# *Reconsidering Thomas Huxley*

## EVOLUTION, ETHICS, AND EQUIVOCATION: T. H. HUXLEY'S CONFLICTED LEGACY

*by David Goslee*

*Abstract.* Recent debates over evolutionary ethics have often circled around T. H. Huxley's late claim that "Social progress means a checking of the cosmic process at every step." In writing "Evolution and Ethics" and its long Prolegomena, however, Huxley may instead be wrestling with the nature and origin of human agency. Early in his career he saw evolution and social progress as converging, but as he came to find cosmic process alien to human welfare, he found moral agency more essential but more problematic. Within "Evolution and Ethics," evolution retreats into a cyclical stasis while ethical challenges end up submitting to it. Huxley implies, however, that in acknowledging these cycles as "natural," ancient sages begged the question of whether resistance to them were possible. And when evolutionary ethicists delimit humanity's potential by its simian origins, Huxley invokes Hume's "naturalistic fallacy," asking them how factual evidence can support their prescriptive conclusions. Both his naturalist and idealist reviewers then drove him to turn his Prolegomena into a rebuttal to the original essay. Here, advocating a balance between altruism and selfishness, Huxley works to relegate agency to a question of degree. In both essays, Huxley's epigrammatic prose demarcates the dead ends of much Victorian thought and points toward alternate paths not explored until the twentieth century.

*Keywords:* agency; cycles; ethics; evolution; "Evolution and Ethics"; heuristic; Thomas Henry Huxley; idealism; naturalism; "naturalistic fallacy"; process; Prolegomena; reflexivity; sociobiology.

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From its delivery in May 1893, Thomas Henry Huxley's "Evolution and Ethics" has been taken as a groundbreaking lecture. Early reviewers saw immediately that Darwin's bulldog, the champion of evolution, had come full circle in his claim that "Social progress means a checking of the cosmic process at every step and the substitution for it of another, which may be called the ethical process; the end of which is not the survival of those who may happen to be the fittest . . . , but of those who are ethically the best" ([1893] 1894, 9:81). With the rise of sociobiology in the late 1960s, this claim has frequently prefaced debates on whether there was, could be, or should be an evolutionary ethics.[1] In 1977 Michael Helfand invoked the norms and strategies of cultural studies to argue that even these impassioned imperatives should be contextualized within Huxley's paternalistic capitalism.[2] In 1988 *Zygon* devoted fifty-five pages to a reappraisal of Huxley's essay; George C. Williams led off with the argument that Huxley had not gone far enough, that the cosmic process should be seen as immoral, not amoral (1988a, 384); his essay was followed by a broad spectrum of opinions on evolution, ethics, and the possible relations between them. In 1989 Princeton University Press brought out a new edition of Huxley's essay accompanied by an expanded version of Williams's and a new one by James Paradis titled "*Evolution and Ethics* in its Victorian Context." These publications and many others speak for Huxley's pivotal position on what has remained one of the most vexed intersections of scientific, sociological, and humanistic thought.

Yet I would argue that the full Huxley essay, including its Prolegomena and concluding notes, has never been pivotal, in the sense of representing a fixed, coherent position around which later writers could pivot. He may in fact remain relevant because he holds in suspension some of the least compatible positions within the contemporary debate. His Prolegomena, for example, reaffirms that "man, physical, intellectual, and moral, is as much a part of nature . . . as the humblest weed" (1894, 9:11) but goes on to insist that "if the conclusion that the two are antagonistic is logically absurd, I am sorry for logic, because, as we have seen, the fact is so" (9:12). Assertions like this have led several commentators to conclude that he was more interested in crafting vivid examples and pithy epigrams than coherent, much less scientific, arguments.[3] I would suggest, however, that in composing these two essays and meditating on the reviews that separated them, Huxley was wrestling with anomalies surrounding the place of human agency within competing discourses.

Early on, Huxley could picture human consciousness as an epiphenomenon and humans themselves as automata, but at that juncture he still saw physical evolution and social progress as converging forces. In his famous figure of men [*sic*] and Nature playing at chess ([1868] 1893, 3:85–86), their knowing and being known (i.e., shaped) by Nature came to the same end: individual and hence collective success in the game of life. As he

began to find the cosmic process increasingly remote from human welfare, he found moral agency at once more essential and more problematic: "in nature, . . . might and right, are coextensive . . . : 'Do what you will, so far as you can'" ([1890a] 1894, 1:346, 350). It is this dilemma that shapes "Evolution and Ethics": evolution retreats from a paradigm of progress into a cyclical stasis, while ethical challenges to this stasis end up submitting to it. In exploring this submission, however, Huxley begins to exploit the reflexivity of human consciousness. He sees that in acknowledging these cycles as "natural" and hence irresistible, ancient sages effectively begged the question of whether resisting them might be possible. And when evolutionary ethicists similarly delimit humanity's potential by its simian origins, Huxley invokes a version of Hume's "naturalistic fallacy," asking them how such factual evidence can support their prescriptive conclusions. Turning their argument on its head, he then claims that our modern power over nature offers us the means and the ethical mandate to rise above our evolutionary raising.

Pouncing on this dubious assumption from both naturalistic and idealistic perspectives, Huxley's reviewers forced him into qualifications that rendered his Prolegomena less an introduction than a rebuttal to the original essay. By caricaturing both altruism and selfishness, and by advocating a balance between them, Huxley tried to relegate the very possibility of agency to a question of degree. While the covert naturalism of the Prolegomena raises as many questions as the covert idealism of "Evolution and Ethics," both essays suggest that the pragmatic, popularizing, epigrammatic nature of Huxley's prose constitutes a kind of heuristic. Demarcating the dead ends of much Victorian thought, this heuristic simultaneously gestures toward some alternate paths not systematically explored until late in the following century.

## Evolution and Ethics

For a "scientific" essay, Huxley's follows a strangely repetitive, rhythmic, almost musical pattern, encompassing both what he calls the cosmic process and the various human efforts to cope with it.[4] By insisting so strongly upon a "cyclical evolution" ([1893] 1894, 9:49), he goes beyond his earlier caveats about evolutionary progress and returns to a much older vision from the Vedas.[5] In an 1892 essay he claimed that "the amount and the severity of the pain . . . [has] increased with every advance in the scale of evolution" ([1892] 1895, 5:48), and here, a year later, he adds that such pain "attains its highest level . . . only in man, the member of an organized polity" ([1893] 1894, 9:51). Hence we are invited to join the "thousands of our fellows" as they discover "that the cosmic process is evolution; that it is full of wonder, full of beauty, and at the same time full of pain. They have sought[, therefore,] to find out whether there is, or is not, a sanction for morality in the ways of the cosmos" (9:53).

This image of the cosmos fuses incompatible analogies from two essays written months apart in 1886–87. The conclusion of "Science and Morals" identified science with the put-upon Cinderella: "in her garret she has fairy visions out of the ken of the pair of shrews [philosophy and theology] who are quarreling down stairs. She sees the order which pervades the seeming disorder of the world; the great drama of evolution, with its full share of pity and terror, but also with abundant goodness and beauty, unrolls itself before her eyes" ([1886b] 1894, 9:146).[6] A year later, the order of nature was wrenched out of human proportions and the winsome Cinderella replaced with far more disconcerting figures. First Huxley finds himself playing Gulliver to a society too small even to notice: "Surely no interruption of the order of nature is involved if, in the course of descending through an Alpine pine-wood, I jump upon an anthill and in a moment wreck a whole city and destroy a hundred-thousand of its inhabitants. To the ants the catastrophe is worse than the earthquake of Lisbon" ([1887] 1895, 5:70–71). The scale is then reversed, now to greater than Brobdingnagian proportions: "It is conceivable that man and his works and all the higher forms of animal life should be utterly destroyed. . . . And yet, to the eye of science, there would be no more disorder here than in the sabbatical peace of a summer sea" (5:72–73).

