

## Thomas Huxley's Positivist Romance

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The "Origin of Species" was the last and most notable of three reviews of Charles Darwin's famous book published by Thomas Henry Huxley in the radical London weekly, the *Westminster Review*.<sup>i</sup> It opens as follows:

Mr. Darwin's long-standing and well-earned scientific eminence probably renders him indifferent to that social notoriety which passes by the name of success; but if the calm spirit of the philosopher have not yet wholly superseded the ambition and the vanity of the carnal man within him, he must be well satisfied with the results of his venture in publishing the "Origin of Species." Overflowing the narrow bounds of purely scientific circles, the "species question" divides with Italy and the Volunteers the attention of general society. Everybody has read Mr. Darwin's book, or, at least, has given an opinion upon its merits or demerits; pietists, whether lay or ecclesiastic, decry it with the mild railing which sounds so charitable; bigots denounce it with ignorant invective; old ladies of both sexes consider it a decidedly dangerous book, and even savants, who have no better mud to throw, quote antiquated writers to show that its author is no better than an ape himself; while every philosophical thinker hails it as a veritable Whitworth gun in the armoury of liberalism; and all competent naturalists and physiologists, whatever their opinions as to the ultimate fate of the doctrines put forth, acknowledge that the work in which they are embodied is a solid contribution to knowledge and inaugurates a new epoch in natural history (*Origin* 22-23).<sup>ii</sup>

The general stir about Darwin's book described here will not surprise us a century and a half later. Somewhat more difficult to grasp is the moral and political significance that Huxley seems to attach to the *Origin* by comparing it to the long-range rifles newly developed by the British industrialist, Sir Joseph Whitworth. How could Huxley claim that "every philosophical thinker" (his preferred name for scientists) celebrated the *is* of biological evolution as something capable of arming the *ought* of liberalism? Such societal applications of biological science were commonplace in the nineteenth century. Indeed, Herbert Spencer who we most often associate with this pattern was part of Huxley's inner circle (Barton). But in public Huxley professed to disdain speculation of this kind. When he coined the word agnostic sometime in 1869, it was to assert the epistemic reserve that set science apart from other forms of inquiry. In "Agnosticism," his late-life retrospective on this term, he wrote that it expresses "the essence of science," the supposition "that a man shall not say he knows or believes that which he has no scientific grounds for professing to know or believe" (239). Why then, in a scientific book review of all places, would he make the forceful assertion that Darwin's

book had advanced the progress of liberalism, a claim we might expect to find in Spencer's speculative evolutionism or that of the French positivists but not in a discussion of Darwin's theory?

Any effort to answer this question must consider the likelihood that Huxley wrote this essay with two aims in mind: a technical one that accorded with usual Victorian conventions of scientific communication, and a broader rhetorical one that could only be executed through historical narration. The above passage, this is to say, is the opening scene of a larger historical sketch written to advance what Ruth Barton and Adrian Desmond have shown to be the prevailing concern of his public career, the advancement of British science. Like many of Huxley's other essays and lectures, this was an effort to re-envision science as the mainstay of higher education and by extension to assign to it the societal mission traditionally given to theology.

It is easy enough to understand why 19th-century thinkers would depict science as the mechanism of historical progress. As the continent's economy became increasingly tied to an industrial revolution that itself took inspiration from science's epistemological ideals, science was bound to find itself written into a public narrative already rooted in the belief that civilization moved in step with science's growing understanding of natural history. I draw attention to Huxley's version of this because it appears to represent a new variation on this theme, one that ever since has defined the place of science in society. While science had been linked to the progress of civilization in several different ways since the time of Francis Bacon, since the 19th century this narrative seems to have taken a more singular shape within scientific circles. It now seems to consistently stand upon what historians call the "conflict thesis," the widespread belief that it was science's defeat of an epistemological impostor, namely religious belief, that brought about its modern triumph (Numbers).

I mean to show that Huxley's version of this narrative borrows the form found in literary romance and that a close look at how he worked the history of science into this form will account for the persuasive appeal that continues to sustain it. In doing so I draw upon the insights of various scholars who have recognized romance's persuasive utility. In her study of English romance, Helen Cooper has shown that the genre took hold in the Catholic Middle Ages as a secular "means by which cultural values and ideals were recorded and maintained and promulgated," and that, even as Tudor England took a Protestant turn, "its familiarity and its infinite adaptability" sustained it "as the site where its values could be questioned and tested but ultimately reaffirmed" (6). Northrop Frye surmised that this pattern has been even more continuous, that the economic and political worldview of every rising power since the Middle Ages has likewise tended to find expression in what he called kidnapped romance.

In every age the ruling social or intellectual class tends to project its ideals in some form of romance, where the virtuous heroes and beautiful heroines represent the ideals and the villains the threats to their ascendancy. This is the general character of chivalric romance in the Middle Ages, aristocratic romance in the Renaissance, bourgeois romance since the eighteenth century, and revolutionary romance in contemporary Russia (*Anatomy* 186).

Like Frye, Fredric Jameson argues that romance's narrative structure accounts for this suasive value. It is "marked with certain indications and signals as to how it is

properly to be used," and this has meant that the same structural codes that formerly aligned secular forms of power with the Catholic world order have continued to perform analogous roles (135). In "the increasingly secularized and rational world that emerges from the collapse of feudalism," romance has been "called upon to assume the literary function of those older codes which have now become so many dead languages" (1423). To enliven this form these secular powers then must posit some alternative to "the constitutive raw materials of magic and otherness which medieval romance found ready to hand in its socioeconomic environment" (142).

