

Mr. Darwin's Book:
Responses to *On the Origin of Species* in the Victorian
Periodical Press

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When experts started reviewing Charles Darwin's *On the Origin of Species* after its publication on 22 November 1859, a legendary debate began. Scientists, academics, and clergymen of all persuasions promptly rallied into pro- and anti-Darwin camps. To Thomas Henry Huxley, an avid supporter of Darwin, the variety and general disorganization of published opinions only clouded the issues at hand. His goal in his article of April 1860 for the *Westminster Review* was "to state afresh that which is true, and to put the fundamental positions advocated by Mr. Darwin in such a form that they may be grasped by those whose special studies lie in other directions" (par. 3). As he notes, "*Origin of Species* is by no means an easy book to read—if by reading is implied the full comprehension of an author's meaning" (par. 3). Furthermore, in this era of burgeoning readership for periodicals, Huxley acknowledged that such a "[d]ebate could no longer take place just between members of the scientific elite in scientific societies or specialist journals, especially in the case of evolutionary theory, which raised such crucial religious, political, social, and philosophical questions" and viewed the reading public as a potential ally so long as he and other scientists provided them with the necessary "guidance" to accompany their reading of *Origin* (Lightman 10, 8). In this same spirit of clarity, other writers attempted to elucidate Darwinism for the benefit of the reading public, whose opinions of scientific theories held increasing sway and who were exceedingly interested in engaging with important debates. Two such attempts appeared in *The Cornhill Magazine* in 1860: one, *Studies in Animal Life* by George Henry Lewes, presents a series of instructive articles (later compiled as a book) on method

and theory for amateur biologists; the other, a short story called “A Vision of Animal Existences” by E.S. Dixon, argues for the significance of “Mr. Darwin[’s]” theories (Dixon 318).

In contrast to the complex and sometimes facetious reviews of *Origin* by detractors such as Richard Owen and William Wilberforce, Lewes and Dixon explain Darwin’s theories to their readers as earnestly and clearly as possible. I will argue that, while some detractors like Richard Owen and Bishop Wilberforce obfuscate the theories with misleading and complicated comments in their reviews, George Henry Lewes and E.S. Dixon use a scientific text and a short story, respectively, to explain evolution and natural selection to the public and advocate for open-mindedness toward them. Both of these authors apparently share Huxley’s desire for clarity in a muddled debate and use the platform of the periodical press to elucidate the important tenets of complex theories. Dixon accomplishes this through an allegorical dream vision, the truth of which the waking life of his narrator confirms. He concretizes and personifies Darwin’s theories, manipulating the traditional elements of the dream vision to illustrate Darwinism in an approachable way. Lewes, who undoubtedly has a better grasp on science than Dixon does, carefully teaches his readers about biology; once he has provided the prerequisite knowledge, he explains the arguments for and against natural selection. Lewes presents these arguments in a balanced way, although he admits that his personal sympathies lie with Darwin (117). Notably, Lewes’s diction in the earlier chapters prepares readers to accept Darwin’s theories when he finally does explain them. These two authors adopt Huxley’s professed approach to the debate surrounding *Origin* through their sincerity and their shared effort to explain it in the clearest manner possible.

The periodical press, in which Dixon, Lewes, Huxley, and others debated and discussed evolutionary theory, filled an impor-

tant role in disseminating information in the Victorian era, when increased literacy, mechanization, the affordability of print media, and the expansion of the railroad enabled readers of all classes to engage with the intellectual problems of their society for the first time. “Reading brought into Victorian homes a revolution in knowledge” (Leighton and SurrIDGE 20), and this revolution was made possible by a convergence of changes in technology, law, and education. Steam-powered presses, paper-making machines, composing machines for type-setting, and the railway, which transported the newly printed periodicals around the country, all served to make printing more efficient and enabled greater circulation and, thus, greater readership. Similarly, the “abolition of newspaper, paper, and advertising taxes” (11)—also called “the taxes on knowledge” (13)—made it possible for poorer people to purchase reading materials and allowed the upper and middle classes to increase their consumption. Lastly, and most importantly, the nineteenth century saw a surge in literacy rates in Britain, so that the literacy rate went “from 67 per cent of men and 51 per cent of women in 1841 to 97 per cent of men and 96.8 per cent of women in 1900” (16).¹