At this point Huxley himself, snuffed out like the rest of life, is replaced by a figure as incomprehensible to him as he was to the ants:

> [To] a being endowed with perfect intellectual and aesthetic faculties, but devoid of the capacity for suffering pain, . . . the universe would seem . . . a sort of kaleidoscope, in which, at every successive moment of time, a new arrangement of parts of exquisite beauty and symmetry would present itself. . . . Such a spectator might well be filled with that *Amor intellectualis Dei*, . . . which some of the greatest thinkers of all ages, Aristotle, Aquinas, Spinoza, have regarded as the only conceivable eternal felicity; and the vision of illimitable suffering, as if sensitive beings were unregarded animalcules which got between the bits of glass of the kaleidoscope, which mars the prospect to us poor mortals, in no wise alters the fact that order is lord of all, and disorder only a name for the part of the order which gives us pain. (5:73–74)

In this, one of the most unjustly neglected passages in Victorian prose, Cinderella's fairy vision of "the great drama of Evolution" can now make sense only to one "devoid of the capacity for suffering pain."[7] Though approximated by Spinoza, the figure and its "objective" vision remain either super- or subhuman.

These two contradictory passages circumscribe the ethical dilemma within "Evolution and Ethics": opposing this cosmic order seems on the one hand pointless and on the other essential for staking out any distinctively human space. This dilemma in turn enables Huxley to redescribe cultural history as a series of noble though futile efforts to purify and thus secularize the ethical imperative. Because the Romanes lecturers were to

avoid religion and politics, he shies away from Christianity, detouring through Hinduism and concluding with this encomium to Buddhism: "A system which knows no God in the western sense; which denies a soul to man; which counts the belief in immortality a blunder and the hope of it a sin; . . . is still . . . the dominant creed of a large fraction of mankind" ([1893] 1894, 9:69). Yet the detour itself follows an earlier progression in the 1886 "Evolution of Theology," actually the evolution of ethics. There, acknowledging his debt to the Old Testament prophets, he regretted that they had grafted their ethical agenda onto a primitive ancestor worship (1886a). Only in Philo and the Stoics did ethics begin to detach itself from any metaphysical or theological claims.[8] Though he had earlier faulted the Stoics' ethical dependence on natural teleology ([1890b] 1894), he now proclaims them "not merely noble, but sane men" ([1893] 1894, 9:74); Stoicism itself, "of all gentile philosophies, . . . exhibits the highest ethical development [and] is animated by the most religious [as opposed to dogmatic] spirit" (9:112n).

While Stoicism and Buddhism are both seen as freeing ethics from its theological crutch, both of them eventually descend into quietism—"Apatheia" for the stoics—an ideal "attained only at the cost of renunciation of the world and mortification, not merely of the flesh, but of all human affections" (9:76). So Eastern is this resignation that Huxley cannot "discover any very great difference between Apatheia and Nirvana"; both of these humanistic, secular challenges to an amoral cosmos end by recapitulating its own cyclic patterns. As he concludes, "By the Tiber, as by the Ganges, ethical man admits that the cosmos is too strong for him" (9:77).

In its very self-consciousness, however, this "admission" begins to sound like a rationalization. In two early essays on Descartes he had suggested extending the claim that "Animals are Automata": "all states of consciousness in us, as in them, are immediately caused by molecular changes of the brain-substance. . . . We are conscious automata, endowed with free will . . . inasmuch as in many respects we are able to do as we like—but none the less parts of the great series of causes and effects which, in unbroken continuity, composes . . . the sum of existence" ([1874] 1894, 1:243–44).[9] And if this gesture toward free will sounds halfhearted, the first essay explains why: "I protest that if some great Power would agree to make me always think what is true and do what is right, on condition of being turned into a sort of clock and wound up every morning before I got out of bed, I should instantly close with the offer. The only freedom I care about is the freedom to do right" ([1870] 1894, 1:192–93). Two decades later, when the "great Power" of cosmic process saw (or rather didn't see) "sensitive beings [as] unregarded animalcules," any ethic that claimed to withdraw from this process into asceticism seemed instead to act in collusion with it.

Thus Huxley begins here to explore the paradoxes spawned when agency encounters claims that compromise its freedom, integrity, or validity. Such paradoxes had not gone unnoticed, most memorably perhaps in Schiller's distinction between the naive and the sentimental, or Wordsworth's "We murder to dissect," or Schelling's "The psychological knife cannot dissect itself." But they were foregrounded along with the deterministic implications of physical and sociological naturalism. The reflexivity of human consciousness, its claim to incorporate the very theories that claim to incorporate it, has come to complicate every field of human study: from philosophical accounts of subjectivity, to anthropological accounts of cultural emergence, to legal accounts of accountability. Invoking this same reflexivity, Huxley turns his etiological quest on its head, reading these ancient sages in the light of his own proleptic vision. Early in "Evolution and Ethics," he describes how civilization can enable "the fortunate few" to replace the struggle for existence with "the struggle to make existence intelligible and to bring the order of things into harmony with the moral sense of man" ([1893] 1894, 9:54). He goes on, however, to describe how "the divine faculty of imagination, while it created new heavens and new earths, provided them with the corresponding hells of futile regret for the past and morbid anxiety for the future. Finally, the inevitable penalty of over-stimulation, exhaustion, opened the gates of civilization to its great enemy, ennui" (9:55). When he then characterizes the Buddhists and Stoics as descendants of warriors whom civilization has "'sicklied o'er with the pale cast of thought'—frank pessimists [for whom] the enemy is self" (9:77), the ease with which Nirvana and Apatheia both collapse into "ennui" suggests that they may be more the products of mental and social self-absorption than of some reasoned capitulation to an invincible cosmos.

A subtext within this essay even describes the implicit naturalism of contemporary ethical theory as recapitulating the psychological and social self-betrayal of its ancient counterpart. Because "the propounders of what are called the 'ethics of evolution'" also refuse to invoke the mind's power to comprehend and thus differentiate itself from the cosmos, Huxley questions their "arguments in favour of the origin of the moral sentiments, in the same way as other natural phenomena, by a process of evolution" ([1893] 1894, 9:79). While acknowledging that they may be "on the right track," he refuses to let them turn their descriptions into prescriptions: "as the immoral sentiments have no less been evolved, there is, so far, as much natural sanction for the one as the other. The thief and the murderer follow nature just as much as the philanthropist. Cosmic evolution may teach us how the good and the evil tendencies of man may have come about; but, in itself, it is incompetent to furnish any better reason why what we call good is preferable to what we call evil than we had before" (9:79–80).[10]

This attack on the "ethics of evolution" anticipates a trenchant criticism of modern sociobiology, the charge that it commits "the naturalistic fallacy." Named by G. E. Moore, this claim was first put forth by Hume in his *Treatise of Human Nature* and more recently and succinctly formulated by Paul Thompson: "Any argument employed to justify a moral claim must be such that a moral claim is used in the justification" (1995, 20).[11] As Huxley anticipates this dictum, anyone assuming that the way things are is the best they can be—or that the way they got this way is the only way that they can change—is begging the question of whether the "ought" of ethics can have any claim beyond the "is" of empiricism. Exactly how conscious Huxley was of these philosophical subtleties is hard to say. We could say for him that he was making a series of ad hoc, strategic critiques of an increasingly smug naturalism—of which he himself had been one of the smugger advocates.

