

The Reception of Francis Galton's *Hereditary Genius* in the Victorian Periodical Press

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Over the past two decades, the scholarship on eugenics has grown rapidly as historians of science have shown increasing interest in investigating the complex, historical interactions between science and social theory. As a movement that began as a statistical proof of a hereditary theory and developed into a blueprint for societal improvement, eugenical science exemplifies the delicacy of the science-society boundary.

Thus far, scholarly works on eugenics have approached the movement from several angles, including general historical studies, geography-specific analyses, biographies of the founder Francis Galton, and explications of the eugenical literature. A complete list of these works would fill a separate paper, but a few titles merit mentioning here.¹ For a comprehensive history of eugenics in the Anglo-American sphere from the late nineteenth century to the current day, Daniel J. Kevles's *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (1985) is a valuable study.² Kevles devotes his first chapter to Galton and presents a fascinating picture of the thinker's life and personality along with an analysis of his statistical method. *The Origins and Growth of the English Eugenics Movement, 1865-1925* (1985), by Lyndsay A. Farrall, has a similar broad scope in its study of the movement, with a chronological focus on pre-World War II times.³ Ruth Schwartz Cowan's *Sir Francis Galton and the Study of Heredity in the Nineteenth Century* (1985) places greater emphasis on Galton

1. For a summary of eugenics scholarship through the 1970s see Lyndsay Farrall, "The History of Eugenics: A Biographical Review," *Ann. Sci.*, 36 (March 1979), 111-123.

2. Daniel J. Kevles, *In the Name of Eugenics: Genetics and the Uses of Human Heredity* (New York: Knopf, 1985).

3. Lyndsay Andrew Farrall, *The Origins and Growth of the English Eugenics Movement, 1865-1925* (New York: Garland, 1985).

himself and his early writings – particularly “Hereditary Talent and character” (1865), Galton’s first hereditary study.⁴

The three comprehensive biographies of Galton were published some years apart, and considerably earlier than the aforementioned works. C. P. Blacker’s *Eugenics: Galton and After* (1952) presents a detailed discussion of Galton’s life, interests, and personality, followed by an outline of the developments in eugenics after Galton’s death and a final chapter on eugenics “today.”⁵ Similarly, D. W. Forrest limits his scope to the man behind the movement in *Francis Galton: The Life and Work of a Victorian Genius* (1974).⁶ With its three volumes, Karl Pearson’s well-known *Life, Letters and Labours of Francis Galton* (1914–1930) remains the most comprehensive study of Galton’s life and work; it contains not only Galton’s correspondence and unpublished papers, but also numerous pictures and five separate pedigree plates outlining his ancestry.⁷

In the past couple of years, studies of the eugenics movement have concentrated primarily on unexplored areas outside of the Anglo-American world. For example, in *The Wellborn Science: Eugenics in Germany, France, Brazil, and Russia* (1990) Mark Adams attempts to revise the current understanding of eugenics by providing a comparative history.⁸ In addition to introductory and concluding chapters and a study of eugenics in Russia by Adams, the collection contains informative chapters on Germany, France, and Brazil by Sheila Weiss, William Schneider, and Nancy Stepan, respectively. Angus McLaren has recently added to the cross-cultural historical study of eugenics with *Our Own Master Race: Eugenics in Canada, 1885–1945* (1990).⁹ In a similar vein, William Schneider’s *Quality and Quantity: The Quest for Biological Regeneration in Twentieth-Century France* (1990) provides an extensive account of French eugenics while emphasizing the significance of comparative studies.¹⁰ A departure from this recent

4. Ruth Schwartz Cowan, *Sir Francis Galton and the Study of Heredity in the Nineteenth Century* (New York: Garland, 1985).

5. C. P. Blacker, *Eugenics: Galton and After* (Cambridge, Mass.: Harvard University Press, 1952).

6. D. W. Forrest, *Francis Galton: The Life and Work of a Victorian Genius* (London: Elek, 1974).

7. Karl Pearson, *The Life, Letters and Labours of Francis Galton*, 3 vols. (Cambridge: Cambridge University Press, 1914, 1924, 1930).

8. Mark B. Adams, ed., *The Wellborn Science: Eugenics in Germany, France, Brazil, and Russia* (New York: Oxford University Press, 1990).

9. Angus McLaren, *Our Own Master Race: Eugenics in Canada, 1885–1945* (Toronto: McClelland and Stewart, 1990).

10. William H. Schneider, *Quality and Quantity: The Quest for Biological Regeneration in Twentieth-Century France* (New York: Cambridge University Press, 1990).

trend is Pauline M. H. Mazumdar's *Eugenics, Human Genetics and Human Failings: The Eugenics Society, Its Sources and Its Critics in Britain* (1992), which, after acknowledging the international nature of the eugenics movement, deals exclusively with the Eugenics Society of England in an account based on its unpublished papers.¹¹

While these recent works emphasizing the international nature of eugenics are contributing much to a comparative understanding of the movement, the field of Anglo-American eugenics, as Mazumdar's study establishes, has not yet been exhausted. To date, the scholarship of eugenics has examined Galton's life and individual works in detail and has analyzed the work of his followers. However, little has been said about the reception of Galton's theories outside of those circles that embraced them. In particular, despite much analysis of the content of the book that introduced eugenics into Western society and of its role in the development of the future movement, only a few scattered paragraphs have been written so far on the immediate critical reception of *Hereditary Genius*.¹² Pearson implies in his biography that *Hereditary Genius* met with a cool reception and was praised by only Charles Darwin and Alfred R. Wallace.¹³ More recently, Forrest argues that *Hereditary Genius* was received poorly by contemporary nonscientific readers "mainly on account of their distaste for Galton's critical strictures on the Church and the clergy," and that scientific reviewers were much more positive.¹⁴ Farrall elaborates on this point:

On the whole, the reviews of Galton's work neglected his suggestions about changing marriage patterns and concentrated on his arguments in favor of the hypothesis that intellectual ability was inherited. The reviewers felt that Galton had overemphasized the role of heredity while neglecting the role of family influence and social class. Moreover, most reviewers rejected Galton's contention that worldly success was an adequate measure of intellectual ability. The idea of controlling breeding was not rejected by everyone, however. . . .¹⁵

11. Pauline M. H. Mazumdar, *Eugenics, Human Genetics and Human Failings: The Eugenics Society, Its Sources and Its Critics in Britain* (London: Routledge, 1992).