Frye drew attention to the same general pattern in his book-length treatment of romance when he described it as a secular scripture (*Secular Scripture* 92). Stories with similar structures tend to stick together, and because the story structures of both romance and the Bible draw upon a common folk ancestry, chivalric romance was able to build "a single integrated vision of the world, parallel to the Christian and biblical vision" (*Secular Scripture* 15). Superficially, this might suggest that medieval romance derived its mythical quality merely from its symbolic affinity with the Catholic worldview, but Frye instead attributes this to an affinity of form, the fact that, like the Bible, romance is "a comedy that contains a tragedy" (*Secular Scripture* 92). This is to say that secular romances parallel the biblical narrative because the coherence of this mixed form invariably depends upon something analogous to the dual heavenly and earthly points of reference more typical of myth and fable. The heroism featured in the typical romance is tragic, subject to inescapable limitations of fate, but this same heroism will also produce a comic outcome, some sort of societal redemption that the protagonist's tragic dilemma seems to belie. Romances overcome this difficulty by assigning a double meaning to this heroism, by maintaining the mortal limitations of these actors while simultaneously assigning some transcendent meaning to their heroism that makes them "analogous to the mythical Messiah or deliverer who comes from an upper world" (*Anatomy* 187). The protagonists featured in the Hebrew Bible are tragic because their heroism is misdirected by their fallen nature as children of Adam, but some divine power also works through them that accords with the designs of providence. At the earthly level we remain aware of the tragic futility that must impede the protagonist, but our awareness that this same heroism has some part to play in a heavenly drama enables us to recognize this tragic reality without foreclosing on the story's hopeful expectations.

One could reasonably argue that the supernatural significance of biblical heroism is a given, that it simply follows from the theological premises of its authors rather than from the mixed form of the stories they tell. But if Hebrew theology necessarily gave rise to a comedy that contains a tragedy, we might expect to find that the inverse of this is also true: that secular stories having an analogous form will give rise to something analogous to theology. One might say in this regard that, while romance's mythical intent is the material cause that enables it to sanction both established and aspirant powers, the mode's structure as a comedy that contains a tragedy is the formal cause that enacts this.

Even when these mythological rationalizations appear to be replaced by ideological abstractions in the secular realm, something analogous is likely to be implied. Those who aspire to govern authorize their claims to power on comic grounds as promising to

serve the public good, but to opponents these claims will seem to be belied by tragic self-interest. Political actors typically negate such objections by depersonalizing their actions, by assigning their causality to some transcendent principle of progress, civil harmony, prosperity, liberty etc. But the same effect is also produced when political actors transcribe such claims into narratives that draw upon the formal conventions of romance. When narrativized these abstractions gain a mythical appeal by becoming components of some upper world that guides the protagonist and accounts for this character's heroism.

### **Positivist Romance: The Scientific Philosopher's Quest**

The conflation of biological evolution and societal progress that Huxley voices in the opening of his "Origin" review suggests a mythological transcendence of this kind, and thus we can expect to find that the narrative embedded within the larger essay will draw upon the conventions of romance to dramatize the scientific heroism he envisions. I do not mean to say that Huxley intentionally or even consciously appropriated this form. It seems more likely that his convictions merely drew him to this popular narrative formula. I will examine this story as it unfolds in the three stages that Frye describes for romance, "the *agon* or conflict, the *pathos* or death-struggle, and the *anagnorisis* or discovery, the recognition of the hero, who has clearly proved himself to be a hero even if he does not survive the conflict" (*Anatomy* 187). While the opening scene of conflict between science and orthodoxy points to the tragic death-struggle to come, it also signals the story's comic direction by situating this *agon* within a historical narrative of progress similar to that voiced by French positivism. As Auguste Comte did in his philosophy of history, Huxley assumes that theology is mere pseudo-science, an evolutionary ancestor of modern science that should have fallen into extinction as positive knowledge arose. The fact that it did not signals the villainy of Britain's orthodox leaders. Some other unnatural motive, interests of power suggestively, must account for its persistence. But this positivist premise also anticipates the role reversal that will occur at the narrative's climax. If theology posturing as science had sustained Britain's governing authority for all these centuries, positive science was the true heir destined to assume its spiritual authority.<sup>iii</sup> The wider controversy ignited by the publication of Darwin's book then becomes the backdrop to the more focused combat between science and orthodoxy found in the story's *pathos* stage. Darwin's discovery has brought these two rivals face to face in a death-struggle that will first test but then ultimately prove science's heroism. Thus, in the final *anagnorisis* stage we discover that the same tragic loyalty to natural fact that once drove science into exile has now enabled it to destroy creationism and thus to assume orthodoxy's spiritual oversight of society.

