Abstract

Utilizing digitally re-published primary sources from The Old News Archive [1], this study investigates the mid-nineteenth-century controversy surrounding the Nebular Hypothesis as presented in Robert Chambers' Vestiges of the Natural History of Creation. We argue that while the hypothesis had been popularized by John Pringle Nichol years earlier without major outcry, its synthesis in *Vestiges* sparked a firestorm by linking cosmic origins to a law-governed, evolutionary, and materialistic morality. Through a comparative analysis of periodicals ranging from the radical Examiner to the provincial Waterford Chronicle, we identify a spectrum of "materialism" as the central point of friction. While reformist outlets celebrated the hypothesis as a metaphor for social progress, the scientific establishment and religious press viewed it as a "degrading" threat to human dignity and social order. Ultimately, the controversy reveals that the Nebular Hypothesis functioned less as a debate over celestial mechanics than a struggle over epistemic authority within science, the authority to popularize it for the public, as well as the implications for our image of God, the occurance of miracles, and - most importantly for the religious press- the moral constitution of man.

4202 words

Contents

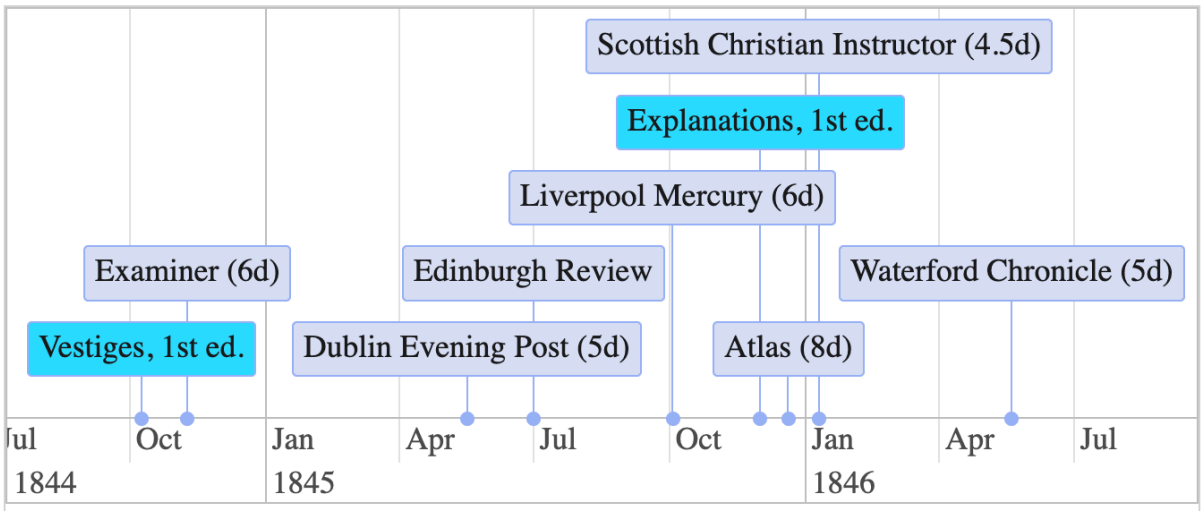

Figure 1: Timeline to show publication date of the articles under discussion. Prices shown where available

Introduction

Main Text

The *Examiner* Celebrates the Moral Progress Left in Our Solar System

The first review of the *Vestiges* was an effusive eulogy in the London-based *Examiner*, a "leading intellectual journal expounding radical principles" [2]. The *Examiner*'s positive review contributed to *Vestiges* selling out the first edition in a few days [3]. The *Examiner* was politically active in the Reformist campaign that led to the expansion of the franchise in the Reform Act of 1832 [4]. It openly celebrated the "death-blows" to Toryism in various borough by-elections [5]. It spared no expense to attack the Tories, even accusing them of inciting the attempted murder of Queen Victoria [6]. The *Examiner* was read by an educated, well-to-do urban intellectual elite capable of paying the relatively steep 6d per issue. It supported the same Whig candidates as the *Edinburgh Review* but was more radical in its demands. The religious persuasions of its the readers ranged from the unorthodox liberal Christianity of Alfred Lord Tennyson and Charles Dickens to the the atheism of John Stuart Mill [7], [8]. After singing the praises of the author's "large and liberal wisdom" and "lofty[1] spirit of beneficence", the *Examiner* turns to outline key elements of the work, starting with the Nebular Hypothesis.

