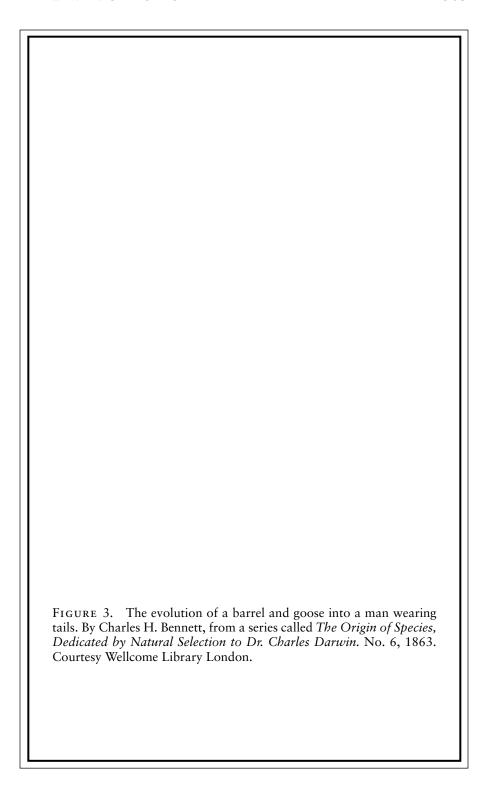


FIGURE 4. In Britain comfortable middle-class values were simultaneously exposed and confirmed by evolutionary caricatures. The caption: "Jack (who has been reading passages from the 'Descent of Man' to the Wife whom he adores, but loves to tease). 'So you see, Mary, Baby is Descended from a Hairy Quadruped, with Pointed Ears and a Tail. We all are!' Mary. 'Speak for yourself, Jack! I'm not Descended from Anything of the Kind, I beg to say; and Baby takes after me. So, there!'" From Punch, 1 April 1871. Courtesy Wellcome Library London.

FIGURE 5. After the *Descent of Man* was published in 1871 Darwin was frequently caricatured as an ape. From *Figaro's London Sketch Book of Celebrities*, 18 February 1874. Courtesy Wellcome Library London.

FIGURE 6. During the 1870s caricaturists increasingly included the motif of a tree, making allusion to the apish origins of human beings as well as the evolutionary tree itself. This ape is reading a copy of the *Origin of Species*. From *Punch*, 30 November 1872. Courtesy Wellcome Library London.

FIGURE 7. André Gill, the Parisian caricaturist, used Darwinism to make trenchant political and philosophical points. The figure of Emile Littré, the arch-materialist, encourages Darwin to crash through circus hoops labelled "Credulité" and "Superstitions." From *La Lune*, "L'homme descend du singe,"18 August 1878. Author's collection.

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in *Fliegende Blätter* (1844), and Thomas Nast in *Harper's Weekly* (1851), who memorably documented the Civil War and etched the elephant and donkey symbols into the American political mind, purveyed Darwinism along with the ironies of their own culture. In 1871, when Darwin's *Descent of man* was widely reviewed in American journals, Nast produced a cartoon for *Harper's Weekly* in which a gorilla accuses Darwin of wanting to claim his pedigree. <sup>19</sup> Nast linked this to a vendetta against Mr. Bergh, of a rival journal. Such idiomatic transformations of high science are ripe for a great deal more study by historians of popular scientific culture.

With publication of the *Descent of Man* in 1871, followed by *Expression of the Emotions* in 1872, Darwin himself entered the cartoons, usually as the ape itself. His personal facial attributes, such as his beard, the great dome of his skull, and the beetling eyebrows, were already relatively familiar to the public from the *Vanity Fair* chromolithograph and photographic images reproduced in the *Illustrated London News* and elsewhere. Such recognition was unusual at a time when mass publicity was only in its infancy, even more so for a scientist. Nevertheless, Darwin's facial features were heavily emphasised in every caricature around the time of the *Descent of Man* and the *Expression of the Emotions*. At one level, the cartoonists were probably playing on the acknowledged iconography of intellectuality. Any caricaturist of the day would have emphasised the typical attributes of knowledge, such as spectacles, an absent-minded air, a blackboard, and so on.