### **Agon**

As is often found in the opening scenes of literary romance, Huxley's narrative introduces a protagonist whose heroism has earned him society's reproach, in this instance because Great Britain is governed by anti-scientific leaders, ecclesiastic and lay pietists and humanistic savants. Nevertheless, a heroic remnant stands with Darwin,

"every philosophical thinker" who recognizes that the liberalism advanced by his work is destined to lift society from this decay. A moral polarity has been set out, and as we find in other romances, this one has been assimilated as Frye describes this to natural opposites. (*Anatomy* 187). But, rather than associate these opponents as medieval and Renaissance romances typically do with opposite ends of a natural cycle, light and darkness or spring and fall, Huxley assimilates them to the past and present of evolutionary time. The societal progress foreseen by his philosophers moves in step with natural evolution just as his orthodox villain moves against the currents of both progress and nature. Frye argues that symmetry of this kind "always means that historical context is being subordinated to mythical demands of design and form" (*Great Code* 43), and this narrative constraint undoubtedly accounts for Huxley's departure from the epistemological ideals of agnosticism. No narrative can provide the "single integrated vision of the world" that myth demands while also obeying the disciplinary rigors of science, philosophy, or history (*Secular Scripture* 15).

Although Darwin is the subject of Huxley's opening, the protagonist typically named throughout his narrative sketch is not a specific person but rather the character type that Darwin represents – the "philosophical thinker." In later decades of the nineteenth century this character would have been called a scientist, but that Americanism as the *Times* called it had not yet come into general use (Desmond 482). Huxley's preference for the broader term philosopher reflects his general agreement with Comte's premise, already in fashion among British freethinkers, that positivist philosophy was destined to bring all of learning within science's compass (Wright).

Huxley's assimilation of Comte's historical scheme enables him to align natural evolution with the progress of liberalism, a term that readers of the *Westminster Review* were sure to associate with the progressive vision outlined in J. S. Mill's *On Liberty* which had come out some months earlier. Since Darwin is one such philosophical thinker, we may assume his agreement with this claim, but Huxley does not say so. As other writers of romance typically do, Huxley is careful to sustain a more marginal position for his protagonist on the outskirts of society. If the orthodox worldview was merely so much obsolete science, the "cosmogony of the semi-barbarous Hebrew" as Huxley later states (52), the societal order of the present world was necessarily a projection of its errors. No true philosopher could genuinely belong to such a world. Thus, when Huxley congratulates the *Origin's* author in the essay's opening, he is careful to assure us that he is not voicing the world's approval. Darwin's "long-standing and well-earned scientific eminence" probably "renders him indifferent to the social notoriety which passes by the name of success" (22). Only a less heroic scientist would care about the public reception of his work – one for whom "the calm spirit of the philosopher have not yet wholly superseded the ambition and the vanity of the carnal man within him" (22). If Darwin's book has overflowed "the narrow bounds of purely scientific circles" to influence the course of societal progress, this is not because the author intended that it should divide "with Italy and the Volunteers the attention of general society" (22). English citizens favoring Giuseppe Garibaldi's republican revolution and those sympathetic to Italy's struggling aristocracy may attend to the transcendent social implications of the *Origin*, but Darwin's mind is solely fixed upon nature's evidences. His heroism will ultimately benefit society, but Huxley wants to



make it clear that this heroism does not come from society but from nature. Huxley reinforces this by also differentiating the philosophical thinkers who recognize the societal ends of evolutionary science from the "competent naturalists and physiologists" mentioned next. No less than Darwin, these scientific specialists are completely focused upon their scientific work and thus innocent of such societal concerns; they see only the natural significance of the *Origin* that it "is a solid contribution to knowledge and inaugurates a new epoch in natural history" (23). Jameson takes this a step further by stating that the "naiveté or inexperience" of such protagonists also makes them unaware of the part they are playing in the supernatural contest they are ultimately linked to. The typical protagonist of romance is "a mortal spectator surprised by supernatural conflict who then himself is gradually drawn in, to reap the rewards of victory without even quite being aware of what was at stake in the first place" (139). Although Jameson does not explain this pattern, I will surmise that it enables authors to hold back some reserve of human agency for their protagonists. While the reader eventually discovers that Darwin has been acting on behalf of nature all along, Huxley does not dare portray him as nature's puppet. His ethical heroism depends upon his retention of some autonomous power of choice.

The nature-society parallel recognized by Darwin's more socially minded allies, the philosophical thinkers, is also sustained throughout the message by what Frye calls the "suggestion of allegory" that is "constantly creeping in around the fringes" of romance (*Anatomy* 304). As in his other public discourses, Huxley creates this effect here by juxtaposing the struggle for progress or societal betterment with the scientific battle over evolution (Lessl *Rhetorical Darwinism* 199-237). This allegorical alignment enables him to work around a messy problem: the fact that much of the opposition to Darwin's theory had come from scientific leaders. By insinuating that the scientific present was analogous to the natural evolutionary present, he also sustains the suggestion that the scientific thinkers who doubted Darwin's claims were out of step with evolutionary time and therefore enemies of progress. Here once again we see why the positivist philosophy of history, despite Huxley's open mockery of this movement in later years, is crucial to his narrative (Lessl *Rhetorical Darwinism* 165-7). If theological inquiry was not the systematic study of the divine that it professed to be but rather the proto-science of the distant past sustained now by villainy, this also meant that any scientific perspective that seemed to accommodate faith was out of sync with evolution as well. As much as the true philosopher was nature's servant, one who moved in step with both natural and societal evolution, Darwin's scientific detractors stood to lock the world in the evolutionary past. These prejudged scientific opponents are guided by the same purpose as the orthodox special pleaders. Their scientific ignorance was "too often stimulated by prejudice," that is to say by an unacknowledged adherence to orthodoxy that could only be corrected by "the fair and thoughtful" efforts of "the candid student of Nature" (23-24). This Huxley tells us as he closes his introduction, is why he is adding another review to the many already in circulation. A crisis impends in this eleventh hour. In alliance with these compromised scientists, the theological elites have not yet "exerted their full force in mystifying the real issues of the great controversy which has been set afoot" (24).