The following section proclaims that "Modern thought [i.e., the secular ethic of his own day] is making a fresh start from the base whence Indian and Greek philosophy set out" ([1893] 1894, 9:77). This "fresh start" has been foreshadowed in the distinction that an 1890 essay makes between "Natural Rights and Political Rights":

> To say that a thing exists in nature and to say that it has a natural right to existence are, in fact, merely two ways of stating the same truth; which is that, in nature, . . . might and right, are coextensive. . . . Grant that the tiger kills and eats men in the exercise of his natural right to preserve his own existence . . . ; it is no less true that men kill tigers in the exercise of their equally natural right to preserve their existence. . . . [T]he law of nature would bid the individual: "Do what you will, so far as you can." ([1890a] 1894, 1:346–50)

Political rights, by contrast, are uniquely human and uniquely social:

> Crusoe and Atkins, stalking the same goat from opposite sides [of the island, might] have been in a position identical with that of two tigers in the jungle, slinking after the same Hindoo. . . . On the other hand, if the two men followed the dictates of the commonest common sense, not less than those of natural sympathy, they would at once agree to unite . . . , renounc[ing] the law of nature, and put[ting] themselves under a moral and civil law, replacing natural rights, which have no wrongs, for moral and civil rights. (1:354–55)

This distinction, in its turn, justifies the crowning imperatives of "Evolution and Ethics," imperatives that focused attention on the essay when it was first published and that continue to define one position within evolutionary ethics today:

> Social progress means a checking of the cosmic process at every step and the substitution for it of another, which may be called the ethical process; the end of which is not the survival of those who may happen to be the fittest, . . . but of those who are ethically the best. . . . Let us understand, once for all, that the ethical progress of society depends, not on imitating the cosmic process, still less in running away from it, but in combating it. ([1893] 1894, 9:81, 83)

As surety that this opposition will enjoy at least limited success, Huxley invokes England's technical might.[12] While he implies here that the cosmos is no longer too strong for us, he conflates the technical and the philosophical problems of standing against it. And these problems are the very ones that his early reviewers press upon him.

## Reviews and Reviewers

Huxley's personal response to these reviews, written and reported, was puzzlingly inconsistent. His son's biography insists that he found them disconcertingly wide of the mark: "some jumped to the conclusion that [he] was offering a general recantation of evolution, others that he had discarded his former theories of ethics. On the one hand he was branded as a deserter from free thought; on the other, hailed almost as a convert to orthodoxy" (L. Huxley 1901, 2:374). Yet his letters, whether sincere or merely tactful, characterize the reviews as more perceptive and favorable than the above description—or a careful reading of them—might suggest. Huxley describes the first reviewer, an anonymous tutor writing in *The Oxford Magazine*, as "about the only critic I have met with yet who understands my drift" (1901, 2:379–80).[13] Yet after "styl[ing] him a Rationalist, a believer in an *a priori* Moral Law discerned by Reason," the reviewer ventures that "it is not any induction from the 'cosmic process' or from the habits of the wolf and the hyena that has told him the difference between good and evil" (Anon. 1893c, 381). Pausing first to note Huxley's ethical shift from the "Sensationalism" of his 1870 book on Hume, the reviewer extrapolates from the ability of "a *pars naturae* like ourselves . . . to rise up against the 'cosmic process' and to pronounce it bad" to questions of "the 'whence' and the 'whither' alike of the 'cosmic process' and of the mind that stops it" (p. 381). Even in these brief excerpts, this reviewer marks out several of the issues elaborated by his successors: the problems of driving a wedge between human and natural, the a priori status of any values identified as other than natural, and the teleology implicit in any goal-directed behavior—whether furthering or opposing the cosmic process. Acknowledging that "our great 'malleus Theologorum' [hammer of the theologians] will no doubt decline to follow us" (p. 381), the reviewer implies that Huxley may be hard put to justify such a refusal.

A second anonymous reviewer, in the 22 July 1893 issue of *The Athenæum*, queries "whether the ethical process, if in reality opposed altogether to the cosmical process, is or is not a part of [it]; and if not, what account can be given of its origin" (Anon. 1893a, 119). He seizes on one of Huxley's characteristically ambiguous similes to the effect that "the ethical process . . . is, strictly speaking, part of the [cosmic process], just as the 'governor' in a steam engine is part of the mechanism of the engine" (Huxley [1893] 1894, 9:115n).[14] He then retorts, "it is not apparent why in

highly developed forms of society the "governor" should aim at opposing the machine altogether. The business of necessary portion of the machine is only to modify its working so that it shall give the best results" (Anon. 1893a, 120). Not only can the part claim no privileged, oppositional position to the whole, but part and whole, according to the figure, are as much the goal-directed constructs of a rational mind as was Paley's watch.[15]

The reviewer also finds it particularly difficult to justify "the assumption that nature in itself is wholly and necessarily an evil, at any rate from the point of view of the ethical man; whereas Mr. Huxley is careful to insist that the cosmical process has no sort of relation to moral ends" (1893a, 120). How vulnerable has Huxley left himself here? His first full exploration of this issue in the 1888 "Struggle for Existence" anticipates the reviewer's distinction:

> If a vast amount of . . . skill, is visible in . . . a deer . . . to escape from beasts of prey, there is at least equal skill displayed in the bodily mechanism of the wolf which enables him to track . . . the deer. . . . [T]he goodness of the right hand which helps the deer, and the wickedness of the left hand which eggs on the wolf, will neutralize one another: and the course of nature will appear to be neither moral nor immoral, but non-moral. ([1888] 1894, 9:196–97)

George Williams finds this vision of the cosmos implicit in "Evolution and Ethics" when he argues that Huxley did not go far enough—that he left nature amoral instead of immoral (1988a, 384). And the essay does offer token opposition to evolutionary Manichaeism: "Wolves could not hunt in packs except for the real, though unexpressed, understanding that they should not attack one another" (Huxley [1893] 1894, 9:56).

This apparent acknowledgment of Petr Kropotkin's "Mutual Aid" ([1890] 1910) has again been foreshadowed in Huxley's own "Natural Rights and Political Rights" from the same year: The tigress and her cubs "enter into an association . . . held together by . . . the animal basis of sympathy, and thus constitute a polity . . . [wherein] she acts as if she were conscious of duties towards her cubs. The cubs, on the other hand, . . . act as if they had correlative duties towards their parent" (Huxley [1890a] 1894, 1:352). Yet no matter how hard Huxley tries to keep from anthropomorphizing, he still maintains that "both sides perform acts which a more developed intelligence symbolizes by these moral ideas" (1:353); in other words, insofar as the members of this feline family act in a self-sacrificing way, they detach themselves from the realm of nature. In leaving this latter realm represented by the bloodthirsty, man-eating, male tiger, Huxley leaves it for all practical purposes immoral. And one of these purposes is fulfilled in "Evolution and Ethics," where it underwrites his mandate to "check the cosmic process at every step."