12. Francis Galton, *Hereditary Genius: An Inquiry into Its Laws and Consequences* (London: Macmillan and Co., 1869).

13. Pearson, *Life* (above, n. 7), II, 115.

14. Forrest, *Francis Galton* (above, n. 6), p. 101.

15. Farrall, *Origins* (above, n. 3), pp. 23-24.

Along somewhat similar lines, Cowan includes a list of journal articles reviewing Galton's work in her bibliography; five of these articles are direct responses to *Hereditary Genius*.¹⁶

My goal in this essay is to study this contemporary reception. In the pages that follow, I will provide an analysis of the reviews of *Hereditary Genius* that appeared in the Anglo-American press during 1870, excerpting extensively from these sources to demonstrate the nature and tone of the response. *Rezeptionsgeschichte*, the study of the contemporary reception of ideas, is now a familiar historical genre.¹⁷ It is this approach to history that allows us to look at ideas in their original historical context, untainted by current-day biases. By concentrating on the immediate reception of Galton's work, this essay attempts to free readers, as far as possible, from twentieth-century readings and to facilitate an understanding of the values and priorities of Galton's contemporaries. For the purpose of studying the truly contemporary reception of the book, my study is confined to reviews written specifically in 1870, immediately following the publication of *Hereditary Genius*. The specification of a limited time-frame helps to ensure that all the quoted reviewers viewed the book through a shared intellectual climate, and hence it provides a basis for the comparison of their reactions.

In 1870, a dozen reviews of *Hereditary Genius* appeared in the English-speaking world in scientific, religious, and literary journals.¹⁸ Most were anonymous, as was customary in Victorian journals, and they varied in length from a single paragraph to twenty pages. Despite the variety of individual responses, the tendency

16. Cowan, *Sir Francis Galton* (above, n. 4), pp. 276–277.

17. Within the history of biology, Alvar Ellegård's *Darwin and the General Reader: The Reception of Darwin's Theory of Evolution in the British Periodical Press, 1859–1872* (published in vol. LXIV of Göteborgs Universitet Arsskrift, Göteborg: Elanders Boktryckeri Aktiebolag, 1958; repr. 1990, University of Chicago Press) is the classic *Rezeptionsgeschichte* text that has helped construct the intellectual atmosphere of the 1860s and 1870s.

18. In collecting the reviews of *Hereditary Genius* I drew on several sources. The *Combined Retrospective Index to Book Reviews in Humanities Journals 1802–1974* and *Poole's Index to Periodical Literature* record five reviews. To locate the others, I searched through the indexes of the journals listed in an appendix of Ellegård's work, which enumerates some 120 Victorian periodicals that reviewed Darwin's work. Two volumes of *British Literary Magazines*, edited by Alvin Sullivan, provided me with valuable information on the political leanings of the journals that reviewed *Hereditary Genius*, while the *Wellesley Index to Victorian Periodicals* helped me identify authors of anonymous reviews. For biographical information on the reviewers, I used the *Dictionary of National Biography*, the *Dictionary of Scientific Biography*, and *British Authors of the Nineteenth Century*.

of the reaction to be consistent within interest groups allows for a convenient, if admittedly somewhat artificial, grouping of the reviews into three professional and ideological categories: scientific, religious, and neutral. Here, the term "neutral" is not intended to indicate that the reviewers had no political and personal leanings, but rather points to the absence of strong, discernible scientific and religious biases; hence it describes, for lack of a better word, articles in political and literary journals whose interpretations of *Hereditary Genius* were based on more subtle or eclectic convictions.

In analyzing these three categories, I will agree with Pearson and Forrest that Galton's book gained its strongest Victorian following among scientific readers, but I will refrain from characterizing the reception in other circles as negative. It is a considerable exaggeration to assert, as Pearson does, that the book was not well received outside the scientific community. From my research, among nonscientific reviewers, only one or two journals published entirely or largely negative reviews. Religious reviewers, offended by the book's attack on the church, divines, and Christian values (in particular, on charity and the human potential for improvement), were strongly critical. Those reviews without religious or scientific leanings, however, although skeptical of Galton's methodology and theory, praised his sincerity and meticulousness and found that he had interesting facts and insights to offer. While judging his conclusions impractical, they reviewed the interesting details and original ideas in the book without the ideological involvement apparent in the scientific and religious reviews. Moreover, almost all criticism reflected a detailed and insightful understanding of Galton's scientific theory and social proposals; reviewers pointed out discrepancies and weaknesses, but none rejected the whole system. In other words, *Hereditary Genius* was neither poorly nor well received by contemporary audiences – rather, it was received differently by each reviewer.

Perhaps most importantly, all three categories of responses viewed *Hereditary Genius* within the context of a nineteenth-century understanding of the new scientism and its role in society. Appearing eleven years after the *Origin of Species*, at a time when Darwin and his colleagues were spurring science on to unprecedented levels of credibility, *Hereditary Genius* was inevitably perceived as advancing the new spirit of scientific naturalism; hence, how a reviewer responded to the book depended first and foremost on his position on scientism in general. Viewing the response again through a threefold framework, it becomes clear that scientists and scientific journals, guided by a belief in the inherent

truth of scientific inquiry, approached *Hereditary Genius* with a pre-determined conviction of its value and validity. Religious reviewers criticized Galton's work mainly in the context of a larger movement toward the displacement of religious faith. Literary and political journals often acknowledged the role of *Hereditary Genius* in the new faith, but criticized its extreme scientism. Reminding readers first that Galton "stood very close to the centre of the Victorian battle between naturalism and traditional religion," Donald A. MacKenzie argues aptly that "[w]hat struck contemporaries as noteworthy about Galton's *Hereditary Genius* was not so much its hereditarianism as its uncompromising naturalism."¹⁹ The findings of this study bear out MacKenzie's observation. Indeed, a close investigation of the immediate reception of *Hereditary Genius* by contemporaries establishes that late-Victorian reviewers found it impossible to judge the book "on its own terms" but rather responded to it variously as an expression of the potent and increasingly pervasive movement of scientific naturalism.

THE SCIENTISTS' REACTION

Galton recalled, in *Memories of My Life*: "The verdict which I most eagerly waited for was that of Charles Darwin."²⁰ Darwin did not disappoint his cousin. In a letter dated December 3, 1869 (the book came out in November), after having read the first few chapters of *Hereditary Genius*, Darwin exclaimed: "I do not think I ever in all my life read anything more interesting and original – and how well and clearly you put every point!" The work seems to have influenced Darwin beyond mere intellectual stimulation, as he then added: "You have made a convert of an opponent in one sense, for I have always maintained that, excepting fools, men did not differ much in intellect, only in zeal and hard work: and I still think this is an *eminently* important difference."²¹ Darwin may not have been convinced of the exclusive role of heredity, but he appears to have agreed to its significance.²²

19. Donald A. MacKenzie, *Statistics in Britain 1865–1930: The Social Construction of Scientific Knowledge* (Edinburgh: Edinburgh University Press, 1981), pp. 54–55.