In the opening chapter of *Vestiges*, the reader is presented with evidence that our solar system is "completed", supported by "mathematical reasons [...] concluding that Mercury is the nearest planet to the sun, which can, according to the laws of the system, exist". This is contrasted with other celestial systems whose "formation [...] is still and at present in progress" [9]. Then, an alternative picture is presented: the "Zodiacal Light" is supposed to provide evidence for "the comparative youth of our system", which implies that, far from being "completed", our system is "one whose various phenomena, physical and moral, as yet lay undeveloped, while myriads of others were fully fashioned and in complete arrangement". Thus, two pictures of the solar system are presented: both are the consequence of natural laws, but one is "completed" whereas the second is imperfect and evolving. Evidence cannot distinguish between them. In presenting this chapter to its readers, the *Examiner* pointedly leaves out the "completed" solar system and presents only the improvable one. Viewed in light of its radical political commitments, it appears that the reviewer in the *Examiner* has

[1]The meaning of this word in 1840 was closer to "exalted" than "pompous"

viewed the Nebular Hypothesism through the prism of the paper's own commitment to social and moral progress: Just as the work of radical reformers was not complete with the Reform Act, so too the Creator's work remained unfinished in the present state of the solar system.

The *Dublin Evening Post* Fears Atheism and materialism and Accuses John Pringle Nichol of Authoring the Work

The *Dublin Evening Post* was one of the most influential newspapers in Dublin [10]. Its main political commitment was opposing the Union, arguing that London should not have a say over the political affairs of Ireland [10]. As a Catholic daily, it devoted substantial sections on battling Protestantism, atheism, "phreno-mesmerism" and "materialism", labels which were used fairly liberally and interchangeably. It also explicitly recognized its own biases, recognizing respectfully that sometimes, what *philosophers* might think of as defensible opinions the *Post* viewed with 'deep odium' [11].

On the 13th of May the *Post* had noted the striking similarities between Chapter 1 of the *Vestiges* and Chapter 3 of John Pringle Nichol's *Architecture of the Heavens*[2], and had accused John P. Nichol of atheism and materialism on the presumption that he was the author. Nichol responded on the 15th of May 1845, noting the "grave charges" against the work in question. Nichol's recognition that this book was a cultural hot potato is clear by his desire to "not have laid upon me the task of dealing with [these charges]". We may glean that he potentially sympathized with the arguments in *Vestiges* by his desire to "avoid[…] any expression of opinion as to the justice or injustice of these charges".

The accusation that Nichol had authored *Vestiges* tells us that the Nebular Hypothesis was known well enough by the public that a newspaper could trace it to a particular popular science book. Indeed, the *Architecture of the Heavens* had popularized the of nebular hypothesis. We find an eloquent summary of Sir William Herschel's discovery and description of nebulae as clouds of luminous matter, or "matter in its pristine state", in the Spectator of that year [13], which continues to describe how the collapse under gravity can explain the high angular momentum of the sun:

> Observing that when currents of water meet, however gently, a dimple or whirlpool is produced, the ever quick and reflective mind of the philosopher detected in this every-day example the mechanical law by which the sun was driven to revolve upon his axis; and as each successive addition to the whirling mass must increase the speed of its revolution, the wonderful swiftness of the solar motion is readily explainable.
>
> — Spectator 1837 [13]

Why did the publication in 1837 of Nichol's *Architecture of the Heavens* not spark nearly the outrage caused by Vestiges? The *Post* gives us the answer: Whereas Nichol sticks to astronomy, Chambers explicitly takes the Nebular Hypothesis as the starting point of a grand evolutionary account - the evolutionary cosmos sets the stage for the evolution of plants and animals, which sets the stage for the evolution of human psychology and morality. It is the putting of human action on a physical basis that the Catholic *Post* views with 'deep odium'.