Although the *Athenæum* reviewer counters that "the canons of morality constantly shift and change in accordance with the circumstances in which society for the time finds itself" (Anon. 1893a, 120), he does second

Huxley's "vigorous denunciation of what he calls 'the fanatical individualism of our time,' which attempts, by the mouth of certain philosophers who need not be named, to apply the analogy of cosmic nature to society" (p. 119). The philosopher in question, resentful perhaps at having been implicated or perhaps at not having been named, retorted three weeks later in the *Athenæum* of 5 August. Disdaining to quote the allegation itself, Herbert Spencer concludes, "it is impossible that Prof. Huxley can have meant to place the ethical views he holds in opposition to the ethical views I hold. . . . But as this erroneous belief is prevalent, it seems needful for me to dissipate it" (Spencer 1893, 194). The four columns leading to this conclusion enumerate the passages in his voluminous writings which advocate social restraint of rampant individualism or "contend that from the dawn of life altruism of a kind (parental altruism) has been as essential as egoism" (1893, 193).[16] To Huxley's rejection of progress, of direction, of value, of social relevance in evolution, Spencer replies that his former friend simply cannot mean what he says.[17] Referring to the earlier-cited note on ethics as "governor," he argues that it contradicts the above claims, and since it is right, they must be wrong: "the ethical process, and, by extension, the ethical man, are products of the cosmic process. For if [not], what is he a product of?" (1893, 193)

That question is easily answered, though not in a way Spencer could accept, by Huxley's next reviewer, the renegade Catholic scientist St. George Mivart. These two almost simultaneous reviews cite some of the same passages and drive the same wedge between the essay's text and its "governor" footnote; yet they attempt to coax Huxley in opposite directions. Where Spencer teases out his grudging admission of parallels between human and animal groups, Mivart seizes on his hints of a transcendent ethical norm. For him, Huxley's rejection of evolutionary ethics represents a vindication, twenty-one years after the fact, of his own attempt to separate our physical evolution from the divine gift of intellect and conscience, which in their turn made possible "the deliberate *intention* of the agent who recognizes his actions as being 'right'" (Mivart 1893, 201).[18] While Huxley had judged this material/formal distinction impossible to implement in practical ethics, Mivart reads passages from this essay as having reinstated it. From here he can redirect Spencer's supposedly rhetorical question: "Prof. Huxley's [ethical] assertion is an uncompromising 'categorical imperative,'. . . but whence does he derive such an ethical ideal? Man did not voluntarily and consciously invent it. It was *in* him but not *of* him" (p. 207). While Mivart acknowledges that "Prof. Huxley seems as yet indisposed to admit" this concluding theodicy (p. 208), both he and Spencer insist that the essay's presuppositions are forcing Huxley in one direction or another, both of them equally repugnant to his own fragilely paradoxical position.[19]

In Leslie Stephen's contribution to *The Contemporary Review*, "Ethics and the Struggle for Existence," the second element of this pair eclipses the first. On Huxley's "audacious proposal to pit the microcosm [of civil co-operation] against the macrocosm [of cosmic conflict]," Stephen "can not help fearing that the microcosm may get the worst of it" (Stephen 1893, 157). To avert this defeat, he advocates fraternizing with the enemy;[20] what Huxley perceives as a social confrontation with evolutionary self-assertion appears to Stephen as "a development of . . . tacit [animal] alliances" wherein "the small circle which included only the primitive family or class has extended" (p. 163). All such exercise of what we might call "instrumental reason" signals for Stephen that "Morality proper . . . has so far not emerged. It begins when sympathy begins; when we really desire the happiness of other; or, as Kant says, when we treat other men as an end and not simply as a means. Undoubtedly this involves a new principle" (p. 163). With the appeal to Kant, Stephen *seems* to join ranks with Mivart, moral idealism, the categorical imperative.[21] But in the next breath Stephen begins to erode the distinction he has just made: "I have to ask whether [such altruism] implies a combating or a continuation of the cosmic process. . . . The conduct which we call virtuous is the same conduct externally which we before regarded as useful" (pp. 163–64). Thus sympathy itself only extends what Huxley called "the liking of the individual [animals] for one another's company" (Huxley [1893] 1894, 9:115n); we have half of Kantian morality, the kingdom of ends, but without the proviso that all rational beings must be admitted to it. Where the *Athenæum* reviewer sided with Huxley against definitions of "ethical action as that which 'favors the maintenance of the individual and the preservation of the race'" (Anon. 1893a, 119), Stephen claims (1893, 165) that even within cultures "in which morality has become most developed, these instincts [of self-assertion and cooperation] . . . may be regarded as conditions of the power of the race to maintain its position in the world."

Quoting Huxley's description of virtue as directed "not so much to the survival of the fittest, as to the fitting of as many as possible to survive" ([1893] 1894, 9:82), Stephen counters with an anticipation of lifeboat morality: "There is only room [on earth] for a certain number of living beings . . . we do in fact go on suppressing the unfit, and can not help going on suppressing them. . . . [S]hould [it] be otherwise? Should we wish, for example, that America could still be a hunting ground for savages? Is it better that a country should contain a million red men or twenty millions of civilized whites?" (Stephen 1893, 165–66). Although he hastily dissociates himself from "the methods of extirpation adopted by Spaniards and Englishmen" (p. 166), he can afford to do so "because I believe in the struggle for existence. This process underlies morality, and operates whether we are moral or not. The most civilized race–that which has the

greatest knowledge, skill, power of organization–will, I hold, have an inevitable advantage in the struggle, even if it does not use the brutal means which are superfluous as well as cruel" (p. 166).[22] While he claims only that natural struggle "underlies morality," for him it actually under*mines* his distinction between moral and amoral cultures: civilization itself is identified with power, and the difference between humane and inhuman use of this power becomes, in his own words, "superfluous" in the long run: "absence of cruelty would not alter the fact that the fittest race would extend" (p. 166). How the "unfit" are to be "suppressed" (i.e., kept from propagating) by humane means he never elaborates.

Word of the lecture that later became Andrew Seth's review in *Blackwood's* prompted this grateful letter: "Accept my cordial thanks for defending me, and still more for understanding me. I really have been unable to understand what my critics have been dreaming of when they raise the objection that the ethical process being part of the cosmic process cannot be opposed to it" (L. Huxley 1901, 2:380).[23] The review itself, however, suggests that however well Seth had understood Huxley, Huxley's informants had not fully understood Seth. While he supports Huxley's oppositional ethics, he denies that they can remain a part of nature in any sense whatsoever. Hoping to establish himself as definitive arbiter of this debate, Seth cites three of the earlier reviews, focusing on the reductive naturalism underlying both Spencer's and Stephen's. While he agrees with them that Huxley's "governor" footnote undermines his effort to detach human society from "nature," he argues that it is they, not Huxley, who are playing fast and loose with the term–first including humanity within it and then defining humanity by the narrower categories of non-human nature.[24]

"Evolution and Ethics" acknowledges some consequences of this naturalism, in particular that "what is 'fittest' depends upon the conditions. . . . [I]f our hemisphere were to cool again, . . . the 'fittest' that survived might be nothing but lichens" (quoted in Seth 1893, 830). But Seth counters, "If changed conditions of life were to lead . . . to the dropping one by one of the ethical qualities . . . , whence the justification for pronouncing this process a 'retrograde metamorphosis'? . . . what survives is best just because it survives" (Seth 1893, 831). He thus articulates what I have been implying—that Stephen's naturalized ethic slides into relativism: "it is not really legitimate to say that nature abets or sanctions morality. . . . Failure or success in the struggle for existence must, on the theory, be the sole moral standard. Good is what survives; evil is what once was fittest, but is so no longer" (p. 831).[25] Instead of interpreting humanity in terms of the cosmos, he proposes interpreting the cosmos in terms of human aspiration. Pointing to the gap between the First and Second Critique, he claims that only when "man [is seen] as the subject of duty, and the heir of immortal hopes, is [he] restored by Kant to that central position in the universe from which . . . Copernicus had degraded him" (p. 834). That Huxley

was not put off by the review itself is suggested by a letter of 31 August 1894, sent along with a gift set of his collected essays including the newly composed Prolegomena. His only specific request—"some day I want you to read the 'Prolegomena' to the reprinted Romanes Lecture" (L. Huxley 1901, 2:382)—suggests that Seth's questions about the original lecture would be answered there. What kind of answer the Prolegomena represents we must now consider.