As the result of its availability and increasingly large audience, Victorian writers and thinkers used the platform of the periodical press to frame important social debates for the reading public; Huxley deliberately sought to persuade this public through his clear explanations of evolutionary concepts, hoping to garner public support for *Origin*. Many writers used periodicals to persuade readers on important issues: “Frances Power Cobbe ... used the newspaper to advocate for feminist causes” (Leighton and SurrIDGE 17), and W.T. Stead published “The Maiden Tribute of Modern Babylon,” a

¹These estimations of literacy are very rough, as they are based on the number of people able to sign their names on the marriage register, but these numbers nonetheless suggest an important shift towards literacy in the nineteenth century.

sensational series on child prostitution in London, in the *Pall Mall Gazette* in 1885 (17). Like Cobbe and Stead, Huxley used periodical publication to advocate for his own cause. Evolution had serious social and religious as well as scientific implications and therefore provoked much debate among scientists, but could not be confined to specialized scientific journals. By educating his readers and thereby encouraging skepticism towards anti-evolution arguments, Huxley hoped that he could convince the public of the merits of Darwinism and strengthen its position in the scientific community. To this end, Huxley invited readers to judge *Origin* for themselves by reading it and by using his review and similar explanatory reviews by pro-evolution scientists as an entry point into understanding it (Lightman 8).

Huxley paved the way for the clarity of writers like Dixon and Lewes by criticizing the misrepresentation of *Origin* in the periodical press. In particular he aimed his gibes at Owen, who, in April 1860, attacked Darwinism in an anonymous and very technical article for the *Edinburgh Review*. In their biography of Darwin, Adrian Desmond and James Moore note that “[f]ew were grasping natural selection, which left [Darwin] cursing that ‘[he] must be a very bad explainer’” (492), but these misunderstandings do not stem solely from Darwin’s own explanations. In a review, Huxley notes that a number of the articles about *Origin* resulted from “ignorance, too often stimulated by prejudice” (par. 2) but that even men of science decried Darwin based on outdated information (par. 1), leading to general misunderstanding. His description of scientists “who have no better mud to throw [and] quote antiquated writers” (par. 1) clearly points to Owen, a well-known paleontologist, who wrote thousands of words examining passages from Lamarck, Buffon, and Cuvier in his review of *Origin*. He obfuscated his ideas, often quoting the passages from these naturalists in the original French and

using the Latin names for the animals he discusses without translating them. Owen also cited himself extensively as an expert, calling himself “Professor Owen” (par. 21). As a result, comprehension of his article requires fairly extensive prior knowledge of his work and the works he cites.

Wilberforce, the Bishop of Oxford and a friend of Owen's, though not a scientist, also played a prominent role in debates about evolution, attacking Darwinism with logically fallacious arguments and misleading comments; in his review for the conservative *Quarterly* in July 1860, he pokes fun at Darwin's grandfather, who also wrote about the transmutation of species, and obscures the tenets of Darwin's theories with jokes rather than discussing them clearly. For his article Wilberforce “disinterred a sixty-year-old parody of [Erasmus Darwin's] evolutionary prose, to show that a Darwin never changed his spots” (Desmond and Moore 498). This *ad hominem* attack mocks Darwin's family history rather than finding fault with his theories. Wilberforce also willfully misreads Darwinism in service of humour and portrays the theories as too absurd to deserve serious consideration. He suggests that if species were actually mutable, the results would be plainly visible with “the favourable varieties of turnips ... tending to become men” (qtd. in Desmond and Moore 499). Reviews like his and Owen's spread misconceptions about Darwinism. Rather than framing their objections clearly, one attacks fatuously and the other obscurely, necessitating clarification from people like Dixon and Lewes, who frame the debate more accessibly if with the opposite bias.

Dixon's “A Vision of Animal Existences” contains the elements of a traditional dream vision—a female guide and a symbolic setting—but alters and updates them to apply to natural selection and the struggle for life. In a dream vision, “[b]y common convention[,] the writer goes to sleep, in agreeable rural surroundings....