It was thus the moral implications of cosmic evolution that stimulated a further understanding what these nebulae were. Were they truly clouds of gas, or were they resolvable into individual stars? Lord Rosse, an Anglo-Irish Unionist, believed he had seen that the Orion nebula could be resolved into individual stars, and he sought to validate his hunch by building the largest telescope up until that date (and the largest telescope in the world until 1917), now known as the Leviathan of Parsonstown, in Birr, in Ireland. The apparent resolvability of various nebulae in the catalogues of

[2] A popular science book which presents the Nebular Hypothesis [12]. It is likely where Chambers first read of it [3]

John and William Herschel became a key piece of evidence cited in the *Edinburgh Review* and the *Atlas*. In fact, the Leviathan found the first evidence of galaxies, dramatically increasing our perception of the scale of the universe. Many of the nebulae it claimed to resolve into individual stars, like the Orion nebula, were later found to be 'true' thanks to spectroscopic analysis performed in the 1860s by William Huggins [14].

The *Edinburgh Review*: Publishes an long rebuttal in an attempt to distance respectable geology from the work and asserting the boundaries of respectable science & science popularization

Known as "The Thunderer", the *Edinburgh Review* was an early pioneer of steam printing in the early 1800s, becoming one of the most influential periodicals of the age [15]. It supported Whig politics, but was more measured than the radical *Examiner*. Among its subscribers was Adam Sedgwick, a prominent geologist, Anglican priest, and mentor to Charles Darwin.

Sedgwick had strong feelings about the book, and hoped that a review would stamp "with an iron heel upon the head of the filthy abortion, and put an end to its crawlings" [3]. When he was approached by the *Edinburgh* review it in his first (and last) contribution to the paper, he produced an eighty-page rebuttal, covering not only the empirical basis of the Nebular Hypothesis, but addressing the wider social implications of the dangerous work.

Whereas *Vestiges* presents the Nebular Hypothesis as an "ascertained truth", to the *Edinburgh Review* it is merely "a splendid vision". It is not dismissed as untrue as much as unfounded: there simply isn't enough evidence to support it and the theory currently has too many difficulties in accounting for empirical facts. Sedgwick concedes that "after five hundred years of continued observation [it] may pass into a substantial theory". The mistake in accounting for the large amount of angular momentum currently present in the solar system represents the anonymous author's "first great blunder", the first of many.

James Secord has argued that for Sedgwick, the book's popularity threatened to provoke an anti-science conservative counterreaction from the "Tory diehards" within the Church [3]. After all, geologists like Sedgwick were making discoveries that threatened a literal interpretation of Genesis [16]. The *Mercury* picked up on this tension too, explaining Sedgwick ire by the fact that the Dean of York had unfairly heaped charges of "infidelity and materialism, [...] on his favorite pursuit, Geology". Perhaps, the *Mercury* mused, a "mere anonymous bookmaker might well be sacrificed to evidence the orthodoxy of a Cambridge divine".

Thus, Sedgwick felt it necessary to distance the respectable, gentlemanly scientific establishment from the work, emphasising that "no man who has any name in science, properly so called, whether derived from profound study, or original labour in the field, has spoken well of the book". He is anxious to prevent geologists' conservative critics, such as the Dean of York, from using the book as ammunition against the scientific establishment.

But Sedgwick was not merely worried about being misunderstood by Tory diehards and Christian fundamentalists. He understood as well as they did that science was "the most potent instrument of persuasion in our culture" [17], and was therefore worried that people like Chambers, who had mastered the conventions of gentlemanly writing, can masquerade as credible authors and lead the public down the dangerous conclusions inferred from its "degrading materialism". This public is depicted as gullible, "men who are fed on nothing but the trash of literature" - and since they "are not able to judge from their own knowledge, [they] must therefore be plainly told" that *Vestiges* is not real science. We must protect "our glorious maidens" from books that "teach that their Bible is a fable when it teaches them that they were made in the image of God - that they are the children of

Apes and the breeders of monsters", or that he has "annulled all distinction between physical and moral".

Sedgwick writes of the "ruin and confusion" that will result from materialism if taken up by the working classes, "will undermine the whole moral and social fabric" bringing "discord and deadly mischief in its train", the fear of a French-style revolution is palpable.