One picture in *Fun* (27 July 1871), titled "A little lecture by Professor D—n on the development of the Horse," showed Darwin as an absent-minded professor in front of a blackboard, with a handkerchief tumbling out of his trouser pocket to mimic a monkey's tail. The joke lay in his explanation of the transmutation of a horseradish plant into a racehorse through ten nonsensical horsey stages, including a clotheshorse, Louis Quart-horse, and a Hors-de-combat.<sup>21</sup>

But there was also an element of creative stereotyping going on. Darwin's general hairiness could easily be turned into the animal fur of anthropoid apes. Add a tail, and there was an image immediately con-

<sup>&</sup>lt;sup>19</sup> Harper's Weekly, "Mr. Bergh to the Rescue," 19 August 1871.

<sup>&</sup>lt;sup>20</sup> Steel engraved portraits of Darwin are in *Illustrated London News* 58 (1871): 244, and *Harper's Weekly* 1871, 308. See also "Men of the Day, No. 33. Natural Selection," *Vanity Fair*, September 1871, by Carlo Pellegrini under his customary byline of "Ape" (although the Darwin print was in fact unsigned).

<sup>&</sup>lt;sup>21</sup> Fun, "A little lecture by Professor D—n on the development of the horse," 22 July

veying the idea of human evolution. *The Hornet* displayed Darwin as a "Venerable Orang-Outang: A contribution to Unnatural History" in March 1871. The Dalziel brothers, the most eminent team of British wood-engravers of the period, produced the same set of symbolic devices in "That Troubles our Monkey again" for *Fun* in 1872.<sup>22</sup> The Dalzeils add a well-bred young woman to accentuate what was to them the shocking idea of apish relatives in the family tree. These pictures of Darwin-as-ape or Darwin-as-monkey readily identified him as the author of the theory, in much the same way as a tricorne hat signalled Napoleon. "Ah, has *Punch* taken me up?" Darwin asked a friend in 1872. "I keep all those things. Have you seen me in the *Hornet*?"<sup>23</sup>

It is significant that hardly any of the other Victorian evolutionists appear in cartoons, and of those who do appear Huxley is by far the most regular.<sup>24</sup> None appear as an ape. This simplification of complex scientific moments of discovery and exposition is perhaps to be expected. Yet it goes to show how quickly—and how easily—evolution by natural selection became almost exclusively associated with Darwin's name, reducing the important roles of Huxley, Charles Lyell, Herbert Spencer, Asa Gray, and especially Alfred Russel Wallace.

At the same time, the evolutionary tree made a literal appearance. Darwin was often depicted as a monkey sitting in, or swinging from, a tree, that was in turn sometimes labelled the "tree of life." *Punch* caricaturists put an ape in a tree diligently reading a copy of the *Origin of Species. Figaro* showed a hairy Darwin among the branches of "A Darwinian hypothesis." The Parisian satirical journal, *La Petite Lune*, dangled him from the "arbre de la science" with an elegant tail draped over his arm.<sup>25</sup>

The twin images of an ape and a tree established that the theory of human descent was the message. Few other scientific theories would have been so quickly identified in the public prints of the day. A hairy, apish Darwin and a tree became easily recognisable images of evolutionary ideas—as recognisable an image as the double helix of DNA is today.

As an antidote to this rather genteel, friendly portrayal in the British press, at least one French caricature carried more of a menacing air. A print made by André Gill brought the radical nature of natural selec-

<sup>&</sup>lt;sup>22</sup> Hornet, "A venerable Orang-Outang. A contribution to unnatural history," 22 March 1871, and Fun, "That troubles our monkey again," 16 November 1872.

<sup>&</sup>lt;sup>23</sup> James Hague, "A Reminiscence of Mr. Darwin," *Harper's New Monthly Magazine* 69 (1884): 759–63, p. 760.

<sup>&</sup>lt;sup>24</sup> Dawson Turner, Catalogue of the Huxley Papers at Imperial College London.

<sup>&</sup>lt;sup>25</sup> Punch, "Piety and Parallel," Figaro, 28 October 1871, and La Petite Lune.