## THE PROLEGOMENA

Huxley's Preface to this ninth volume contains his fullest account of the Prolegomena as a response to critics—fullest but not necessarily most candid.[26] He first apologizes that this "elementary" essay is longer than the one it introduces and then claims that he had kept it from growing longer only by restricting his focus to "the apparent paradox that ethical nature, while born of cosmic nature, is necessarily at enmity with its parent" (Huxley 1894, 9:viii). As the reviewers have impressed on him, however, this Oedipal conflict appears hopelessly lopsided: for Stephen (1893, 157), "the microcosm may get the worst of it"; for Seth (1893, 834), Huxley reduces humanity to "an unexplained intrusion in a world organised on other principles, and no way adapted as a habitation for so disturbing a guest." Taking this lead could have furthered Huxley's journey toward a proto-existentialist vision of the cosmos as absurd and existence as free to the extent that humans refuse to acknowledge themselves as essentially determined by it.[27]

He starts down this road bravely enough, insisting that "this seeming paradox is a truth as great as it is plain," but at this point the qualifications begin: "the society which renounces [individual self-assertion] must be destroyed from without . . . ; the society in which it dominates must be destroyed from within . . . ; the drama of human life is . . . discovering the mean between self-assertion and self-restraint" (Huxley 1894, 9:viii–ix).[28] Informing the entire essay, this qualification reinscribes the original conflict between the human and the natural as a conflict between assertion and cooperation, a conflict now internalized within both natural and social orders. While this paradigm shift bolsters the essay's scientific credibility, it simultaneously threatens to transform Huxley from a prophet into a proponent of social engineering. Yet as "Evolution and Ethics" subverted determinism without capitulating to Seth's idealism, now the Prolegomena will return the favor, subverting agency without capitulating to Stephen's social Darwinism.

At its end, the Preface is dated "Hodeslea [Huxley's newly built country house], Eastbourne, *July* 1894," and the Prolegomena opens appropriately with the view from his study window.[29] Panning in on the "small patch of soil" wrested from the state of nature "three or four years ago . . . by the intervention of man" (1894, 9:9), he introduces one of his most famous

and most baffling figures, the analogy of human society to a garden.[30] Here "vegetables, fruits, and flowers are produced, of kinds which . . . have [n]ever existed, except under conditions such as obtain in the garden" (9:9). And by this same analogy he can maintain that "The distinction thus drawn between the works of nature and those of man, is universally recognized; and it is, as I conceive, both useful and justifiable" (9:11). Though reaffirming that "man, physical, intellectual, and moral, is as much a part of nature . . . as the humblest weed" (9:11), Huxley insists that "if the conclusion that the two are antagonistic is logically absurd, I am sorry for logic, because, as we have seen, the fact is so" (9:12). From this platform, Huxley trumpets his refusal to back down from the paradox which all his critics, whether naturalists or idealists, have branded as untenable.

Yet just as in the Preface, the remainder of the essay seems to retreat from this very paradox. Perhaps heeding Seth's claim that moral idealism led directly to philosophical idealism, Huxley begins to qualify the former into submission. The same letter recommending the Prolegomena to Seth offers a source for these new conditions: "Lately I have been re-reading Spinoza (much read and little understood in my youth). But that noblest of Jews must have planted no end of germs in my brains, for I see that what I have to say is in principle what he had to say, in modern language" (L. Huxley 1901, 2:382). These germs may be traced back to the powerful passage quoted above in which one immune from pain could view the cosmic process as beautiful because "sensitive beings were unregarded animalcules which got between the bits of glass of the kaleidoscope" ([1887b] 1895, 5:74). There Spinoza's "*Amor intellectualis Dei*" seemed predicated on one's being immeasurably above—or beneath—human station. Here, however, Huxley seems willing to reconsider the possibility of shifting from ethical dualism to ethical monism.

Yet another letter, this to Lord Farrer, shows Huxley contemplating the next step–from a Spinozan to a naturalistic principle of order:

> There is much need that somebody should do for what is vaguely called "Ethics" just what the Political Economists have done. Settle the question of what will be done under the unchecked action of certain motives and leave the problem of "ought" for subsequent consideration. For, whatever they ought to do, it is quite certain the majority of men will act as if the attainment of certain positive and negative pleasures were the end of action. . . . Of course the utilitarians have laid the foundations of such a science, with the result that the nicknamer of genius [Carlyle] called this branch of science "pig philosophy," making just the same blunder as when he called political economy "dismal science." "Moderate well-being" may be no more the worthiest end of life than wealth. But if it is the best to be had in this queer world–it may be worth trying for. (L. Huxley 1901, 2:407–8)

While the December 1894 date keeps it from being considered a premonition of the Prolegomena, this letter remains an apt summary of it. In "Evolution and Ethics," as we saw, he insisted that "Cosmic evolution . . . is incompetent to [justify] why what we call good is preferable to what we

call evil" ([1893] 1894, 9:79–80). As late as March 1894, while he maintained that "evolution accounts for morality," he could still deny that "the principle of evolution in general can be adopted as an ethical principle" (L. Huxley 1901, 2:382). But by the July publication of the Prolegomena, he is willing to "leave the problem of 'ought' for subsequent consideration," to return to an earlier vision of desiring humans as Cartesian automata, to rehabilitate utilitarian hedonism provided it be qualified as only "moderate well-being."

At this point again, however, I would suggest that both Huxley's language and his agenda are more nuanced than they may appear. Like his pragmatic rejection of "logic" for "fact," cited above and at the very beginning of our essay, his appeal to moderation here offers a means of exploring the limits and possible intersection of agency and determinism. Likewise the Prolegomena as a whole, instead of shelving his ethical idealism "for subsequent consideration," can reassess some of its complexities and pitfalls. Huxley initiates this reconsideration by elaborating on the garden image as a way to exemplify his earlier description of society as "the fitting of as many as possible to survive" ([1893] 1894, 9:82). The introduction of a gardener, who "provides that each plant shall have sufficient space and nourishment" (1894, 9:14), seems only to further that project—but we then learn that those so fostered must be "those forms which most nearly approach the standard of the useful, or the beautiful, which he has in his mind" (9:14). If humans in society are as plants in a garden, then who or what is comparable to the gardener?—a question not easily answered by one who has just dismissed the idea of a cosmos "suddenly created and swiftly shaped by a supernatural power" (9:8).

Huxley's first illustration seems to defer any questions about the locus of power: While the "shipload of English colonists sent to form a settlement [in] Tasmania" (9:16) may set out to *make* a garden, they do not themselves *make up* the garden. Selection and transformation have shaped their environment but not their society; if they are energetic and intelligent, they will prosper; "if they are slothful, stupid, and careless . . . , the old state of nature will have the best of it" (9:17). Setting up the ideal conditions for human flourishing, this proto-Rawlsian thought experiment seems created to challenge Stephen's eager cooperation with the racist, imperialist underpinnings of social Darwinism. So far Huxley has avoided Stephen's claims (1) that "the struggle for existence . . . underlies morality, and operates whether we are moral or not" (1893, 166), and (2) that both self-assertion and cooperation "may be regarded as conditions of the power of the race to maintain its position in the world" (1893, 165).