It is interesting to pause and say that while the Catholic *Dublin Evening Post* and the Unionist-Liberal-Whig *Edinburgh Review* may not have agreed on much in the realm of politics, they were remarkably in sync when arguing that the book's materialism has dire social implications. Granted, the Catholic post framed this as infidelity whereas Sedgwick uses the more secular language of "ruin and confusion", but the charges are much the same.

To Sedgwick, "religious revival should go hand in hand with the diffusion of knowledge from *credible sources*" [3]. He therefore makes a point to state not only who is allowed to do science and how, but also who should be allowed to communicate this to the public. People who have not learned the lessons of "humility" from "their own repeated failures", who have not "learned to appreciate the enormous and continued labour by which every new position has been won", should not be allowed to "toss their fantastical crudities before the public". True science is thus cautious - and manly ("ill-fitted for the drapery of a petticoat" - Sedgwick virulently opposed the entry the admission of women into Cambridge University). Only men who have experience walking the "rugged and thorny road of science" have the humility requisite to communicate science to the public.

Some commentators have noted that Sedgwick's attack must have left an impression on his former pupil Charles Darwin. While Darwin had basically fully formulated his theory of evolution by natural selection by 1844, Sedgwick's attack may have encouraged Darwin to do some more "careful inductive science" and embark on a 5 year study of barnacles to fortify his theory.

The *Liverpool Mercury* uses the Hypothesis to lampoon the 'Cambridge Schoolmen'

We now turn to the voice of the industrial English North: the *Liverpool Mercury* originated in Liverpool was an upbeat "provincial" paper, read by the up-and-coming northern merchants and shopkeepers riding the wave of the industrial revolution [18]. A huge portion of the Northern middle class were Dissenters - Baptists, Methodists, and Unitarians - barred from taking degrees at Oxford and Cambridge, and were thus anxious for social reform much like the readership of the *Examiner*. The *Mercury*'s motto, *Salus Populi Lex Suprema*[3], revealed their founders' long-term aim as 'continual and peaceful progress'. It was a staunch campaigning newspaper fighting for better housing and public health in Liverpool [19]. It was just as radical as the *Examiner*, but its focus was less on literature than commerce and politics, and of course, the interests of the North. The newspaper therefore is likely to have been read by middle-class and reform-minded Dissenters, interested in social improvement and progressive politics and eager for reform. These are the men and women that Sedgwick surmised were "fed on nothing but the trash of literature".

In contrast to the *Post* and the *Edinburgh*, who reacted with "deep odium" to the "degrading materialism" of the work, the *Mercury* is positive, although it stops well short of the *Examiner's* earnest and effusive praise. Instead, the *Mercury* approves of the spirit of the work, calling its attention "well-deserved". In a lighthearted and satirical commentary on the hypocrisy of the "Cambridge schoolmen", it explains how the once-loved Nebular Hypothesis was rejected by scientific establishment once the *Vestiges* had appropriated it for its own ends [20].

[3]The welfare of the people is the supreme law

The review clearly sets up a dichotomous relationship between "our readers, the reading and thinking public", and a lampooning tone towards "our Cambridge schoolmen", "the doctors", or "the philosophers" who are feigning to be "scandalized" by the ideas in *Vestiges*. It expresses "regret" that the "he speculative opinions hazarded by the author [...] should have been met in such an intolerant spirit". Many of the readers of the *Mercury* were newly wealthy and well-read but institutionally barred from participating in professional science due to their religious convictions. Therefore the readership of the Mercury is likely to have admired and identified with the anonymous author of the *Vestiges*, who is clearly well read from books, while lacking practical scientific experience. Why shouldn't these upstarts be allowed to speculate on the origin and fate of the Universe?

For the *Mercury*, Sedgwick's commitment to scientific caution strays into "theory-phobia". What appear to the *Mercury* as "harmless, really inoffensive speculations", Sedgwick says are at "open war with all the calm lessons of inductive truth":

> If Columbus had published his Theory of the Discovery of America in a pamphlet, the Rev. Professor would have demolished it in a good set speech, [...] and would [...] have blandly told him [...] that he had no "right to toss out his fantastical crudities before the public, and give himself the airs of a legislator over the material world."