## Pathos

Science's eleventh-hour death-struggle with orthodoxy unfolds in an entr'acte that divides Huxley's twenty-page exposition on the properties of species from his closing discussion of the relative explanatory merits of special creation and evolution. He transitions to this phase of his story with a passing reference to human evolution that again draws to mind the science-nature symmetry of his opening. He does so by actively inviting the reader to imagine the evolution of science as a recapitulation of natural history:

Such are the most essential characteristics of species. Even were man not one of them—a member of the same system and subject to the same laws—the question of their origin, their causal connexion, that is, with the other phænomena of the universe, must have attracted his attention, as soon as his intelligence had raised itself above the level of his daily wants. Indeed, history relates that such was the case, and has embalmed for us their speculations upon the origin of living beings, which were among the earliest products of the dawning activity of man. In those early days positive knowledge was not to be had, but the craving after it needed, at all hazards, to be satisfied, and according to the country, or the turn of thought, of the speculator, the suggestion that all living things arose from the mud of the Nile, from a primeval egg, or from some more anthropomorphic agency, afforded a sufficient resting-place for his curiosity. The myths of Paganism are as dead as Osiris or Zeus, and the man who should revive them, in opposition to the knowledge of our time, would be justly laughed to scorn; but the coeval imaginations current among the rude inhabitants of Palestine, recorded by writers whose very name and age are admitted by every scholar to be unknown, have unfortunately not yet shared their fate, but, even at this day, are regarded by nine-tenths of the civilised world as the authoritative standard of fact and the criterion of the justice of scientific conclusions, in all that relates to the origin of things, and, among them, of species (51-2).

If orthodox mythology arose from a scientific craving but was fated to pass away as positive knowledge accumulated, its persistence could only be due to some pollutant that has stalled the natural course of history. In this instance this pollutant is the ruling power that orthodoxy sustains by keeping in the dark the "nine-tenths of the civilized world" who regard Genesis as a scientific authority.

The positivist supposition that theology was science locked in a primitive stage of its evolution identifies this orthodox antagonist with modern science as both its ancestor and archenemy, and this sets the stage for the climactic role reversal that will enable modern science to assume this imposter's role. Of course, to treat theology merely as so much false science required a bit of fudging. Some conservative clergy did set Genesis against evolution, but learned church tradition had rejected literalism of this kind even before the Aristotelian revival of the Middle Ages (Lindberg). Darwin's most notable critics may have been creationists in a broad sense, but they argued their position mainly on philosophical and scientific grounds (Moore). This was the case for

Darwin's Cambridge mentor, Adam Sedgwick, the geologist and Anglican priest who had launched an anonymous attack against the *Origin* a month earlier in *The Spectator*. Although certainly a defender of natural theology's traditional alliance with science, Sedgwick's criteria of scientific judgment were hardly distinguishable from Huxley's, and this made him an outspoken enemy of Mosaic literalism (Speakman 103-4). Neither had Samuel Wilberforce set the Bible against science in his storied exchange with Huxley earlier in 1860 at the British Association's Oxford meeting (Lucas). The naturalist Richard Owen who prepped the bishop for this exchange had believed since the 1840s that species evolved according to natural laws; he merely did not accept the mechanism proposed by Darwin (Cosans 97-103).

Nevertheless, the eleventh hour confrontation with orthodoxy could only end with science assuming theology's societal role if orthodoxy was in some sense science's evil twin, a theological Esau consumed by jealousy and determined to kill the scientific Jacob that threatened to make off with his birthright. Huxley reaffirms this identification of opposites as he rounds out the above passage by depicting a past in which science and theology were in a perpetual state of war:

In this nineteenth century, as at the dawn of modern physical science, the cosmogony of the semi-barbarous Hebrew is the incubus of the philosopher and the opprobrium of the orthodox. Who shall number the patient and earnest seekers after truth, from the days of Galileo until now, whose lives have been embittered and their good name blasted by the mistaken zeal of Bibliolaters? Who shall count the host of weaker men whose sense of truth has been destroyed in the effort to harmonise impossibilities—whose life has been wasted in the attempt to force the generous new wine of Science into the old bottles of Judaism, compelled by the outcry of the same strong party? (52).

If the orthodox clung to false science this could only be because some corrupting influence compelled them to, and as he suggested in the essay's opening scene, this was "the ambition and the vanity of the carnal man" that strives for "social notoriety" (22). Huxley now brings this villainy into the foreground by plying a familiar literary formula. He magnifies the mortal danger that threatens his protagonist by revisiting the tragic fate of past scientific adventurers, both brave and cowardly, whose armored skeletons and shattered swords lay about the dark passages and cobwebbed corners of the orthodox underworld. Since it was a societal villainy that was turned against the "patient and earnest seekers after truth," the brave forerunners to Darwin have suffered in like fashion by having their lives "embittered and their good name blasted." The fate of the weaker men of science, by contrast, was the inverse of this. Infected with the social ambition that now corrupted orthodoxy, their determination to harmonize impossibilities turned them from the scientific path and destroyed their very souls, their "sense of truth."