20. Francis Galton, *Memories of My Life* (London: Methuen, 1908), p. 290.

21. Charles Darwin to Francis Galton, December 3, 1869, as published in Galton, *Memories*, p. 290.

22. More concrete evidence of Darwin's response to *Hereditary Genius* appears in his two-volume work *The Variation of Animals and Plants under Domestication*. In the second edition of the book (1875), Darwin comments in his chapter "Inheritance" that "Some writers have doubted whether those complex mental

A second scientific opinion of the merits of *Hereditary Genius* was put forth by Alfred R. Wallace (1823–1913), the codiscoverer of the theory of natural selection, whose “On the Law Which Has regulated the Introduction of New Species” (1855) prompted Darwin to publish his own findings in the *Origin of Species*, and whose classic natural history travel book *The Malay Archipelago* (1869) had already won him an international reputation as one of the greatest English naturalists of his day. In a March 1870 review in *Nature*, Wallace wrote: “Many who read it [*Hereditary Genius*] without the care and attention it requires and deserves, will admit that it is ingenious, but declare that the question is incapable of proof. Such a verdict will, however, by no means do justice to Mr. Galton’s argument.” Wallace then set forth to do justice to the argument himself in a short but comprehensive summary of the book’s main points. Although he refrained from analyzing Galton’s theory in these paragraphs, the care with which he discussed the main arguments revealed his respect for them. He disagreed with Galton on the issue of marriage laws, arguing that an “increase of population depends less upon the number of children born, than on those which reach manhood.” Yet, in being merely technical in his criticism, he demonstrated an equality of faith in the power of scientific reasoning to reach social conclusions. He concluded his review by asserting that the last chapters of *Hereditary Genius* contain “some of the most startling and suggestive ideas to be found in any modern work.”²³

An anonymous review in the *Journal of Psychological Medicine* displayed the same lack of moral response to Galton’s theory as did Wallace’s article.²⁴ While providing a detailed, knowledgeable, and impressively lengthy paraphrase of Galton’s thesis, method, and data, the reviewer devoted only a few lines to his social theory, even then maintaining an aloof tone by stating the argument without commenting on its validity. He attributed a few unidentified difficulties in the eugenics argument to factors beyond Galton’s control: “The

attributes, on which genius and talent depend are inherited, even when both parents are thus endowed. But he who will study Mr. Galton’s able work on ‘Hereditary Genius’ will have his doubts allayed” (Charles Darwin, *The Variation of Animals and Plants under Domestication* [London: John Murray, 1905], I, 538). Darwin also refers to Galton’s work several times in *The Descent of Man*.

23. Alfred R. Wallace, review of *Hereditary Genius*, in *Nature*, I (November 1869–April 1870), 501–503.

24. Review of *Hereditary Genius*, under “Contemporary Literature” in *The Journal of Psychological Medicine: A Quarterly Review of Diseases of the Nervous System, Medical Jurisprudence, and Anthropology*, 4 (1870), 399–417.

author is thoroughly in earnest in his belief, and as thoroughly honest in his treatment; if he is not always convincing, it is more owing to the inherent difficulties which beset the subject, than from any lack of research, zeal, or talent, on the part of the advocate." The review concluded that the merits of Galton's "brightly and attractively written" argument could only be definitively determined after further research. More importantly, by claiming *Hereditary Genius* to be "an able contribution to the Darwinian doctrine of Natural Selection," and a potential initiator of broader research, the reviewer placed Galton's work in the same naturalistic genre as Darwin's, hinting at the intrinsic validity of scientific reasoning.²⁵ As with Darwin and Wallace, the anonymous reviewer seemed to assume an underlying belief in the verity of "scientific reasoning." The fact that none of the three showed a strong moral response to social ideas that inspire horror in many today demonstrates an essential commitment to an amoral scientism.

THE RELIGIOUS PRESS

What scientific audiences overlooked, religious audiences attacked. "I am now about to push my statistical survey into regions where precise inquiries seldom penetrate, and are not very generally welcomed," began Galton in his chapter on divines.²⁶ The comment was prophetic. Not only did religious audiences not welcome his comments on divines, they attacked his ideas on free will, charity, and the potential future of the British population. The two religious journals that reviewed *Hereditary Genius* in 1870 proved to be the most critical of the book, challenging it on method and conclusion alike. Like scientific readers, the religious reviewers saw in Galton not just the author of a new scientific text, but a follower of a rapidly and aggressively expanding naturalistic movement. Galton's attack on the divines and the Catholic church alone were grounds for resentment. But it was the larger picture, the movement that assigned "scientific truth" to such attacks and sanctioned them, that religious audiences fought against. Thus they criticized the "scientific" method that Galton and contemporary scientists employed in formulating such theories, and there cast

25. Ibid, p. 417. For further information on the interaction of Galtonian and Darwinian theories, see Cowan, *Sir Francis Galton* (above, n. 4) and Blacker, 87-143; *Eugenics* (above, n. 5), pp. 82-83. Also see Daniel Pick, *Faces of Degeneration: A European Disorder, c. 1848-c. 1918* (Cambridge: Cambridge University Press, 1984), pp. 191-192, 198-199.

26. *Hereditary Genius*, 257.

doubt on the infallibility of truth reached through scientific reasoning, posing some vital questions on the legitimacy of nineteenth-century formulations of science.

The *Catholic World*, a monthly magazine of general literature and science, published a review of *Hereditary Genius* in September 1870.²⁷ The anonymous article began with an irate reference to the field:

Mr. Galton is what in these days is called a *scientist*, or cultivator of the physical sciences, whose pretension is . . . to assert nothing but positive facts and the laws of their production and operation, ascertained by careful observation and experiment, and induction therefrom. Their aim would seem to be to explain all the facts or phenomena of the universe by means of second cause.

The science of Galton and his contemporaries, the author asserted, attempted to deduce the universal from the particular, introducing conclusions broader than the facts in question could allow, and therefore venturing into the field of philosophy with unmerited confidence. The danger of science, the article continued, was not the factual information revealed, but the attempt to "induce a law . . . that will hold good beyond the particulars observed and analyzed."²⁸ Assuming cause and effect for any set of events distorted reality; so did the acceptance of any hypothesis that fit the facts:

Even if it were uniformly true that great men have always descended from parents remarkable for their natural abilities, Mr. Galton's theory that genius is hereditary could not be concluded with scientific certainty. . . . All that could be asserted would be the relation of concomitance or of juxtaposition, not the relation of cause and effect. . . . For, after all, there may be a real cause on which the facts depend, and which demands an entirely different explanation from the one which the scientist offer.²⁹

That the reviewer moved on to criticize universally accepted scientific figures of the time, such as Charles Darwin and Charles

27. "Hereditary Genius," *Catholic World*, 11 (April–September 1870), 721–732.

28. *Ibid.*, pp. 721–722.

29. *Ibid.*, pp. 726–727.

Lyell, provided further evidence of his distaste of the new naturalism and revealed biases of his own. In particular, he stated that he did "not believe a word in Darwin's theory of natural selection; for all the facts on which he bases it admit of a different explanation."³⁰ this admission puts the reviewer's approach to *Hereditary Genius* in perspective.

Indeed, the author's biases are not hard to decipher. He caustically criticized Galton and contemporaries for failing to recognize a Creator and for assigning human nature to nothing but "the mechanical, chemical, and electrical arrangement and combination of the particles of brute matter." He additionally accused Galton of classifying humans with animals and plants "with an air of the most perfect innocence in the world."³¹ The reviewer's attitude hence seemed to stem from a concern to retain a religious outlook on the distinction between body and soul. The soul, the article hoped to assert, was not generated like the body and had an identity beyond the mere biological organization of the human being. After attempting once more to assure the reader that he would accept any theory if based on actual facts ("for nothing can be true . . . that contradicts real science"), the reviewer immediately revealed his true sentiments: "But the author [Galton] is bound to consider whether a theory or hypothesis which contradicts the deepest and most cherished beliefs of mankind in all ages and nations, and in which is the key to universal history, is really science, or really is sustained by facts."³²

It appears that the cherished beliefs will transcend the truest of sciences after all. Even the most rigorous proof would not hold up against such prior religious sentiment. That Galton's work disregards "freedom of the human will, or man's moral responsibility for his conduct, or that it excludes all morality, all virtue, and all sin, and recognizes only physical good or evil,"³³ may ring true to all who disagree with his harsh determinism; to the *Catholic World*, however, the objection was a matter not only of humanitarianism, but also of dogma.