This "theory-phobia" basically reveals that the industrial north saw the Cambridge schoolmen as pedantic. In contrast, *Mercury*'s readership saw a "theory" as a "business plan". You need one to move forward. For Sedgwick, a "Theory" without 50 years of data to back it up is a "filthy abortion". After establishing Sedgwick's theory-phobia, the *Mercury* dismisses the implications for Victorian morality: the cry of "materialism" is dismissed as "a lack of sounder argument in those having recourse to it".

Just like the *Post*, the *Mercury* picks up on similarities between *Vestiges* and Nichol's *Architecture of the Heavens*, but rather than demanding Nichol's head, it cleverly emphasizes the *lack of controversy* surrounding the Nebular Hypothesis in 1837 to show that the "Cambridge schoolmen" had a hidden agenda in discrediting the work that went beyond *what was said*. What mattered was that an outsider had appropriated their Hypothesis and used it for his own ends:

> It is, however, not a little curious, that while the nebular theory was locked up from vulgar eyes in the iron-bound casket of the *Philosophical Transactions*, it was held as a talismanic gem of the first water [...] But no sooner had Nichol[4], with more of zeal for popular information than proper veneration for philosophical profundity, transferred it, brilliantly re-set, to his pert little duodecimo, than it was discovered that the gem contained some flaws [...] But now that the author of the "Vestiges," in his turn, has taken it, cut and dry, from Nichol [...] to make it work out its seeming destiny in his own pages, it is discovered to be mere paste after all.

Thus, the *Mercury* understandably refracts the Nebular Hypothesis through the prism of class warfare: Just like the Reform Act of 1832 had wrested power from the entrenched "Old Blood" of the English southern aristocracy, the same battle lines are drawn in the reception of this book. Their reception of the Nebular Hypothesis shows that the Cambridge schoolmen do not want to allow the commercial men to appropriate science and use it for their own ends, using "philosophical profundity" and the "charge of materialism" as a smokescreen for scientific gatekeeping.

[4]John Pringle Nichol, astronomer and popular author, author of the *Architecture of the Heavens*, 1837 [12]

The *Atlas*' Sophisticated Neutrality Boosts the Legitimacy of the Hypothesis

The uproar around *Vestiges* prompted Chambers to publish a rebuttal to his critics, which he called *Explanations* and published in December 1845.

The Vestiges and its sequel, Explanations, received a markedly different treatment in the Atlas—London's most expensive weekly and a self-styled "Journal of Literature." While the Atlas shared the Examiner's Liberal-Whig sympathies, it remained more detached from the fray of everyday politics, opting instead for a measured, philosophical tone. Rather than weaponizing the Nebular Hypothesis as immediate fodder to "smash the Tories," the Atlas dwelt on the "dark and solemn inscrutabilities" of the theory. By prioritizing these philosophical musings—noting they were the areas where "popular feelings are likely to be most deeply interested"—the Atlas signaled that the evolutionary cosmos was no longer merely a radical provocation, but a sophisticated subject for elite inquiry. We can only guess at Sedgwick's reaction…

The *Atlas* reminds its readers that the main empirical issue with the Nebular Hypothesis as was that Lord Rosse's gigantic telescope had resolved the Orion nebula, revealing that "masses of light, rendered apparently nebulous by their vast distance, have been resolved into clusters of stars". Clearly, the non-existence of nebulae presents a big problem for the hypothesis, and to the evolutionary universe as a whole. The *Atlas* then turns to philosophy and theology: First, where does this theory leave individual acts of God? Second, what does it imply for our "estimate of the Divine character"? On the first question, it notes that "there are names of no mean repute who would reserve certain domains of creation as the fields of special interventions". On the second question, *Explanations* quotes the Nonconformist minister Phillip Doddridge who says "No, there is nothing atheistic, nothing irreligious, in the attempt to conceive creation, as well as reproduction, carried on by universal laws".