The perilous danger imagined in this passage also tightens the story's emotional springs. By heightening our sense of the enemy's depravity, Huxley stores up the dramatic tension that will power the role reversal to come. The supercilious pietists described in the essay's opening now seem tame, hardly more threatening than the silly



and pedantic curates who pass through the novels of Austen and Eliot. A darker villainy is needed to intensify this polarity. The enemy who has bound science in the culturalevolutionary past of the "semi-barbarous Hebrew" is a sexual predator, a demonic incubus who comes in darkness to violate the innocent in their sleep – to the disgrace or opprobrium of the churchmen who stand by as this pseudo-scientific molestation unfolds.

The new wine analogy that closes this passage presages the comic resolution that comes next by likening modern science to Christianity's new covenant. Like the revelation of Christ, the appearance of modern evolutionary science is history's defining event, the apocalypse as R. G. Collingwood would say that enables us to comprehend the whole drama of human life (49-50). In light of evolution, we now recognize what the age of orthodoxy genuinely was: the science of a long-passed epoch, a mere ancestor to positive science. Just as the Mosaic law for the New Testament's authors was a partial revelation that was now completed and thus subsumed by a second and more definitive one, modern science by this biblical analogy is destined to assume the spiritual role of the old governing order.

### **Anagnorisis**

This climactic reversal resolves the tension that has built up in the narrative's tragic phase. Even though our emotions push back against this suffering, our admiration for science compels us to accept it as something that science was destined to endure, and so when the villainous obstruction responsible for this dissonance is finally removed, science's healing waters pour out across the desert landscape. No less than tragedy, romance turns upon what Aristotle called catharsis, but whereas this emotional tension is released in tragedy as Frye puts it through an "epiphany of law," Huxley's romance does so in the next passage – now found in *Bartlett's Familiar Quotations* – through an epiphany of grace, a full revelation of the unseen divine power that has stood behind science all along (*Anatomy* 208-9):

It is true that if philosophers have suffered, their cause has been amply avenged. Extinguished theologians lie about the cradle of every science as the strangled snakes beside that of Hercules; and history records that whenever science and orthodoxy have been fairly opposed, the latter has been forced to retire from the lists, bleeding and crushed if not annihilated; scotched, if not slain (52-53).

The fate of Herculean science is thus brought to completion, not through *nemesis*, a righting of nature's balance, but rather through *soteria*, its rightful deliverance by the higher power that sired it.

By giving the part of science to the infant Hercules and that of orthodoxy (implicitly at least) to the goddess Hera, Huxley offers another allegorical recapitulation of positivism's historical scheme. The newborn science has inherited the divine power long exercised by the Pantheon's queen, but its childlike innocence has made it immune to the jealousy and ambition responsible for the murderous rampages of its orthodox stepmother. Attuned now only to positive knowledge, science regains its epistemological purity. But even as this allegory affirms science's societal indifference,

it turns upon an identity of opposites that signals its entitlement to orthodoxy's governing role. Inasmuch as science partakes of the same divine power that ordered Hera's household, its victory also anticipates the wider role it is destined to assume.

Just as Hercules' supernatural strength bears witness to his divine parentage, the progressive character of science shows it to be the offspring of natural evolution. Orthodoxy's villainy by contrast, is demonstrated by the fixity of its claims which Huxley next compares to France's fading monarchy:

But orthodoxy is the Bourbon of the world of thought. It learns not, neither can it forget; and though, at present, bewildered and afraid to move, it is as willing as ever to insist that the first chapter of Genesis contains the beginning and the end of sound science; and to visit, with such petty thunderbolts as its halfparalysed hands can hurl, those who refuse to degrade Nature to the level of primitive Judaism (52-53).

Huxley's Bourbon analogy recapitulates his earlier alignment of science with liberalism. The widening of personal freedom, like the evolution of knowledge, advances in harmony with the unfolding of life on earth, and thus the progressive weakening of orthodoxy, like that of France's *Ancien Régime*, is a kind of devolution that reflects the unnatural authority claims that stalled its adaptation to the changing modern world.

Huxley certainly knew that Anglican clergy did not typically regard Genesis as the "beginning and the end of sound science" (Elder). His habit of constructing such "Manichean Evolutionist vs Creationist" polarities, as Desmond has called them, is a necessity of plot (256). Science could not seize theology's crown at this story's end unless the two enterprises aspired to rule the same domain. No such story could work for readers who supposed that religious opposition to evolution stemmed merely from its theological implications. It could only work, so to speak, by supposing that there was no such thing as theology; that theology was merely so much obsolete science. An Anglican opposition grounded in literalism sharpens the key moral polarity of Huxley's narrative and in this way makes science's assumption of orthodoxy's societal role more plausible.

As in the Herculean myth cycle that Huxley alludes to, his story ends with science's apotheosis, its entry into the society of the gods, and he achieves this by drawing back a curtain to reveal the full "majesty of Fact," the unseen elemental forces that have stood behind science all along:

Philosophers, on the other hand, have no such aggressive tendencies. With eyes fixed on the noble goal to which "per aspera et ardua" they tend, they may, now and then, be stirred to momentary wrath by the unnecessary obstacles with which the ignorant, or the malicious, encumber, if they cannot bar, the difficult path; but why should their souls be deeply vexed? The majesty of Fact is on their side, and the elemental forces of Nature are working for them. Not a star comes to the meridian at its calculated time but testifies to the justice of their

methods—their beliefs are “one with the falling rain and with the growing corn” (53).