He then beholds either real people or personified abstractions” (Cud-don 242). The supposed writer—a first person narrator—often follows and learns from an “angelic guide” (243). Rather than falling asleep in an idyllic pastoral setting, Dixon’s narrator falls asleep in the refreshment-house of the “Zoological Gardens”—“the world of brutes”—on a “sultry” summer day (311). This setting emphasizes the division of animals into species, around which the story will revolve, and illustrates the harshness of the natural world. The “[h]eat implies drought” and causes the “thinning” of the “human company” (311), which mirrors the struggle for life between members of a species that the narrator will see enacted once he falls asleep. In the dream, he encounters real people who have morphed into personified abstractions; this change from one type to another suggests the process of evolution. He meets the same woman he sees while awake, but she has changed. The authoress from the refreshment-house transforms into “Natural Selection! Originator of Species!!” (313), and her son becomes “Struggle-for-Life” (313), neither of whom appears angelic like traditional guides. Instead, she is cold and stark, and her son has “short strong tusks” and “retractile talons” (313). Her cool learnedness and his beastliness juxtapose the purity traditionally associated with their narrative role. Through them Dixon provides secular guides for a scientific story, in which angels and religious symbolism become implicitly obsolete. Furthermore, their behaviour and possessions use the allegory of the traditional dream vision to Darwinist ends. The “deadly instrument ... paradoxically called a life preserver” (313), with which Natural Selection kills the weaker antelopes, (317) reflects the preservation of the best of a given species over time. This club, typically a weapon for self-defense and transformed from a parasol (313), becomes the embodiment of adaptation for the betterment of a species.

Although these personified natural forces and simplified

demonstrations of Darwin's theories successfully persuade the dreaming narrator, a dream vision alone will not necessarily persuade a rational reader, and so, through the story's "real life" frame, Dixon affirms the logic and rightful popularity of *Origin*. His descriptions of the woman and her son before the dream begins hint at the pervasiveness of Darwin's theories. The lady's "green-covered book" (312), which the narrator immediately recognizes (311), is, of course, *Origin of Species*, the first edition of which was bound "in royal green cloth" (Desmond and Moore 476). Similarly, the child—appropriately named Charles (318)—playing with his animal figurines clearly enacts natural selection when, "instead of setting them out in orderly procession" (311), he "knock[s] them together, to try which was the strongest ... only keeping such of the wooden effigies as were able to resist the shock" (311). This game illustrates Darwinism in the waking world, grounding it in reality, and implies the direction that the story will take both in and out of the dream.

Once the narrator wakes, the woman, no longer an abstraction, provides a conclusion to the story that the fanciful dream could not fully communicate by describing of the logic and sincerity of Darwin's book. She says that no one "can offer any conclusive criticism on so difficult a topic" (318), but that Darwin "offer[s] a rational and logical explanation of many things which hitherto have been explained very unsatisfactorily, or not at all.... If it be not the truth, [she] cannot help respecting it as a sincere effort after truth" (318). Whereas, in the dream, the guide proclaims the certain veracity of Darwinism, the story concludes on a note of moderation, advocating an open-minded approach to the theories. Without any knowledge of the man's dream vision, the woman adopts the role of the guide in the waking world and points towards truth in the form of a book rather than personification and allegories. The symbolic

dream explains natural selection in a somewhat fantastic way for the purpose of illustration, but the woman's closing words affirm that, despite the strangeness of the preceding allegory, Darwin's theories are rational and "worthy of credit" (318).

Lewes approaches his subject, biology, as a teacher, instructing his reader and enabling an informed theoretical discussion rather than one based on misunderstanding; he defines his terms and examines each animal in detail before moving on to another. Only after several meticulously explained chapters about fieldwork and vocabulary does Lewes explain Darwinism and the objections raised against it. He writes, "Mr. Darwin's book is in every body's hands, and my object has been to facilitate ... the comprehension of this book" (119). He accomplishes his goal by providing necessary contextual information before discussing the subject. Rather than immediately beginning to debate Darwinism in technical language as Owen does, Lewes initiates his reader slowly, focusing on education over persuasion. He spends pages on a topic that Owen sums up in a single sentence:

[W]hen the ciliated 'monad' has given birth to the 'grega-rina,' and this to the 'cercaria,' and the 'cercaria' to the 'distoma,' — that the fertilised egg of the fluke-worm again excludes the progeny under the infusorial or monadic form,... the cycle again recommences. (par. 33)