An anonymous review of *Hereditary Genius* in the *British Quarterly Review*, a Congregationalist/Baptist journal of criticism, showed that Protestant circles shared the sentiments of the *Catholic*

30. Ibid., p. 731.

31. Ibid., p. 724.

32. Ibid., p. 725.

33. Ibid., p. 724.

World reviewer.³⁴ Although much shorter, the *British Quarterly Review* article was nonetheless packed with the same emotional involvement so conspicuously absent in scientific journals. Once again, concern with the issue extended beyond Galton's theory per se to the overall scientific developments of the time. The reviewer predicted that Galton provided the application of Darwinian ideas to "a region of phenomena where the theologic phase is likely, even among extreme positivists, to linger the longest." The author refrained from detail, but articulated Galton's main argument in powerful and sarcastic rhetoric:

as easily and certainly as a cook can from the ingredients of milk, egg, and flour, produce now an omelette and now a sponge-cake, so the formation of all the various forms of man, and even the individualities that lead to "eminence" in the various professions – all, in fact, that constitutes the genius of Caesar or Milton, or Brougham or George Herbert – is definitely traceable or is conceivable as originated by the inexorable laws of heredity.³⁵

Further, because of its clear and articulate expression of the conflict between the developing scientism and the traditional religious sentiment, a long section of the article is worth quoting.

There have always been some sacred regions to which the man who could not part with faith in the living God has prided himself that even Materialism could not penetrate. The *Ego*, the individuality, that which constituted the centre of his consciousness, has said, "I came forth from God." "Parents have been instrumental in God's hands in fashioning my physical frame, and even my animal temperament and the quality which my nature has assumed, but God is the father of my spirit." This respectable "delusion" is now swept away by accomplished Darwinites, and our author has planted a battery of averages, statistics, and facts, drawn from hundreds of "biographical dictionaries," and has fired a broadside into the citadel. . . . Circumstances, early education, social advantages, are hardly, according to him, to be named in comparison with "natural ability," which he characterizes as "intellect," "zeal," and "power of work." No amount

34. Review of *Hereditary Genius*, by Francis Galton, under "Contemporary Literature, Politics, Science, and Art" in *Brit. Quart. Rev.*, 51 (January and April 1870), 242–244.

35. *Ibid.*, p. 242.

of education, no amount of leisure or help from without, will be a substitute for these.³⁶

Like the review in the *Catholic World*, the review in the *British Quarterly Review* addressed more specific problems in Galton's theory (the significance of environmental influences, in one example), but kept the conflict between science and religion at the forefront of its discussion. The reviewer concluded the article with the claim that "the law represented in averages breaks into fragments" when applied to individuals.³⁷ Both the *Catholic World* and the *British Quarterly Review* articles hence clearly moved beyond Galton to target "the Darwinites" as the opposition.

The editors of the *Theological Review*, "a journal of religious thought and life" with a Unitarian basis and liberal political tendencies, must not have excluded articles with a lack of "respect for piety and religious earnestness,"³⁸ to use the words of the *British Quarterly Review* author, for an article on "Hereditary Piety" seemed hardly troubled by Galton's treatment of the divines.³⁹ The author of the review, Frances Power Cobbe (1822–1904), was an Irish writer on religion and philosophy and an unorthodox member of a family of strict evangelical Protestants, who devoted most of her life to philanthropy and advocated suffrage and higher education for women. Her substantial article commented solely upon Galton's chapter on the divines. She showed a surprising lack of interest in the theory of religious constitution espoused in *Hereditary Genius*, and thus departed from the pattern of religious outrage at such hereditary theory. Rather, underlying her almost exuberant acceptance of traditionally anti-Christian arguments is a respect for science and scientific progress, confused by a poor understanding of Galton's theories. Cobbe's article attempts an exceptional incorporation of scientific doctrine into religious teaching, but ultimately misses the inherent tensions between the two.

The opening paragraphs of the twenty-three-page review acknowledged that Galton's ideas had shocking potential – yet not, Cobbe implied, because of any blasphemous untruths espoused, but because of conservative public opinion. Public opinion, according to Cobbe, had progressed through the successive stages

36. *Ibid.*, pp. 242–243.

37. *Ibid.*, p. 244.

38. *Ibid.*, pp. 242–243.

39. Frances Power Cobbe, "Hereditary Piety," *Theol. Rev.*, 7 (1870), 211–234.

of viewing humans as "wholly fresh, isolated specimens of creative Power," of worshiping the "omnipotence of education," and finally, of admitting the role of "heritage of . . . bodily organization" in the formation of the human constitution. That "*all* man's faculties and qualities, physical, mental, moral and religious also, have a certain given relation to the conditions of his birth," provided a new challenge: "Now . . . our gauge of moral responsibility must make large allowance for the good or evil tendencies inherited by saint or sinner, and our whole theory of the meaning and scope of Education must rise from the crude delusion that it is in our power wholly to transform any individual child."⁴⁰

Cobbe's eager acceptance of this blow to traditional religious convictions stands in stark contrast to the *Catholic World's* response to a doctrine "at war with Christian theology." Although the *Catholic World* acknowledged the described process of incorporating scientific thinking into a philosophy of life, it expressed resentment, not acceptance, of this "progress." Cobbe's intentions were not to displace the theological with the biological, but to incorporate the latter into the former. She found Galton's comments on the mental disposition of divines challenging to a religious outlook. Turning to some of the dilemmas so disturbing to the *Catholic World*, and hinting at the ultimate incompatibility of Galtonian views and a Christian outlook, she wrote:

What is painful in the theory of Hereditary Piety is the idea that, through such material instrumentality as natural birth, the most divine of all gifts should be bestowed or denied, and that, in fact, a pious man owes his piety not so much (as we had ever believed) to the direct action of the Holy Ghost on his soul, blowing like the wind where it listeth, but rather to his earthly father's physical bequest of a constitution adapted to the religious emotions.⁴¹

Yet even this difficulty did not convince Cobbe to drop her scientific convictions. She posited an elaborate relation between the Holy Ghost and heredity that allowed her to retain a belief in both. Some people, she argued, were more receptive to the work of the Holy Ghost because of their hereditary tendencies. God must still shape the divine, although He will be assisted by a "constitutional receptivity towards pious emotions." As for those people

40. *Ibid.*, p. 213.