In the past, science appeared to journey “*per aspera et ardua*,” as through “harsh and rough places,” but now we recognize that it was only the enemy’s mischief that made it seem so. In truth as indicated at the end of the longer passage from Seneca that Huxley quotes here, this protagonist had moved upon the “level ground” of reason all along.<sup>iv</sup> What once seemed a tragic limitation has in fact unleashed endless possibilities. By refusing to turn from “Fact,” science took nature’s hand and began the ascent that leads up from Hades into the sunlight of modernity. Having thrown off its pauper’s rags, it now stands before us in the crimson vestments of a prince. The dramatic complement to this that follows is the full exposure of orthodoxy’s imposture:

But the hypothesis of special creation is not only a mere specious mask for our ignorance; its existence in Biology marks the youth and imperfection of the science. For what is the history of every science but the history of the elimination of the notion of creative, or other interferences, with the natural order of the phænomena which are the subject-matter of that science? When Astronomy was young “the morning stars sang together for joy” [Job 38:7] and the planets were guided in their courses by celestial hands. Now, the harmony of the stars has resolved itself into gravitation according to the inverse squares of the distances, and the orbits of the planets are deducible from the laws of the forces which allow a schoolboy’s stone to break a window. The lightning was the angel of the Lord; but it has pleased Providence, in these modern times, that science should make it the humble messenger of man. . . (58-59).

Like the child Hercules who acted out divine ends he could not comprehend, youthful science could not foresee that it was destined to overpower its enemy. Now we see why this was inevitable. Because the factual subject-matter of modern biology was also the phenomena of nature itself, infant science was doing nature’s bidding all along.

When Huxley states that the heavenly bodies once “guided in their courses by celestial hands” now move “according to the inverse squares of the distances,” he reaffirms science’s grounding in causal determinism. But if science’s virtue lies in its fateful acceptance of a closed universe, how can it also be a creative force for society? How can science demonstrate universal causality and also free us from the same thing? Huxley’s solution, once again, is found in this story’s undercurrent of identification between science and orthodoxy. As orthodoxy’s evolutionary heir, science has license to retain features of the old cosmology that suit the author’s purpose. Huxley sustains this implication of positivism by leavening his message with elements drawn from theology’s lexicon. Even in its law-like regularity, the scientific cosmos retains a purposeful harmony. It “pleased Providence” that science should wrest lighting from the “angel of the Lord” and, via the telegraph, make it “the humble messenger of man” (59).

Drawing upon the natural supernaturalism that he and John Tyndall imbibed from Thomas Carlyle (Lightman 146-60), Huxley exploits the same naïve sense of nature’s

purposefulness that drew the previous generation of readers to William Paley's natural theology. Darwin's flank movement on Paley's natural theology, as John Angus Campbell has shown, did this more indirectly. By borrowing theological language, Darwin could gradually dislodge the assumption that a transcendent intelligence was needed to account for nature's contrivances. He could "wrest a naturalistic confession of faith from a supernaturalistic tradition" (221-222). Huxley's frontal attack is more daring. By situating theology in the evolutionary past, he is able to sustain the villainy of the Anglican establishment while simultaneously warranting a role reversal that gives science claim to this enemy's pastoral function. As he continues this enables him to transfer to nature the benevolent qualities he has stripped from the God of Abraham: The solvency of great mercantile companies rests on the validity of the laws which have been ascertained to govern the seeming irregularity of that human life which the moralist bewails as the most uncertain of things; plague, pestilence, and famine are admitted, by all but fools, to be the natural result of causes for the most part fully within human control, and not the unavoidable tortures inflicted by wrathful Omnipotence upon His helpless handiwork (59).

The signs that bear witness to nature's providence, the telegraph as its humble messenger and the solvency of great mercantile companies, bring into view the alliance of science, industry, and liberalism that Huxley foreshadowed in the essay's opening. Having made manifest the essential regularity that bars wrathful Omnipotence from the natural macrocosm, science enters the social microcosm as nature's prophet, as one making known the true basis of the human control that will enable mercantile capitalism to bring liberty to the captives.

This reordering of English society fills out Huxley's comic vision, but by removing his protagonist from society in closing he can keep the extra-human and extra-societal bases of this saving heroism in sight. Literary and cinematic romances often achieve this by sending their triumphant protagonists back into exile. For this reason, the heroic lawmen of American westerns rarely stick around once they have cleaned up the town. The sheriff's badge is only an idol, one incapable of symbolizing true governance, and so it is exchanged for gun and saddle, the tokens of this hero's true home in the natural wilderness (Rushing 20). Shakespeare's Pericles in like manner falls into a half-sleep after completing his quest and then awakens to the music of the spheres sent by the goddess Diana to draw him away. In Huxley's final scene science is once again removed from the new civilization it has redeemed. The society it has given birth to is still visible, but only as a point of light on a far horizon. As the human world recedes, nature fills the stage so that science stands alone, silhouetted against its harmonious order:

Harmonious order governing eternally continuous progress—the web and woof of matter and force interweaving by slow degrees, without a broken thread, that veil which lies between us and the Infinite—that universe which alone we know or can know; such is the picture which science draws of the world, and in proportion as any part of that picture is in unison with the rest, so may we feel sure that it is rightly painted (59).