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tion to the fore. It was published in the Parisian magazine La Lune in August 1878.<sup>26</sup> Under the caption "L'homme descend du singe," Darwin appeared as a monkey at the circus, bursting through a paper hoop labelled "Credulité" and aiming for another marked "Ignorance" and "Superstition." The hoops are held by Emile Littré, the medical writer and populariser of Comte, who was repeatedly denounced in France as an arch-fiend of scientific positivism. The message was that rational thought would smash through Catholic ignorance, a powerful force for change.

In Britain there was a vast satirical attack on the Anglican religion, labelled "Our National Church," known in two versions, one published in 1873, the other in 1883.<sup>27</sup> The central feature is the dome of St. Paul's Cathedral serving as an umbrella in a storm, indicating the key role of the Church of England in the state. But the umbrella cannot shelter all the dissenting groups, shown here as Broad Church, Low Church, High Church, No Church, Catholicism, and Science. Darwin is included as a dissident voice, indicating the way to rational thought, which he calls sunshine and light. Huxley and Tyndall, two prominent critics of establishment religion, carry flags behind him.

These two theological caricatures—the French and the English bring a vivid sense of immediacy to the debate surrounding Darwin's work. In both of them, the idea of evolution is seen as a liberating force that reaches beyond the boundaries of professional science.

In conclusion, it seems very probable that these visual statements propelled the idea of evolution out of the arcane realms of learned societies into the ordinary world of humour, newspapers, and demotic literature. Without Mr. Punch's gorillas, or Figaro's monkeys, the full implications of Darwin's densely-packed theory would have taken much longer to sink in.

Furthermore, the cartoons fused the notion of evolution with the personal identity of Darwin, a matching of theory with author that surely contributed to the highly personalised response to the Origin of Species and perhaps also to the increasing use of the term Darwinism rather than (say) Spencerism, or Wallaceism. Generally speaking it is not easy for an artist to draw a picture of scientist that also conveys his

 $<sup>^{26}</sup>$  La Lune, "L'homme descend du singe," 18 August 1878.  $^{27}$  Discussed in Warren Sylvester Smith, The London Heretics, 1870–1914 (London: Constable, 1967). Smith attributes the text of the print to George Holyoake, pp. xiii-xvi. This complex picture primarily played on James Martineau's attempts during the 1870s to unite all clergymen under the single umbrella of a "national" church, and the looming menace of evolutionary theory was merely one of several perceived threats to the establishment. Darwin had both. His copies are in DAR 141:10 and 11. I am grateful to Jim Moore for his help on this issue.

or her theory—Newton has his mythical apple of course, Einstein his formulae.<sup>28</sup> But these are accoutrements specific to the kind of knowledge produced, merely pictorial conventions for representing abstract achievements, in the same way as a scientist is often depicted in a laboratory or book-lined study.<sup>29</sup> The caricatures of Darwin, by contrast, actually show him *as* his theory or as a consequence of his theory.

Without wanting to claim too much for caricature and cartoons as a means of understanding the Darwinian revolution, it does seem possible to view mass-produced caricatures in socially positive terms, as contributing to a greater group identity, perpetuating a shared ideology, and raising common anxieties about the implications and consequences of evolutionary ideas. These caricatures are not just a transparent medium of communication, not just illustrations, but could be the actual shapers—maybe even realisers—of nineteenth-century popular thought.

<sup>&</sup>lt;sup>28</sup> The creation of such legends is touched on in Richard Yeo, "Genius, Method and Morality: Images of Newton in Britain, 1760–1860," *Science in Context* 2 (1988): 257–84, and Alan J. Friedman and Carol C. Donley, *Einstein as Myth and Muse* (Cambridge: Cambridge University Press, 1985). See also Pnina Abir Am and Clark A. Elliott, eds., "Commemorative Practices in Science. Historical Perspectives on the Politics of Collective Memory," *Osiris* 14 (1999).

<sup>&</sup>lt;sup>29</sup> There is a large body of relevant literature on the history of portraiture. Scientific portraiture is authoritatively explored by Ludmilla Jordanova, *Defining Features, Scientific and Medical Portraits* 1660–2000 (London: Reaktion Books, 2000).