41. *Ibid.*, p. 232.

who had "the opposite tendency towards absorption in purely secular interests," one only had to remember that "God teaches a few of us some lessons here, which others must wait to learn hereafter," and that "it is all the more (and not the less) certain that an immortality of knowledge and love awaits these disinherited ones of earth and 'trims the balance of eternity.'"⁴²

Cobbe's solution is an interesting, noble, and resourceful attempt to combine religious and scientific thought, but it misses the essence of Galton's original theory. There is quite a difference between claiming that a son must inherit two different characteristics from his father in order to join the ranks of the divine, as did Galton, and proposing that the Holy Ghost can only convert a receptive person into a divine, as Cobbe did. Despite all her claims to find Galton's theories original, interesting, and – most importantly – valid with a few "minor" changes, at no one point did Cobbe keep her modifications minor enough to convince the reader that she had any real understanding of Galton's work. To say the least, her interpretation of *Hereditary Genius* was extremely liberal. In the end, although Cobbe's review represented a positive reception of Galton's work, it was a relatively naive attempt to integrate two philosophies that were essentially at odds.

Thus Cobbe's lengthy review of *Hereditary Genius* seems hardly convincing enough to seriously challenge the other reviews as representative of the religious response. It is, rather, an interesting and foretelling account of the potential for misreading Galton's work and of molding scientific information to nonscientific ideology. It cannot be grouped with the reviews in the *Catholic World* and the *British Quarterly Review* in an analysis of the religious reception of *Hereditary Genius*, for it showed an essential misunderstanding of the book. The other reviews revealed an underlying defensiveness. Indeed, one could even argue that Galton's proposal represented an attack on religious circles: not only did Galton assign some of his harshest treatment to the divines, he also lamented the destructive influences of the Catholic church in the Middle Ages. Much of Galton's hereditary theory seemed truly incompatible with cherished Christian beliefs. And, more importantly, his writing added to the canon of scientific thinking that threatened the omnipotence of traditional faith.⁴³

42. *Ibid.*, pp. 232-233.

43. Raymond E. Fancher makes this point in *Pioneers of Psychology* (New York: W. W. Norton, 1979): "By the conclusion of *Hereditary Genius*, Galton's intention was clear: he hoped to replace traditional beliefs and practices with a new but essentially 'religious' movement based on evolutionary science and

THE "NEUTRAL" REVIEWERS

The scientific and religious reviews represent opposite ends in the spectrum of responses to *Hereditary Genius*, with all other reviews falling somewhere in between. The political and literary journals that reviewed the book in 1870 found his work interesting and valuable and praised variously the sincerity, ingenuity, and intelligence of the author; at the same time, all criticized aspects of his method and conclusions. The dominant criticism was issued from a kind of Lockean environmentalist perspective, targeting the exclusiveness of Galtonian heredity over social and educational factors. A few authors pointed out the arbitrariness of Galton's statistics; the majority found his conclusions impractical. That Galton extended an already accepted theory of heredity too far, that he put too little emphasis on education, circumstances, and nepotism, that his method excluded many exceptions, and that his data were flexible enough to fit any theory, were criticisms repeated in the "neutral" reviews. These reviews thus lacked the emotional horror of the religious journals in disputing Galton's social theory, as well as the unquestioning acceptance of his scientific method on the part of the scientists. They were less defensive, less aggressive, and often quite satirical.

The neutral reviewers' skepticism of Galton's extreme confidence revealed itself first in their refusal to grant him originality. Frederic William Farrar (1831–1903) – the Cambridge-educated novelist, historian, and theologian who was to be appointed dean of Canterbury in 1895 despite his belief in evolution and his controversial 1877 sermon against eternal punishment – wrote in *Fraser's Magazine*, a general journal with liberal political tendencies, that "Most people would admit at once that *something* is or may be hereditary."⁴⁴ An anonymous reviewer for the *Westminster*

eugenic principles" (p. 271). Similarly, MacKenzie points out that "Areas of traditional religious authority – the human mind and conscience, the holy sacrament of marriage, the relation of parent to child – were being invaded by science. Galton even saw in eugenics an alternative to Christianity – eugenics was to be a naturalistic religion in which individuals would find their places as manifestations of the immortal germ plasm" (*Statistics in Britain* [above, n. 19], p. 55).

44. Frederic William Farrar, review of *Hereditary Genius*, by Francis Galton, in *Fraser's Mag.*, n.s. 2 (July–December 1870), 251–265. *Fraser's Magazine* (1830–1882) published a blend of intellectual articles and outrageous humor in its early days, resulting in a few libel law suits, but turned to a more sober tone with high literary quality as it matured. It also grew more politically conservative with the years, with contributions from such renowned authors as Edward Fitzgerald, J. A. Froude, Charles Kingsley, G. H. Lewes, and Thomas Love Peacock.

and *Foreign Quarterly Review*, a more radical journal, concurred that Galton did not have "absolutely novel propositions."⁴⁵ Herman Merivale (1806–1874) – a liberal political economist known for his promptitude of judgment, who served as a professor at Oxford and for some years as undersecretary to India, and who wrote extensively for the *Edinburgh Review*, the *Foreign Quarterly*, the *Quarterly Review*, and the *Pall Mall Gazette* – claimed in a review for the *Edinburgh Review* that Galton had "overstated" his case due to his misconception that he had to fight "popular prejudices."⁴⁶ Merivale acknowledged the influence of heredity on ability, but found that Galton's method of proof, in attempting to be conclusive, omitted much commonsense knowledge of other influences: he harmed rather than helped his case "by the extreme minuteness of tabulation through which he seeks to establish it."⁴⁷

While no reviewer in the 1870s denied the role of heredity in the acquisition of ability, none agreed with Galton that heredity played an exclusive role in its development. Farrar found Galton's proof of the exclusively hereditary nature of intelligence weak: "It must, we fear, be reluctantly admitted that, as regards this single question in its bare form, all Mr. Galton's labour, and learning, and acuteness, although they have elucidated many remarkable details, have not greatly advanced our previous knowledge."⁴⁸ He emphasized Galton's overextension of the label of "eminence" and his omission of the influence of outside circumstances as the two greatest flaws of his work. Galton, he found, applied the title of "eminent" to many "men of very average ability, helped forward by incidental advantages," thus greatly skewing his numbers, and this merged with

45. Review of *Hereditary Genius* under "Contemporary Literature, History and Biography," *Westminster For. Quart. Rev.*, 37 (January and April 1870), 300–302. The *Westminster and Foreign Quarterly Review* was established in 1824 as the *Westminster Review* and developed under the early guidance and prolific contributions of John Stuart Mill. It moved over the years from publishing literary reviews to nonreview articles on social issues, attracting excellent writers. It advocated radical reform in the political process and in education. The journal ceased publication in 1914 because of financial problems.

46. Herman Merivale, "Galton on Hereditary Genius," *Edinburgh Rev.*, 132 (July and October 1870), 52–64; reprinted in *Littell's Living Age*, 18 (July–September 1870). The *Edinburgh Review* (1802–1929) took strong positions on major issues in British politics and was perceived as speaking for the Whigs. It favored reform in politics, economics, and education, advocating free trade, parliamentary reform, and a more flexible curriculum that included an emphasis on the sciences. The editors encouraged contributors to express their opinion of the book reviewed rather than to provide a straightforward description.