The next section of the Prolegomena, however, introduces "some administrative authority, as far superior in power and intelligence to men, as men are to the cattle" (Huxley 1894, 9:17). It is now he, in defiance of history, who includes humans among the native animals to be extirpated;[31]

yet the colonists themselves are treated as if they were indeed cattle. Huxley's initial description may sound utopian: each colonist

> would be relieved from the fear of being deprived of [the means of life] by his stronger or more cunning fellows. Laws . . . would restrain the self-assertion of each man. . . . Protection against extremes of heat and cold would be afforded by houses and clothing . . . ; roads, bridges, canals, carriages, and ships would [provide] transport; . . . hygienic precautions would check, or remove, the natural causes of disease. . . . Thus the administrator might look to the establishment of an earthly paradise . . . in which all things should work together towards the well-being of the gardeners. (1894, 9:18–19)

We seem to have moved unobtrusively from the island of Tasmania to the British Isles. Yet the plural form, "gardener*s*," now sounds disingenuous at best. When he completes and occupies the fourth place in the garden-society analogy, the administrator must take over the role of agent—of gardener—and thus must reduce the colonists to objects.

For practical considerations, he must also reduce their numbers. From a twenty-first–century perspective, Huxley may seem naive when he invokes overpopulation as the rationale for turning his utopia into a totalitarian state. Because of its perceived threat to family stability, he personally disapproved of birth control and certainly never used it to limit his own large brood; yet by ignoring it even as an option, he forces the administrator to begin culling his human herd. He thus blurs any distinction between the very different arguments for population control, on the one hand, and eugenics or species improvement, on the other: The colonists are to be mated and bred "with a view to the progeny best adapted to the purposes of the administrator," and hence the "hopelessly diseased, the infirm aged, the weak or deformed of body or in mind, the excess of infants born, would be put away, as the . . . breeder destroys undesirable cattle" (1894, 9:21). So too, because they are too many, some portion of the "hundred boys and girls under fourteen . . . [must] be chloroformed, as . . . sure to be stupid, idle, or vicious" (9:23). While Huxley claims that not even his superhumanly perceptive administrator can predict their future potential, his point seems weakened, since in his own scenario some of them would need to be "put away" in any case. Once again, however, this ambivalence meshes with his pragmatic appeal to lived experience. As the ancient ethicists of the first essay were both victims of and collaborators with an amoral cosmos, so here his administrator embodies both the hubris of a tyrant and the tragedy of one assigned a role beyond even his superhuman ability.

Huxley's alternatives to social subjugation share a similar ambiguity. Because humans, unlike bees, inherit no morphological "predestination to a sharply defined place in the social organism" (9:27), they are not easily reduced to tools of an all-powerful administrator; yet they can be effectively socialized by mutual affection within the family and fear of shame

outside it.[32] He remained skeptical of Mill's utilitarianism and dismissed Comte's positivism as "Catholicism minus Christianity," but like his account of "Eubiotics," this new vision shares their preoccupation with a social conditioning that seems—and eventually becomes—innate. Associations formed from the opinions of others bring us "to think in the acquired dialect of morals. An artificial personality, the 'man within,' as Adam Smith calls conscience, is built up beside the natural personality. He is the watchman of society" (9:30). Huxley's argument anticipates Foucault's, but to the opposite effect. If the subject's agency is ceded not to an administrator but to a personified construct, it can be both internalized—thus removing the need for coercion—and identified with socially defined roles—thus securing the loose canon in Huxley's naturalism.

There remains the question of what society can best exploit these inducements, and here Huxley returns to the plea for balance in his Preface: "the drama of human life is . . . discovering the mean between self-assertion and self-restraint" (1894, 9:viii–ix). Here also, as so often in these essays, he holds out a pragmatic solution to a theoretical dilemma. He opens by arguing that both the altruism of unqualified agency and the self-interest of social Darwinism are not just extreme but self-contradictory. Invoking his earlier attacks on Christian ethics, he finds that the Sermon on the Mount in general, and the Golden Rule in particular, "can be obeyed, even partially, only under the protection of a society which repudiates it" (9:32). Revisiting his initial image, he asks "What would become of the garden if the gardener treated all the weeds . . . as he would like to be treated" (9:33). A few pages later, however, he is pointing out (with covert reference to his own dysfunctional family [Paradis 1989, 48]) the difficulty of distinguishing human flowers from weeds: do "people who talk so freely about extirpating the unfit, ever dispassionately consider their own history" (9:39)? Where the administrator, no matter how brutal, had the good of the colony at heart, these caricatures of Stephen,[33] "whose whole lives . . . are an education in the noble art of suppressing natural affection and sympathy, are not likely to have any large stock of these commodities left" (9:37). They, like the altruists, have forfeited any stock of credibility for their position.[34]

Hence, Huxley's real (as opposed to his fantasized) colonial society not only finds itself balanced between the extremes of utopia and barbarism but encourages in its citizens a comparable balance between self-restraint and self-assertion: "What is often called the struggle for existence in society . . . is a contest, not for the means of existence, but for the means of enjoyment. Those who occupy the first places in this practical competitive examination are the rich and the influential; those who fail, more or less occupy the lower places, down to the squalid obscurity of the pauper and the criminal" (1894, 9:40). The ingenuity of this solution must not be discounted. Struggle, while still operative, has been "civilized" as no longer

to the death: the life-and-death "struggle *for existence* in this [lowest] class can have no appreciable selective influence upon the other 95 per cent of the population" (9:41; emphasis added).[35] Huxley's appeal here to "the means of enjoyment," like that to "[m]oderate well-being" in the letter to Lord Farrer, may seem tame; yet because humans remain driven by "the insatiable hunger for enjoyment" (9:27), the rewards in this struggle will always seem worth the effort. In this context, "the qualities which ensure success are energy, industry, intellectual capacity, tenacity of purpose, and, at least as much sympathy as is necessary to make a man understand the feelings of his fellows" (9:33).[36] And this balance is not just personally but socially efficacious: "in so far as the struggle for the means of enjoyment tends to place such men in possession of wealth and influence, it . . . tends to the good of society" (9:42).

In a by-now-familiar sequence, Huxley's efforts to slip between the horns of this dilemma create as many problems as they solve. With the best balanced society defined as that which promotes the best balanced individuals and the best balanced individuals as those who promote the best balanced society, our search for this elusive balance in either seems caught within an infinite regression. Yet by holding this vision open as simultaneously utopian and reachable, not yet and already in operation, individually activated and socially constructed, Huxley has refined into oblivion the dilemmas surrounding social norms and human agency within a naturalistic universe. With both altruistic idealism and laissez-faire self-interest pilloried as pragmatically and hence theoretically flawed, Huxley envisions a society so finely tuned that these extremes coalesce into one another, cooperating with evolution even as they transform it, shaping it even as they are shaped by it. And within this society, individuals balance these same extremes to enable it as they are enabled by it. In so doing they see their own well-being so "moderated" by that of their fellows that their actions reconcile their roles as agents and as social constructs because they make either interpretation equally viable.[37]

Huxley's conclusion reaffirms the anomaly of human agency in that "modern" phenomenon, "the gardening of men by themselves" (1894, 9:43). Earlier in the Prolegomena he had likened such self-governance to an attempt by domestic pigeons to supervise their own breeding (9:21); yet as the "sciences and arts of the present day" enabled him to defy an amoral cosmos in "Evolution and Ethics" ([1893] 1894, 9:84), they now proffer an analogous escape from the logical collapse of his garden analogy. As he there anticipated an existential challenge to scientific essentialism, the "modern" circumstances he invokes here may anticipate a *post*modern challenge to scientific causality. If he can straddle incompatible paradigms of ethics and agency, perhaps humans can simultaneously occupy the incompatible positions of gardeners and garden.[38]

Once again, these tentative explorations are overwritten and nearly obliterated by the succeeding text.[39] In its Eastern resignation, Huxley's somber final sentence recalls the equally somber opening of "Evolution and Ethics," but now technical prowess and moral commitment can offer at best a momentary stay within a cosmos committed not to flux but to entropy: "man may develop a worthy civilization, capable of maintaining and constantly improving itself, until the evolution of our globe shall have entered so far upon its downward course that the cosmic process resumes its sway; and, once more, the State of Nature prevails over the surface of our planet" (1894, 9:45). Sometime before that point, however, I suggest that we reexamine these essays, less as a repudiation of social Darwinism than as a tentative, conflicted, but prescient exploration of some of the paradigms that have succeeded it.