Unlike Owen, Lewes first defines words like *cilia*, "delicate hairs" that act as "instruments of locomotion" (16), and *infusoria*, "simple, microscopic animals (28). Then, with the aid of illustrations, he explains the full process during which creatures, like those Owen mentions above, produce each other as part of their reproductive cycle (28–31). Furthermore, rather than immediately pointing to this case study as proof of a theory, Lewes leaves it unadorned by opinion and, thus, purely informative. He also explains the classification of animals in chapter 3 and examines the ambiguity of the word *spe-*

cies in chapter 4 to prepare his readers for an informed discussion of natural selection, in which he carefully states both sides of the debate “as clearly and forcibly as possible” (109), democratically maintaining that all such theories “are necessarily hypothetical” (100).

Although Lewes presents his own views with caution, explaining that he agrees with Darwin but cannot prove his theories with perfect certainty (122), his diction in the preceding chapters reflects his views and helps to persuade readers without explicit argumentation. He repeatedly refers to the shared life of all living creatures, which implies a common origin, which Darwin also proposes in *Origin*. In his introduction, Lewes says that animals “are not alien but akin. The Life that stirs within us stirs within them” (11), which suggests “that all animals and plants have descended from some one prototype” (Darwin qtd. in Owen par. 46). When he says that protozoa, “these simplest of all animals[,] represent ... the beginnings of life” (82), Lewes pushes the idea of a common progenitor a step further than Darwin, who offers no explicit guess as to the form of this universal ancestor. Lewes intimates by his choice of words that protozoa, whose name literally means “first animal” (82), represent the beginning of the evolutionary process. His focus on shared ancestry and beginnings subtly introduces Lewes’s readers to these ideas prior to any explicit discussion. Lewes admits that

[he] conceive[s] the doctrine of fixity of species to be altogether wrong, [he] can not say that the arguments adduced in favor of the development hypothesis rise higher than a high degree of probability [and] will leave even the most willing disciple beset with difficulties and doubts. (122)

However, by the time he makes this concession, he has already, through subtle implication, worked to create “willing disciples” like himself, who will search for proof rather than demand it from him.

Desmond and Moore note that supporters of the *Origin of Species* “provoked a ferocious paper war” and that “[f]our hundred books and pamphlets contested and defended the issues” in the five years following its publication (500). They point to a book published in early 1860 called *Essays and Reviews* as the beginning of this book-writing war, but *Origin* had begun a similar public debate in the periodical press upon its publication in November 1859. “Scientists were compelled to debate the validity of theories in new public sites, not just in exclusive scientific societies or in specialized scientific journals with limited circulation” (Lightman 5), and thus evolution became an object of general rather than purely scholarly interest. Almost anyone could engage with the debates through the various periodicals. The debate included experts like Owen and Huxley as well as other less prominent authors, who wanted to express their opinions. As Huxley notes ironically in his review, “[e]verybody has read Mr. Darwin’s book, or, at least, has given an opinion upon its merits” (par. 1) with the result that the published opinions ranged confusedly from informed to uninformed and from well to poorly argued. Certain detractors like Owen and Wilberforce complicated the debate unnecessarily through overly technical language and sarcasm. Dixon and Lewes, on the other hand, attempt to explain Darwinism without clouding the theories with undefined terms and misleading comments. Although, they both support *Origin*, illustrating the logic of its ideas, they do so fairly, admitting that its propositions are only theoretical and not certain truth. They mobilize their very different works to similar ends, hoping to educate their readers about the operations of the natural world. Dixon inserts evolutionary images and principles into the literary dream vision.

His guides, for example, personify natural selection and the struggle for life rather than abstract virtue. Lewes follows a path much closer to Darwin's and writes a scientific text. In *Studies in Animal Life*, he defines important technical terms and meticulously explains the process of collecting and examining specimens. He also elaborates on the debate surrounding Darwin's theories, having already provided the knowledge required to understand them. He implies the truth of these theories through his phrasing, presenting the arguments with relative neutrality but persuading his readers through implication rather than argumentation. "When the public is eager and interested, reviewers must minister to its wants" (Huxley par. 2), and "A Vision of Animal Existences" and *Studies in Animal Life* do exactly that.

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