As John Arthos says of Pericles' awakening, this is the moment that brings "together all that has gone before" to reveal the true nature of the protagonist's soul (269). Here Huxley again strikes the agnostic chord that began his story. Darwin earned his scientific eminence by listening only to nature, by tuning out the theological protests of society. Now at its close we discover that science's principled rejection of theology, its refusal to peer behind the "veil which lies between us and the Infinite," is nature's doing. The "picture which science draws" in obedience to the "eternally continuous progress" demonstrates its distinctive heroism. Science moves in step with this "harmonious order" (59).

### The Conflict Metanarrative

If romance is the narrative form that typically gives shape to the political and economic interests of aspirant and established powers, we should expect to find it put to service by modern science as well. As an example of this, Huxley's message is only a kind of proto-romance, a suggestive outline or narrative enthymeme left to his successors to fill out. Notably, one of the most influential of these elaborations, the *Outline of History* (1920), was written by one of his students at the Royal School of Mines, H. G. Wells. But Wells was not the first to do this. John Draper's *Conflict between Religion and Science* (1874) and Andrew Dickson White's two-volume *History of the Warfare of Science with Theology in Christendom* (1896), both best-sellers in the U.S., gave wide currency to Huxley's premise that science was the protagonist and religion the antagonist of intellectual history. Many of the warfare vignettes found in these volumes are still staples of public science, having made their way into the popular works of writers like Bertrand Russell, Jacob Bronowski, Carl Sagan, Richard Dawkins, Stephen Hawking and countless others (Lessl 1999).

The central premise of these narratives, now often called the "conflict thesis," fell out of favor in the last century as scholars began to explore science's relationship to religion in the historical past. Contributors to this subdiscipline have shown that many of the key claims that bolster the conflict thesis are historical fictions and that others have been interpreted without consideration of context (Numbers), but these revisionist efforts have done little to forestall the propagation of these popular efforts. This is hardly surprising. If the form and content of historical narratives are two sides of the same thing as Hayden White has argued, histories that uphold powerful interests will likely reshape facts to accord with the meaning given them by this narrative form. A striking illustration of this tendency can be found in contemporary depictions of Huxley himself who, except in scholarly treatments, is everywhere fictionalized as "Darwin's bulldog," a persona that enables him to play a part in stories similar to the one he invented in 1860. Even if he ever did claim this title, which remains unknown, he could not have meant what these thousands of vignettes suppose – namely, as PBS's "Evolution Library" puts it, that Huxley was responsible for "forcefully promoting" Darwin's "theory of natural selection." In fact, Huxley was never able to convince himself that natural selection was the mechanism that drove evolution, and thus he rarely discussed it in his books, essays, lectures, nor even in the classroom (Bartholomew; van Wyhe). In the conclusion of his exhaustive biography, Desmond describes the bulldog sobriquet as a misnomer that masks the real goal of Huxley's



public treatments of evolution which was to showcase its "overriding social importance" (626). This Huxley, however, could play no suitable role in any positivist romance. That story requires a character more like the one suggested by the bulldog moniker, "the ideologically untainted Scientist" as Desmond puts it (624). Once seen as the aggressive defender of Darwin's theory, Huxley takes on a role like the one he assigned to Darwin in the *Westminster* essay; he is fictionalized as a scientist who has "superseded the ambition and the vanity of the carnal man within him" (22), one able to mediate the pure natural knowledge that enabled science to supplant its ecclesiastic enemies.

In consideration of the expansive evolutionary vision that one finds in Huxley's public discourse, we would do better to remember him as Spencer's bulldog. Undoubtedly, one of Huxley's concrete goals as a public actor was to advance the fortunes of scientific specialists like himself, but science could only prosper on the larger scale he envisioned for it in a world that derived its identity from such inquiries, and this aim was more likely to be realized through a narrative that, as Ruth Barton says of Herbert Spencer's, mixed together "anti-Establishment politics, a purely naturalistic science," and "a philosophy to support this science" (89). Indeed, it was Huxley's commitment to what Barton calls the "metaphysical implications of science," that prompted Spencer to introduce him to John Chapman, the editor of the radical *Westminster Review* who put him to work writing book reviews of the kind treated here (128).

That modern science would give rise to such narratives is not particularly surprising. Cultures set their true stories apart from false ones, their myths from their fables, according to Frye, "by attaching a body of discursive writing to the true story, designed to verify or rationalize its truth" (*Secular Scripture* 18). At least since the time of the Babylonians, and likely long before, science has contributed an important share of such validating material. For this reason, it is not surprising that the resurgent Aristotelian science of the thirteenth century so quickly fell into the orbit of Catholic theology (Lindberg) and that similar patterns emerged in the Reformation. Protestant advocates of science like Francis Bacon, John Amos Comenius, and Samuel Hartlib wrote it into their revised narratives of Christian history as the philosophical counterpart to Luther's doctrine of *sola scriptura* (Webster). It is commonly assumed now that this natural theology tradition ended with the advent of evolutionary science, but Huxley's rhetorical career, like that of countless others, shows that this is a continuing pattern.

### Works Cited

- Aristotle, *Poetics*. Trans. by George Whalley., Ed. John Baxter and Patrick Atherton. McGill-Queen's UP.
- Arthos, John. "Pericles, Prince of Tyre: A Study in the Dramatic Use of Romantic Narrative." *Shakespeare Quarterly* 4.3 (1953): 257-270.