## Notes

This article grew out of an October 2000 presentation at the Victorians Institute Conference, Columbia, South Carolina.

1. I acknowledge here my deep gratitude for Professor Blinderman's online Huxley File (*http://aleph0.clarku.edu/huxley/*). Full, elegantly designed, and carefully documented, it is an indispensable resource for students of Huxley, Victorian culture, and nineteenth-century science.

2. "Huxley had simply reinterpreted Spencerian ethics to apply to the imperial ambitions—the competition for foreign markets—of late Victorian England" (Helfand 1977, 169–70). Particularly in its 1997 second installment, Adrian Desmond's biography also describes Huxley's quests and conflicts as undertaken to perpetuate institutions of power and his place within them. For a critique of Helfand, see Paradis 1989, 5–6.

3. Ruth Barton, for example: "What Huxley said, how he said it, and his emphasis, depended on whom he was speaking to and whom he was attacking. . . . Consequently, it [is] not safe to build an extended argument about Huxley's views from the implications of a colorful metaphor without first asking whether it had more than stylistic significance" (1983, 261).

4. While Houston Peterson "speculate[s] on . . . how much better these volumes [of collected essays] might have been, if Huxley had had adequate leisure and money" (1932, 291), Helfand notes that "Evolution and Ethics" took a full year to write (1977, 160), and Huxley himself speaks of "the pains I have bestowed on these 36 pages" (L. Huxley 1901, 2:375). Yet the time and pains spent fail to produce anything approaching a linear argument. Like his earlier essays on chalk, coal, or yeast, this one opens with a popular example, but where they all celebrated the power of evolution, Huxley's account of Jack and the Beanstalk focuses on decay: "no sooner has the [botanical] edifice . . . attained completeness, than it begins to crumble" (Huxley [1893] 1894, 9:48).

5. "[C]yclical change . . . meets us in the water that flows to the sea and returns to the springs; in the heavenly bodies that wax and wane, go and return to their places; in the inexorable sequence of the ages of man's life; in that successive rise, apogee, and fall of dynasties and of states which is the most prominent topic of civil history" (Huxley [1893] 1894, 9:49).

6. By 1886 Huxley himself was one of the most respected of late-Victorian sages, and the science he championed was hardly a stepchild in matters of national prestige and national funding.

7. Sheridan Gilley and Ann Loades quote the entire passage but focus on natural beauty instead of human insignificance (1981, 302).

8. The essay, however, finds itself increasingly burdened by the question of whether ethics, so detached, can remain efficacious.

9. He refuses, however, to be counted "among materialists, for I am utterly incapable of conceiving the existence of matter if there is no mind in which to picture that existence" ([1874] 1894, 1:245). Here, as elsewhere, his commonsensical surface overlies a faith that philosophical quandaries will resolve themselves empirically.

10. An 1891 letter to a clergyman anticipates this claim: "The actions we call sinful are as much the consequences of the order of nature as those we call virtuous. . . . [T]hey have become sins because man alone seeks a higher life in voluntary association" (L. Huxley 1901, 2:299–300). Later in "Evolution and Ethics" he elaborates: "Once more we have a misapplication of the stoical injunction to follow nature. . . . [I]f the cosmic process has no sort of relation to moral ends; if the imitation of it by man is inconsistent with the first principles of ethics; what becomes of this surprising theory" ([1893] 1894, 9:82–83).

11. Thompson's anthology of essays, *Issues in Evolutionary Ethics*, testifies throughout to Hume's importance to this vexed and timely issue. Hume's text reads, "In every system of morality, . . . of a sudden I am surpriz'd to find, that instead of the usual copulations of propositions, *is*, and *is not*, I meet with no proposition that is not connected with an *ought*, or an *ought not*. . . . [A]s this *ought* or *ought not* expresses some new relation or affirmation, it is necessary that . . . a reason should be given, for [it] seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it" (Hume [1740] 1978, 469). Antony Flew notes both that Moore's "*Principia Ethica* neither quotes nor mentions this earlier classical authority [Hume]" and that "Moore's own account [remains] wrapped up in various unfortunate assumptions" (1967, 38).

12. "As civilization has advanced, . . . the organized and highly developed sciences and arts of the present day have endowed man with a command over the course of non-human nature greater than that once attributed to magicians" ([1893] 1894, 9:84).

13. Presumably Huxley was not here making invidious comparisons with the account in the London *Times* (Anon. 1893b), which consisted almost wholly of a very full, often word-for-word, summary of the entire lecture.

14. This, another of Huxley's extended footnotes, seems written with a growing awareness that he has left himself open to just this kind of attack.

15. In his "Reply" to the respondents in the *Zygon* exchange, Williams ends with a similar acknowledgment: "If this recognition of functional design is Aristotelian teleology, so be it" (1988b, 438).

16. Nowhere does Spencer deny his Lamarckian vision of evolution as a teleological force encompassing biology and sociology and guiding the universe, with ever more conscious human participation, toward a utopian future. A similar vision, albeit in chastened and more scientifically credible vesture, informs Ralph Wendell Burhoe's contribution to the *Zygon* symposium (1988, 417–30 passim).

17. Huxley's long friendship with Spencer had fallen apart as recently as 1889 after a political dispute in the *Times* (Desmond [1994] 1997, 573).

18. Ever since 1871 Mivart had rankled under Huxley's pillory of him in "Mr. Darwin's Critics" ([1871] 1893, 2:120–86) for his theistic attack on the *Origin*.

19. Mivart's subordination of the material to the spiritual leads him to some ecologically frightening conclusions: "weighed in the balance with [man], the rest counts for nothing . . . the manufacturer's chimney, with its grimy surroundings and furnaces which make verdure impossible, [is] priceless in value compared with all the charms of irrational Nature which the most skillful poets can depict" (Mivart 1893, 205–6). Such visions, however, are pastoral compared to those of Stephen.

20. Arguing that moral judgments on nature are "undeniably futile" because they "can not even be asked in any intelligible sense" (Stephen 1893, 157), he insists that any alternative proposed for a natural evil involves us in fruitless condition-contrary-to-fact speculations. To animal predation he responds that the prey would have to die anyway, that eating the less fit improves the breed, that the predator "needs" and is thus bound to the prey in the closest kind of alliance, that among predators, as Huxley admitted, we find cooperation and maternal self-sacrifice. Turning to humanity, he argues that rationality and foresight render the struggle different in degree, not in kind. Looking ahead, we can assure our food supply by raising it and can eliminate competition from other predators by exterminating them.

21. In a letter to him Huxley first objected that he had "overlook[ed] the general immorality of the cosmos on the score of its having begotten morality in one small part of its domain" and then concluded plaintively, "I don't see there is any real difference between us" (L. Huxley 1901, 2:404). Although this letter acknowledging Stephen's thanks for his collected essays was sent a year after the review, Huxley's reference to the lumbago "incurred in my Oxford escapade" suggests that he is still mulling over the exchange.