47. *Ibid.*, p. 59.

48. Farrar, review (above, n. 44), p. 260.

his reluctance to account for "family tradition, and surrounding circumstances, and early education."⁴⁹

Merivale similarly argued that many of the professional positions included in Galton's statistics were filled not so much by ability as by "fortune" and "favors," weakening his proof. He strongly disagreed with Galton's claim that men with ability would always overcome circumstantial hindrances: "For one who succeeds, a hundred, perhaps not inferior in natural gifts, fail and perish by the way."⁵⁰ Merivale also spoke of a certain "inherited professional aptitude." Using judges as an example, he pointed out that some 100 out of the 250 eminent relatives were lawyers themselves; this, he argued, had far less to do with the inheritance of a "special talent of the lawyer" than with a judge's ability to guide his son into the same career.⁵¹

What Merivale politely termed an "inherited professional aptitude," an anonymous reviewer for *Chambers's Journal of Popular Literature*, a journal of varied instructive articles catering to a middlebrow audience, called nepotism.⁵² The reviewer, whose catchy and sarcastic phrases set the tone for this only strongly negative nonreligious review of *Hereditary Genius*, pointed out that many more eminent descendants accompanied Galton's eminent men than did eminent forefathers, "which it is surely not begging the question to suggest might be owing to the said eminent man's having stretched out to them a helping hand." That an "extraordinary number" of the descendants, at least in the case of the judges, followed in the same profession, further argued for the reviewer's point, which he elaborated with humor: "The six-and-twenty Atkynses were all lawyers; and of them it may certainly be said that they possessed a most extraordinary hereditary genius – for getting on at the bar." Galton, although aware of this objection, had made "much too light of it," found the reviewer: "It is curious to see how recklessly even a wise man will ride when once he has mounted his hobby-horse."⁵³ He argued further that Galton's strategic decision to discuss the judges first followed from the

49. *Ibid.*, p. 263.

50. Merivale, "Galton" (above, n. 46), p. 57.

51. *Ibid.*, p. 58.

52. "Hereditary Talent," *Chambers's J. Pop. Lit.*, 4th ser., 7 (1870), 118–122. *Chambers's Journal* (1832–1956) was established as part of the cheap-journalism craze that accompanied political reform in England in the 1830s and was intended to reach a broad audience including the laboring community. The journal included literary and scientific articles, good quality fiction, and various essays on subjects of general interest.

53. *Ibid.*, p. 119.

greater occurrence of what he termed hereditary talent in the said group compared to other groups. Galton's conclusion, "which is forced upon us, notwithstanding all our author's eloquence and ingenuity," argued the reviewer, was that practical talent "such as involves power and patronage" was much more hereditary than talent "not of a material kind" that "does not command any such advantages."⁵⁴ He furthered his point by commenting briefly on the confusion Galton caused by choosing to use the term "genius" for what seems to be mere talent.⁵⁵ Anonymous reviewers for the *Athenaeum*⁵⁶ and the *Examiner and London Review*⁵⁷ joined Farrar, Merivale, and the *Chambers's Journal* author in questioning Galton's exclusively hereditary theory. Reiterating that "the one fatal omission in the book" was its ignorance of the effects of "education and training," the reviewer for the *Examiner and London Review* explained: "We are inclined to believe that muscular development is more frequently transmitted than brain power or mental energy; and we think that physiologists will testify generally to the truth of this assertion."⁵⁸ The *Times*, in a January 1870 article, also disagreed with Galton on this point "where he will scarcely give an inch of ground."⁵⁹

54. *Ibid.*, p. 120.

55. Though references to Galton's vague terminology were frequent throughout the reviews, it was Merivale who spoke most strongly, explaining that "the key-words of the inquiry are used in a permissible and popular, but certainly not a scientific sense" (Merivale, "Galton" [above, n. 46], p. 59). He saw Galton's attempt at strict definitions as yet another example of his tendency to overparticularize, thereby losing much of the advantage of common sense. Merivale himself attempted to define a few of the terms in a "looser and less pretentious mode."

56. Review of *Hereditary Genius*, by Francis Galton, under "Literature" in *Athenaeum*, 43: 1 (January–June 1870), 85–87. The *Athenaeum: Journal of Literature, Science, the Fine Arts, Music, and the Drama* (1828–1934), the leader in weeklies, covered a broader range of subject matter than most of its competitors, including the arts, literature, architecture, and proceedings and meetings of scientific societies. The journal included a brief description of *Hereditary Genius* in one article along with reviews of *A Dissertation on the History of Hereditary Dignities* by W. F. Finlason and *The Mansions of England in the Olden Time* by Joseph Nash.

57. Review of *Hereditary Genius*, by Francis Galton, under "The Literary Examiner" in *Examiner London Rev.*, no. 3236 (February 5, 1870), 84–85. Previously the *Examiner*, the *Examiner and London Review* (1808–1881) was founded originally as a political journal but moved toward literary reviews, becoming less partisan. The section "Literary Examiner" was established in 1860 and listed many literary works, discussing few.

58. *Ibid.*, p. 84.

59. Review of *Hereditary Genius*, by Francis Galton, in *Times*, January 7, 1870, p. 10.

What allowed these reviewers to argue against the exclusiveness of heredity was a distrust of Galton's method. The "extreme minuteness of tabulation," so convincing to a scientist, inspired little confidence in the political and literary reviewers, and the statistical proof failed to impress them. Many found Galton's method unreliable. Farrar pointed out that Galton's immense body of data, far from proving exclusively a hereditary theory, could lend itself to many different interpretations, particularly that of an environmental basis for eminence. The reviewer for the *Athenaeum* argued that "Mr. Galton's volume seeks at least to prove this [that genius is hereditary], but is one of the many illustrations of the saying that anything may be proved by statistics"; he concluded by asserting that there are always "capricious examples supplying statistics for supporting or destroying a theory."⁶⁰ The *Chambers's Journal* reviewer acknowledged that Galton had collected his facts with "careful zeal," had put together interesting information, and had made the "dull and bald" subject of statistics tolerable, but he expressed twice that he was "wholly unable" to agree with Galton's conclusions: "We should be very willing to do so if we could. What an admirable arrangement might our hereditary aristocracy become if, in the first place, we gave titles to really great men; and secondly, if their greatness were hereditary!"⁶¹ But entirely unconvinced by Galton's theory, the reviewer commented sarcastically in his discussion of poets and literary men:

When papa lives by his pen, it is only natural that the children should endeavour to use it for their livelihood. They catch "the trick" of authorship; they may even learn from him to address the public in a taking way, and so they become in some sort authors themselves, even of sufficient repute to appear in a genealogical table where their presence is most earnestly desired by a gentleman with a theory.⁶²

Galton, according to the *Chambers's Journal* reviewer and a majority of the other general journals, was not much more than a "gentleman with a theory" in search of any data that would fit his conclusions. He had gathered his information, although meticulously, with a specific theory in mind. As the nature of statistics allowed for the interpretation of the data in several different

60. *Athenaeum* review (above, n. 56), pp. 86, 87.