- Bartholomew, Michael. "Huxley's Defence of Darwin." *Annals of Science* 32 (1975): 425-435.
- Barton, Ruth. *The X Club*. U of Chicago P, 2018.
- Campbell, John A. "Of Orchids, insects, and natural theology: Timing, Tactics, and Cultural Critique in Darwin's Post-"Origin" strategy." *Argumentation* 8 (1994): 63-80.
- Collingwood, R. G. *The Idea of History*. Oxford UP, 1956.
- Comte, Auguste. *The Positive Philosophy*. Trans. by Harriett Martineau. 2 vols. 3<sup>rd</sup> ed. Kegan Paul, 1893.
- . *The System of Positive Polity*. Trans. by Frederic Harrison. 4 vols. 3<sup>rd</sup> ed. London, Kegan Paul, 1875.
- Cosans, Christopher E. *Owen's Ape & Darwin's Bulldog: Beyond Darwinism and Creationism*. Indiana UP, 2009.
- Cooper, Helen. *The English Romance in Time: Transforming Motifs from Geoffrey of Monmouth to the Death of Shakespeare*. Oxford UP, 2004.
- Elder, Gregory P. *Chronic Vigour: Darwin, Anglicans, Catholics and the Development of a Doctrine of Providential Evolution*. UP of America, 1996.
- Evolution Library*. "Huxley: Darwin's Bulldog." Public Broadcasting Service, 11 February 2022, [https://www.pbs.org/wgbh/evolution/library/02/2/1\\_022\\_09.html](https://www.pbs.org/wgbh/evolution/library/02/2/1_022_09.html).
- Desmond, Adrian. *Huxley: From Devil's Disciple to Evolution's High Priest*. AddisonWesley, 1997.
- Frye, Northrop. *Anatomy of Criticism: Four Essays*. Princeton: Princeton UP, 1957.
- . *The Secular Scripture: The Study of the Structure of Romance*. Harvard UP, 1976.
- . *The Great Code: the Bible and Literature*. 1st ed., Harcourt Brace Jovanovich, 1982.
- Huxley, Thomas Henry, "The Origin of Species," *Darwiniana*, vol. 2 of *Selected Works of Thomas H. Huxley*. Appleton, 1893.
- . "Agnosticism" *Science and Christian Tradition* vol. 5 of *Selected Works of Thomas H. Huxley* Appleton, 1893.
- Jameson, Fredric. "Magical Narratives: Romance as Genre." *New Literary History* 7.1 (1975): 135-63. *JSTOR*, <https://doi.org/10.2307/468283>.
- Lessl, Thomas M. *Rhetorical Darwinism: Religion, Evolution, and the Scientific Identity*. Baylor UP, 2012.
- . "The Galileo Legend as Scientific Folklore." *Quarterly Journal of Speech* 85.2 (1999): 146-168.
- Lightman, Bernard. *The Origins of Agnosticism: Victorian Unbelief and the Limits of Knowledge*. Johns Hopkins UP, 1987.
- Lindberg, David. *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to a.d. 1450*. U of Chicago P, 2007.
- Lucas, J. R. (1979). "Wilberforce and Huxley: A Legendary Encounter." *The Historical Journal*. 22.2 (1979): 313-330.
- Moore, James R. *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America 1870-1900*. Cambridge UP, 1979.

- Numbers, Ronald L., editor. *Galileo Goes to Jail and Other Myths About Science and Religion*. Harvard UP, 2009.
- Rushing, Janice H. "The Rhetoric of the American Western Myth." *Communication Monographs* 50.2 (1983): 14-32.
- Seneca, Lucius Annaeus. *Anger; Mercy, Revenge*. Trans. by Robert A. Kastor and Martha Craven Nussbaum. U of Chicago P, 2010.
- Shakespeare, William. *Pericles, Prince of Tyre*. Ed. Philip Edwards. Penguin, 1976.
- Speakman, Colin. *Adam Sedgwick: Geologist and Dalesman 1785-1873*. Broad Oak Press, 1982.
- van Wyhe, John. "Why there was no 'Darwin's Bulldog': Thomas Henry Huxley's Famous Nickname." *The Linnean* 35.2 (2019): 26-30.
- Webster, Charles. *The Great Instauration: Science, Medicine, and Reform 1626-1660*. Holmes & Meier, 1976.
- White, Hayden. *The Content of the Form*. Johns Hopkins UP, 1987.
- Wright, T. R. *The Religion of Humanity: The Impact of Comtean Positivism on Victorian Britain*. Cambridge: Cambridge UP, 1986.

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<sup>i</sup> The earlier reviews are published as "The Darwinian Hypothesis," and "The Origin of Species," vol. 2 of *Selected Works of Thomas Huxley* (New York: Appleton, 1893), 1-21, 22-79. <sup>ii</sup> The essay was originally published as "Darwin On the Origin of Species," *Westminster Review* (April, 1860). The passages cited here are from "The Origin of Species," *Darwiniana*, vol. 2 of *Selected Works of Thomas H. Huxley* (New York: Appleton, 1893).

<sup>iii</sup> A similar historical scheme was explicitly spelled out by Comte. He proposed in *The Positive Philosophy* that the theological systems that arose out of mythology in the distant past would ultimately give way to various scientific systems, and in his later *System of Positive Polity* he transferred the governing role formerly assumed by theology to the positive science of society, which he named "sociology." Huxley's later condemnation Comte's positivism as "Catholicism minus Christianity" clearly followed from his own contention that the natural sciences were destined to assume this role (Lessl *Rhetorical Darwinism* 165-197). <sup>iv</sup> Seneca, *On Anger* 2.13.1.