22. This breathtaking line of reasoning concludes with the same excuse he had used earlier to condone the slaughter of sheep by animal or human predators: "All the natives who lived in America a hundred years ago would be dead now in any case, even if they had been treated with the greatest humanity" (Stephen 1893, 166).

23. The letter is dated October 27, some months before the review's December publication, but Huxley's reference to "Man and Nature" seems to mesh with the review's subtitle, "Professor Huxley on Nature and Man" (Seth 1893, 823). This phrase does not appear in the Blinderman database.

24. This reductive scientific paradigm seeks causal explanations for one level of complexity in terms of the simpler order beneath it: chemical phenomena would be reduced to physics, biological phenomena to chemistry, humans to biology, whereas for Seth "*the true nature of the cause only becomes apparent in the effect*" (1893, 828). Seth here points toward Adorno's quest for the remainder that falls through the categories of Enlightenment reason.

25. From here it is a short step to Dawkins's selfish gene and Michael Ruse's argument: "ethics is a collective illusion of the human race, fashioned and maintained by natural selection in order to promote individual reproduction . . . morality is subjective—it is all a question of human feelings or sentiments [but] there are good (biological) reasons why it is part of our nature to objectify morality. If we did not regard it as binding, we would ignore it" (Ruse 1986, 102–3).

26. The excuse he gives for writing it had already occurred to him nine months earlier in his first reply to Seth: "The prince of scientific expositors, Faraday, was once asked, 'How much may a popular lecturer suppose his audience knows?' He replied emphatically, '*Nothing*'" (L. Huxley 1901, 2:380). Reusing this less-than-flattering appraisal of his reviewers' competence, he now attributes their difficulties to an apparent ignorance of his earlier writings. The matter of the Prolegomena, therefore, was to be "chiefly elementary or recapitulatory," and indeed the numerous notes to earlier essays establish it as the archive of his final, considered opinions.

27. Seth himself looks backward toward late Romanticism, particularly that of Arnold.

28. While he laments that this new social mean "rarely presents itself" until those trying to implement it have been pilloried by "that stern critic, aged experience" (1894, 9:ix), this apparent disclaimer confers on him credentials far more impressive than any of his critics. Who more qualified to find such an elusive balance than this late-Victorian sage, himself nearing three score and ten? The whole Prolegomena is haunted by Huxley's persona—whether as an unassuming gardener, as an administrator directing evolutionary energy for the good of society, as the voice denying that such direction could ever be impartial and rigorous enough to succeed, or finally as an antiphonal voice lamenting this impossibility.

29. As in the "Jack and the Beanstalk" story, he again employs a botanical metaphor, but he now meets his critics literally on his own turf, the English Downs. Insisting on change, as he did in "Evolution and Ethics," he here focuses not on cyclical flux but on a causally ordered progression through which life evolves within this site of scarcity and struggle.

30. His "Apologetic Irenicon" of 1892 posited the same analogy: "Through this small plot . . . there runs [Arnold's] 'stream of tendency towards righteousness.' But outside this very rudimentary germ of a garden of Eden, thus watered, I am unable to discover any 'moral' purpose" (quoted in L. Huxley 1901, 2:321). Paradis suggests (1989, 35) that Huxley may have found the garden image in the opening chapter of Darwin's *Origin*, "Variation Under Domestication."

31. In the earlier scenario, the settlers may "extirpate or drive out the [native] animal population," but the fate of the human population—already eradicated by that time—is passed over in silence, even though a letter of 1890 had acknowledged that "the British colonist . . . was the main agent of their extirpation" (L. Huxley 1901, 2:284).

32. Extrapolating from humans' capacity for mimicry to their need for sympathy, as delineated by Hume and Adam Smith, Huxley concludes triumphantly, "I doubt if the philosopher lives . . . who could know himself to be heartily despised by a street boy without some irritation" (1894, 9:29).

33. Paradis (1989, 47–48) also suggests Francis Galton, certainly among the most credible of the eugenicists. The goals, though not the means, of his project tally with those of Huxley's administrator: Galton's new preface to the second edition of *Hereditary Genius* concludes, "The processes of evolution are in constant and spontaneous activity, some pushing towards the bad, some towards the good. Our part is to watch for opportunities to intervene by checking the former and giving free play to the latter" ([1869] 1972, 41).

34. In thus dismissing these extremes of self-denial and genetic manipulation, Huxley ducks Stephen's claim that family affection and social solidarity actually foment national and racial struggle.

35. Where Huxley got such a implausibly low percentage he does not say. That he was positing some evolution toward liberal democracy is rendered doubtful by his warning to an audience at Johns Hopkins on the American Centenary: "You are making a novel experiment in politics . . . : whether this great mass will hold together under the forms of a republic, and the despotic reality of universal suffrage" ([1876] 1893, 3:260).

36. This imagery hearkens back to the passage most associated with early Huxley as the unabashed champion of evolution, the account of Nature playing chess with humans for their survival. There too, "Those who take honors in Nature's university, . . . the really great and successful men in this world," manifest a similar balance; they possess minds like "a clear, cold, logic engine," but have also "learned . . . to respect others as [themselves]." As these are outnumbered by "[t]he great mass of mankind . . . , who pick up just enough to get through" ([1868] 1893, 3:85–86), so also in the Prolegomena's model society, "The survivors of the contest [are] the moderately 'fit,' whose numbers and superior propagative power enable them always to swamp the exceptionally endowed minority" (1894, 9:41–42).

37. We never learn how earlier people in earlier societies came to delimit evolutionary struggle to the means of enjoyment; yet for all his grumpy asides, Huxley implies that Englishmen and English institutions have best adapted themselves within these limits. Whether his account *de*scribes late-Victorian England or *pre*scribes its future direction remains ambiguous, but within that very ambiguity Huxley can shield his agenda from the sarcasm of evolutionary naturalists and the even more embarrassing adulation of Christian and Kantian idealists.

38. These essays do not constitute Huxley's final word on these issues. At his death in 1895 he had published in *The Nineteenth Century* the first part of a review of A. J. Balfour's attack on agnosticism in his *Foundations of Belief* (1895). The second part, in galleys at his death, has been published in an appendix to Peterson's biography (1932, 315–27). Because both of these pieces show that Huxley's opinions were evolving until the very end, they deserve an extended discussion in their own right.

39. In the penultimate paragraph, one long periodic sentence, Huxley fleshes out his earlier reference to the Fall with one of his darkest, most comprehensive repudiations of human desire: "so long as he remains liable to error, intellectual or moral; so long as he is compelled to be perpetually on guard against the cosmic forces, whose ends are not his ends, without and within himself; so long as he is haunted by inexpugnable memories and hopeless aspirations; as long as the recognition of his intellectual limitations forces him to acknowledge his incapacity to penetrate the mystery of existence; the prospect of attaining untroubled happiness . . . appears to me to be as misleading an illusion as ever was dangled before the eyes of poor humanity. And there have been many of them" (1894, 9:44). Almost every species of pessimism in late Huxley and late Victorian culture here puts in an appearance: from Calvinism, to post-Romantic despair, to failed social utopianism, to literary naturalism, to proto-Freudian psychology, to scientific bewilderment at the stubborn complexity of physical and biological nature. This litany effectively demolishes his naturalistic formula for even "moderate well-being," but it also renders moot all questions of inclusive versus exclusive social goals or of descriptive versus prescriptive ethics.

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