61. "Hereditary Talent" (above, n. 52), p. 121.

62. *Ibid.*, p. 120.

manners, it was just as easy for Galton to use the pattern to conclude that his calculations pointed to exclusive heredity, found his reviewers, as it was for them to use the exceptions to conclude the environmental influences complicated his simple system.⁶³

This adamant opposition to Galton's method did not, however, translate into an adamant ethical opposition to Galton's social theory. The general journals approached Galton's conclusions with interest but not emotion, discarding them as impractical rather than immoral. Merivale's tone, for example, in disputing Galton's final arguments, was factual, perhaps slightly satirical, but not emotional. He discussed the feasibility, not the morality, of the plan:

In the first place, "mirus Amor" would very certainly render any efforts towards it [the marriage law] fruitless by introducing his own capricious exceptions. And, in the next place, if our very elementary knowledge of this branch of physiology has established anything, it is this: that from some unknown causes, hereditary peculiarities are certain to die out in time, and most likely to die out early. . . . No combination which we are entitled to conceive as possible of hereditary influences will produce an individual fitted with mental powers beyond a standard.⁶⁴

Similarly, the reviewer for *Chambers's Journal* found Galton's plan for breeding a more intelligent race too vague, and resorted to humor, not condemnation, in discussing the proposed marriage laws.

Under this happy and philosophic system, we shall no more hear of a lady "throwing herself away" upon an unworthy object . . . ; clever men will no more suffer under the proverbial stigma of "always marring stupid women"; and when we give a dinner-party, we shall no more regret that the usages of society prevent our inviting a gentleman's better-half without himself.⁶⁵

The *Times* reviewer speculated that Galton "fails to take full advantage of his discovery" because "the only possible way in which we can turn a knowledge of such laws to account is by interfering with the marriage state according to the Spartan mode, a reform

63. This generalization, however, was not true of the *Times*. The *Times* reviewer seemed quite convinced of the infallibility of statistics, as he plunged into calculations of his own.

64. Merivale, "Galton" (above, n. 46), p. 64.

65. "Hereditary Talent" (above, n. 2), p. 118.

beyond the boldness of the most enthusiastic theorist." The author found Galton's only credible solution to be that of abolishing the celibacy requirement for university fellowships, and then suggested leaving the raising of ability to the Education Bill, arguing that "the universal knowledge of reading, writing, and ciphering and the absence of pauperism would raise the national grade of ability far quicker and higher than any system of selected marriage."⁶⁶

Farrar approached the practical implications of Galton's theory somewhat more solemnly, realizing that they would affect "marriage, criminal legislation, and the allowance to be made for distinctions of race in our national policy" and arguing that such matters evade scientific considerations. Yet, like Merivale and the anonymous reviewer for the *Times*, Farrar eventually found the humorous in Galton's conclusions: "Will our young Fellows and First Class men be wise if they follow Mr. Galton's directions, and marry and multiply as fast as they can, on the calculation that their possibly clever descendants will in three centuries be fifteen times more numerous than they would have been had their marriages been deferred?"⁶⁷ It appears thus that the literary response to Galton's social conclusions was largely characterized, not by confidence, as with the scientific journals, nor by outrage, as with the religious reviewers, but by amusement.

What inspired the greatest response among the literary and political reviewers, in the end, was not Galton's method or conclusions, but the curious facts and details scattered throughout his text. The reviewers praised Galton for "propounding much matter of interest" even if "in a desultory way."⁶⁸ Often, they attempted to revise these "matter[s] of interest"; some had more serious objections. Merivale devoted much time to extended discussions of Galton's theories of English peerages and sterility, and his thoughts on temporary eminence at times of historical crises; he also mentioned Galton's views on the relative influence of female and male hereditary lines. Farrar found Galton's treatment of poets and artists "misled," and of divines "the weakest in the book," arguing that "it would, we believe, be a perfectly easy task to rewrite it with a collection of names which would largely nullify all Mr. Galton's unfavourable conclusions, many of which conclusions have no connection with the main argument or object of the book."⁶⁹ Similarly, the reviewer for the *Westminster Review* wondered "whether the

66. *Times*, review (above, n. 59), p. 10.

67. Farrar, review (above, n. 44), p. 264.

68. Merivale, "Galton" (above, n. 46), p. 59.

69. Farrar, review (above, n. 44), p. 255.

celibate life of the old church had not compensating or counter-acting accompaniments."⁷⁰ Regardless of their disagreements, almost all the articles referred back to these details in their conclusions, which, whether accurate or inaccurate, raised issues of concern to the intellectuals of the time. To a good portion of the reviewers, the details of *Hereditary Genius* seemed much more enlightening than its overall thesis. Despite his criticism of so many of the details, Farrar ended his review, for example, with the statement that the book "contains a great deal of which the value and importance are unaffected by his main theory."⁷¹

A summary of the "neutral" response to *Hereditary Genius*⁷² would thus argue that the reviewers' respect for Galton's extensive and sincere effort was counterbalanced by their distrust of the rigidity of his theory. They objected, not to the hereditary nature of genius, but to Galton's claim to have proved its exclusiveness. Farrar's concluding analysis of *Hereditary Genius* summed up the overall attitude of the neutral reviewers, arguing that a deductive proof of the heredity of intelligence would remain impossible until further developments in chemistry and physiology showed the correlation between genius and the biology of the brain. He credited Galton with attempting a careful alternative proof, but he wisely argued that absolute proof must be left for the future: "The problem is, in fact, too complex for present solution; it must remain insoluble until we have gained an immense increase of chemical, physiological, and psychological knowledge; or perhaps we ought to say, until psychology itself is reduced to the rank of one of the Natural Sciences."⁷³

In other words, Farrar requested that human heredity be left a question of laboratory research rather than statistics, thereby largely expressing the sentiment of his nonscientific contemporaries. The "neutral" journals indeed found that Galton posited a legitimate theory but carried it to illegitimate extremes. Galton's final suggestions were not instructive, but impractical – and, according to some reviewers, outright silly. The method failed to convince the reviewers not only because it appeared too carefully molded to fit the theory, but also because it approached a biological theory

70. *Westminster*, review (above, n. 45), p. 302.

71. Farrar, review, p. 265.

72. A three-sentence notice that appeared in *Fortnightly Review*, 13 (February 1, 1870), announcing the publication of *Hereditary Genius*, has not been included in the above analysis because of its brevity and the absence of commentary.

73. Farrar, review (above, n. 44), p. 260.

from a nonbiological groundwork. They ultimately concurred that the book derived its value, not from its ground-breaking conclusions, but from its mass of interesting data and occasional original insights.