The Atlas viewed the work as a "Frankenstein" union of scattered scientific limbs—a synthesis that, while daring, offered a systematic research model that the cautious "Baconian" establishment had become too "timid" to attempt (an echo of the *Mercury*'s criticisms)

In the "Historical Sketch" of the 1859 Origin of Species, Charles Darwin would famously acknowledge Vestiges for its role in "removing prejudice" and "preparing the ground" for his own theory [21]. I would argue that the *Atlas* review, being neither overtly political like the *Examiner*, nor heavy-handed like the *Edinburgh*, contributed a lot to shaping the image of the Nebular Hypothesis and its attendant implications for morality and theology. By stripping the Nebular Hypothesis of its "infidel" or "radical" baggage and presenting it as a modish, high-brow philosophical inquiry, the Atlas desensitized the Victorian elite to the shock of a law-governed universe. It transformed a "filthy abortion" into a legitimate, even sophisticated topic of conversation [22].

The Scottish Christian Instructor & Waterford Chronicle: The Denigration of Man

The *Scottish Christian Instructor* and *Waterford Chronicle* allow us to glean the reactions from the religious press. Interestingly. Like the *Mercury*, *Examiner*, and *Atlas*, and even *Edinburgh Review*, they agreed that the work had severe implications for theology. But whereas the previous publications primarily viewed the work as a threat to our conception of *God*, a remarkable turn in the religious press is to primarily focus on the implications for the conception of *Man*. For these critics, the central crisis was the collapse of the boundary between the physical and the moral: If we are made of the same "fire-mist" as a rock, and our "will" is just a galvanic battery, then sin doesn't exist.

The *Scottish Christian Instructor* was explicit in its charge, arguing that Chambers' aim was "to do damage to the moral constitution of man" [23]. By placing human origins within a mechanical "history of creation," the work reduced an exalted moral being to "nothing else but the earthly descendant of a cyclo-neura… or a snail." To the Instructor, the Nebular Hypothesis was the first link in a chain of "gross materialism" that replaced a Particular Providence with the "patience of an ostrich"—a God who waits indifferently for laws to create themselves while ignoring the "martyr's pains and the patriot's despair."

The Waterford Chronicle echoed this rejection of "materialist fantasies" with even greater indignation [24], attacking the idea that the human will is merely a "moral thermometer" regulated by temperature and "statistical law." The Chronicle found it "painful and yet amusing" that Chambers attempted to prove that mental action is merely a "mechanical process" of "electric action," identical to a galvanic battery. By arguing that a person's morality is determined by laws as "uniform and precise" as the quantity of rain that falls in five years, the Chronicle asserted that Vestiges "annulled" the distinction between the physical and the moral. For the Irish religious press, reducing the Ten Commandments to a "principle of electricity and condensation" was an "audacious infidelity" that stripped Man of his soul, effectively turning a murder into nothing more than a "moral irregularity" dictated by the weather.

Conclusion

The reception of the Nebular Hypothesis in the 1840s demonstrates that scientific ideas do not exist in a vacuum; they are refracted through the existing political, religious, and class-based prisms of their audience. In the hands of the *Examiner*, the uncompleted solar system was parallel of unfinished social progress. To the *Liverpool Mercury*, the Nebular Hypothesis allowed one to plainly see the "theory-phobia" and gatekeeping of the "Cambridge schoolmen." However, as seen in the scathing reviews of the *Edinburgh Review* and the religious press in Dublin and Waterford, the hypothesis was also a source of profound cultural trauma and threatened the social order and the dignity of man.

The central conflict was not the empirical validity of collapsing gas clouds, nor even the removal of the Divine hand from the immediate management of the world, for this had been done by Nichol. But by placing human morality on a "mechanical footing"—reducible to galvanic action or statistical probability—Chambers threatened the very boundary between the physical and the spiritual.

This perceived "denigration of man" was so potent that it spurred the construction of the Leviathan of Parsonstown, as the Anglo-Irish establishment sought to "resolve" the nebulae and, by extension, resolve the threat of a materialist universe. Ironically, the Leviathan of Parsonstown is remembered for massively increasing our sense of the scale of the universe, while the existence of true nebulae was established in the 1860s by spectroscopic measurements.

The *Vestiges* controversy performed essential cultural labor. By forcing the Victorian public to engage with a law-governed cosmos, it "removed prejudice" and prepared a more resilient, if still contentious, ground for the arrival of Darwinian evolution. The episode stands as a definitive example of scientific co-production, where the "creative competence" of a bookseller and the vocal reactions of various publics together shaped the boundaries of modern scientific discourse.