CONCLUSION

The reviews of *Hereditary Genius* that appeared in 1870 individually make for intelligent, insightful, and not infrequently entertaining reading; as a whole, they reveal contrasts and similarities that allow one to speak of a certain "reception." The variety of responses should perhaps be underscored: most journals agreed that hereditary influences contributed to the formation of mental ability, but most disagreed that social and educational factors did not have a significant role as well. Many reviewers found Galton's general method properly scientific and thus valid, but challenged his extreme interpretation of the data, pointing out that the statistics lent themselves to more than one interpretation. Other commentators disagreed with the method entirely, arguing either that statistics or that science in general did not provide an appropriate avenue for research on humans. Most disagreed with Galton's conclusions, but only very few on moral grounds, the majority on practical grounds. Each review brought out a favorite aspect of the work, either to praise or to criticize it. In general, contemporary responses to the book followed along ideological lines: scientific reviewers embraced Galton's method and hence his theory, but ignored his conclusion; while religious readers took offense at the attack on Christian men, institutions, and values. And the neutral reviewers approved of Galton's general theory and method, but found the extremes to which he took them ridiculous and the resulting conclusions impractical.

It is important in conclusion to point out that the so-called neutral journals shared with the scientific and religious ones the realization that Galton's ideas fit into a larger nineteenth-century scientific development. The reviewer for the *Westminster Review*, for example, concluded that "Mr. Galton's clear vigorous statement of the argument which he sustains and the course which he advocates, his statistical illustrations, his suggestion of a derivation of mathematical formulae from the doctrine of Pangenesis, and the general ability and originality of his treatise, make it a worthy contribution to the discussion on Natural Selection, which Mr. Darwin so magnificently inaugurated and so intrepidly continues."⁷⁴

74. *Westminster*, review (above, n. 45), p. 302.

No one, including Galton himself, approached *Hereditary Genius* as a work independent of a movement. Rather, it was seen as a part of the new scientific faith initiated by Darwin, his predecessors, and his followers, and it was judged largely by its role in this scientific movement. It is impossible not to see this larger context as the main factor in the formation of the three responses. To the scientists, who followed the faith with devotion, there could be no question of the validity of Galton's assumptions and arguments. The religious community, on the other hand, was keenly aware of the threat of the new scientism to traditional Christian faith and was not willing to allow Galton to add yet another piece of doctrine to the mass of scientific dogma. The general reviews were more willing to accept the new scientific ideology, but found Galton's particular role in it questionable. Galton, as they saw it, was taking a valid and accepted scientific devotion a step too far by applying it to the unscientific realm of human social engineering.

That Victorian readers viewed *Hereditary Genius* through these specific intellectual lenses makes the reviews of 1870 a distinctly nineteenth-century phenomenon. So does their comparative serenity in the face of Galton's social conclusions. A twentieth-century reader cannot help but notice that Galton's emerging eugenics troubles only the religious journals, and this only on the grounds that the theory is contrary to the belief in a spiritual potential for self-improvement. A majority of the articles respond with silence, or even with humor, to what today largely inspires horror and intense disapprobation. The book was criticized in 1870 as impractical and overstated, but not as socially dangerous or morally unacceptable. Nowhere in the contemporary review literature was a statement in defense of the groups that Galton considered less intelligent to be found; at most, the reviewers defended the intelligent young middle-class man's right to marry an equally middle-class but not-so-bright young lady. Certainly no one predicted the destructive potential of Galton's eugenical outline.

In *Toward the Final Solution: A History of European Racism*, George Mosse reminds late-twentieth-century readers that the "qualities praised [by Galton] as superior were once more those prized by the middle classes . . . : physical prowess, intelligence, hard work, and character."⁷⁵ The promotion of these values appeared natural and justifiable to those who read the book. Further, the readers were easily convinced that they possessed these positive

75. George L. Mosse, *Toward the Final Solution: A History of European Racism* (New York: Howard Fertig, 1978), p. 75.

qualities in a greater degree than did other nationalities and races. The birth of a new empire under Queen Victoria had given the British power over new and different cultures; that they derived the right to rule from some form of imagined racial superiority seemed a natural conclusion. Hence the British intellectual class that read *Hereditary Genius* in 1870 was neither surprised nor offended to find out that the "barbaric" races were one or two grades below themselves in intelligence, and they felt no need to question the conclusion. The reviewers were much more interested in the "scientific" claims that affected their own position and they responded to Galton's attack on traditional middle-class values: the significance of education, the virtue of charity, the uniqueness of human free will.

The present analysis of the reception of *Hereditary Genius* in 1870 thus demands that a historian free Galton from twentieth-century preconceptions. That Galton was not alone in misreading the horrific potential of his work allows us to view the book as a product of nineteenth-century scientific and social – specifically, racial – thinking, rather than as the result of one man's misguided scientific and social theories. If in 1994 it proves impossible to read *Hereditary Genius* innocently, it was entirely possible to do so in 1870. Karl Pearson says of *Hereditary Genius* that "If it met with a cool reception, it was because the world was not ripe for it."⁷⁶ It is much more tempting to argue the opposite: If *Hereditary Genius* met with a warm reception (and the reviews make it quite clear that the reactions were considerably more positive than Pearson led us to believe), this was at least in part because the world was not ripe for it. Few people could have predicted the potential of scientific racism until some sixty years later, after the cumulative impact of the two world wars and the atomic bomb. Perhaps Galton was lucky to die before World War I, before the twentieth century brought about man's disillusionment with himself and his science. Had he lived a half-century longer, he might have been more skeptical of eugenics himself. Indeed, Galton, his book, and its reception can only be understood as manifestations of a nineteenth-century phenomenon, as products of a generation that believed in the infinite perfectibility of man, the inherent truth and moral integrity of science, and the inevitable progress of the two, hand in hand.

76. Pearson, *Life* (above, n. 7), pp. 114–115.

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Organizing Evolution: Founding the Society for the Study of Evolution (1939–1950)

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There are many instances in the history of biology where the founding of a society or of a journal has signaled a new development. This surely can also be claimed for the founding of the Society for the Study of Evolution and of the journal *Evolution*.

Ernst Mayr¹

INTRODUCTION

In a previous article I offered an interpretive framework for understanding the emergence of evolutionary biology following the historical event recognized as the evolutionary synthesis.² In that article I stressed the wider process of unifying the biological sciences in the interwar and postwar period of American science through the emergence of a central science of evolution within the positivist theory of knowledge that then held sway.³ In this paper, I will focus on a more local feature of the evolutionary synthesis, the reconfiguration and institutionalization of evolutionary practice through efforts made to organize evolution by the founding of the Society for the Study of Evolution (SEE). These efforts to unify evolution were simultaneous with the wider efforts made to unify biology. Following a brief introduction to its precursor societies – the Society for the Study of Speciation, and the

1. Ernst Mayr to A. E. Emerson, October 28, 1965, Society for the Study of Evolution Papers (SSE Papers), Library of the American Philosophical Society, Philadelphia.

2. For the most comprehensive account see Ernst Mayr and William B. Provine, eds., *The Evolutionary Synthesis* (Cambridge, Mass.: Harvard University Press, 1980). See also Ernst Mayr, *The Growth of Biological Thought* (Cambridge, Mass.: Harvard University Press, 1982).

3. See V. B. Smocovitis, "Unifying Biology: The Evolutionary Synthesis and Evolutionary Biology," *J. Hist. Biol.*, 25 (1992), 1–65; for Ernst Mayr's response see "What Was the Evolutionary Synthesis?" *Trends Ecol. Evol.*, 8:1 (1993), 31–34.