Bibliography

[1] V. Elgersma, "Old News Archive." [Online]. Available: https://oldnews.vjbe.net/

[2] "The Examiner (1808-1881)." [Online]. Available: https://www.britishnewspaperarchive.co.uk/titles/the-examiner

[3] J. A. Secord, *Victorian sensation: the extraordinary publication, reception, and secret authorship of Vestiges of the natural history of creation.* Chicago: University of Chicago Press, 2000.

[4] M. Bloy, "The Reform Act Crisis." [Online]. Available: https://victorianweb.org/history/reform.html

[5] "Election News," *Examiner*, Mar. 1840, [Online]. Available: https://oldnews.vjbe.net/examiner/1840/03/election_news.html

[6] "The Attempt on the Queen's Life," *The Examiner*, June 1840, [Online]. Available: https://oldnews.vjbe.net/examiner/1840/06/attempt-queen.html

[7] "Vestiges of the Natural History of Creation," *The Examiner*, Nov. 1844, [Online]. Available: https://oldnews.vjbe.net/examiner/1844/11/vestiges.html

[8] G. Landow, "Movements and Currents in Nineteenth-Century British Thought." [Online]. Available: https://www.victorianweb.org/philosophy/thought1.html

[9] R. Chambers, *Vestiges of the Natural History of Creation.* 1844.

[10] M. J. Tutty, "The Dublin Evening Post 1826," 1970.

[11] "Professor Nichol," *17/05/1845*, [Online]. Available: https://oldnews.vjbe.net/dublin_evening_post/1845/05/vestiges.html

[12] J. P. Nichol, *The Architecture of the Heavens.* 1838.

[13] "DR. NICHOL'S ARCHITECTURE OF THE HEAVENS.," *Spectator*, July 1837, [Online]. Available: https://oldnews.vjbe.net/spectator/1837/07/nichol-s-architecture-of-the-heavens.html

[14] B. W. Service, "The Great Telescopes and Evolution." [Online]. Available: https://www.bbc.co.uk/sounds/play/p02ybwzx

[15] J. Clive, ""The Edinburgh Review".," *History Today.*, vol. 2, no. 12, pp. 844–850, 1952.

[16] A. Fyfe, "Victorian Science and Religion." [Online]. Available: https://victorianweb.org/science/science&religion.html

[17] G. Cantor, "The rhetoric of experiment," *The uses of experiment; Studies in the natural sciences.* 1989.

[18] A Contributor, "Mercury Extraordinary!," *Supplement to the Liverpool Mercury*, p. 1, Oct. 1845, [Online]. Available: https://oldnews.vjbe.net/1845/10/mercury/

[19] P. Shennan, "The Liverpool Mercury: Born 1811, merged 1904... and still a legend." Accessed: Mar. 23, 2026. [Online]. Available: https://www.liverpoolecho.co.uk/news/liverpool-news/liverpool-mercury-born-1811-3369215

[20] A Contributor, "The Edinburgh Review, and Vestiges of the Natural History of Creation," *Supplement to the Liverpool Mercury*, p. 1, Oct. 1845, [Online]. Available: https://oldnews.vjbe.net/1845/10/mercury/

[21] C. Darwin, "An Historical Sketch Of The Progress Of Opinion On The Origin Of Species, Previously To The Publication Of The First Edition Of This Work," in *On the Origin of Species, 6th Edition*, 1872.

[22] "Explanations: a Sequel to "Vestiges of the Natural History of Creation." By the Author of that Work. Churchill. London, 1845.," *Atlas*, Dec. 1845, [Online]. Available: https://oldnews.vjbe.net/atlas/1845/12/explanations-review.html

[23] "VESTIGES OF THE NATURAL HISTORY OF CREATION," *Scottish Christian Instructor*, 1846, [Online]. Available: https://oldnews.vjbe.net/edinburgh_evening_post_and_scottish_standard/1846/01/vestiges.html

[24] "VESTIGES OF THE NATURAL HISTORY OF CREATION"—AVOWED INFIDELITY.," 1846, [Online]. Available: https://oldnews.vjbe.net/waterford_chronicle/1846/05/review-vestiges.html