AN ARGUMENT FROM SUBLIME LITERATURE: HOW LANGUAGE, BEAUTY, AND LITERATURE POINT TOWARD THE EXISTENCE OF GOD

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AN ARGUMENT FROM SUBLIME LITERATURE: HOW LANGUAGE, BEAUTY, AND LITERATURE POINT TOWARD THE EXISTENCE OF GOD

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For my loving wife, Sarah, who did as much or more
to complete this journey as I did; and to our sons, Emerson and Logan, who brought a
smile to my face whenever I needed it most.

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PREFACE

The seeds of this project were planted long before I was born. I am deeply indebted to my great grandfather, G. R. S. Blackaby, a man whom I never had the privilege to meet, but whose spiritual and literary heritage has had a profound impact on my life and career. The path that would eventually lead me to pursue a PhD in Christianity and the Arts and to devote two years writing this dissertation on literature was paved by his love for books. Hundreds of treasures inherited from his personal library—from Dickens, to Twain, to Tolstoy—have surrounded me throughout the duration of this great undertaking.

Another man whom I never had the fortune to meet, but whose influence cannot be understated, is Francis Schaffer. His short book *Art and the Bible* was the spark that first ignited my interest in thinking critically about Christianity and the Arts, and inspired me to pursue this interest at a deeper level. I hope that, in some small way, this work will honor his amazing legacy and example.

I owe many thanks and appreciation to Dr. Mark Coppenger for guiding me through this process, being an endless source of wisdom and ideas, and for talking me off the ledge on more than one occasion. I could not have asked for a more supportive and helpful supervisor.

I am also grateful for the astounding support of my family and friends. I thank my parents for the countless hours of proof-reading and free babysitting so that I could be faithful to God's calling to pursue this PhD. I thank my sister, Carrie, for providing a final proofread at the reasonable price of only a single slice of cheesecake. I thank Mark and Angie Brown, for opening their home to me for a much-needed writer's retreat. I thank Rob Martin, for our always-encouraging breakfasts at Truett's Luau, and for his

continual prayer throughout this process.

This project represents the culmination of the journey God has led me on, bringing harmony to many disparate experiences and detours in a way only a sovereign God can do. My prayer is that I have been faithful in this assignment, and that God may now take it and use it however He desires. While I am under no delusion of reaching the towering literary heights of J. R. R. Tolkien, I conclude this project by echoing his words upon finally completing the manuscript for *The Lord of the Rings*: "It is written in my life-blood, such that it is, thick or thin; and I can do no other."

Daniel Richard Blackaby

Hampton, Georgia
December 2018

CHAPTER 1

INTRODUCTION

Shall we conceal the Case, or tell it –
We who believe the evidence?
Here and there the watch-towers knell it
With a sullen significance,
Heard of the few who hearken intently and carry an eagerly unstained sense.
Hearts that are happiest hold not by it;
Better we let, then, the old view reign;
Since there is peace in it, why decry it?
Since there is comfort, why disdain?
Note not the pigment the while that the painting determines
Humanity's joys and pain![1]

—Thomas Hardy, "The Problem."

An Answerable Problem

In the aftermath of Charles Darwin's bombshell publication of *On The Origin of Species,* English novelist and poet Thomas Hardy, like many others, faced a dilemma: spread the new Darwinian gospel—of which he was wholly convinced—or remain silent and allow those still devoted to their antiquated faith peace and comfort, even if such sentiments were built on an illusion. Unbeknownst to Hardy, however, a possible resolution to his problem was hiding in plain sight, contained within the very poem used to pose the question. The answer comes, not in the message, but in the medium. Poetry, a uniquely human phenomenon, has always possessed an almost ethereal and transcendent quality that has never fit comfortably within the naturalistic confines of Darwin's theory.

[1] Thomas Hardy, "The Problem," in *Thomas Hardy: The Complete Poems*, ed. James Gibson (Basingstoke, UK: Palgrave Macmillan, 2001), 120.

Thus, there is a problem exposed by the above poem, but not the one that Hardy assumed. Ironically, by utilizing a poetic medium to confess his allegiance to Darwinism, Hardy was using a communicative device which itself could not be readily explained through Darwin's theory. Like a white flag of surrender fastened to and delivered by a tactical missile, there is a disconnect between the message and the vehicle used to deliver it that must somehow be reconciled.

Darwinism and the Challenge of Literature

Philosopher Daniel Dennett describes Darwinism as a hypothetical universal acid that "eats through just about every traditional concept, and leaves in its wake a revolutionized world-view, with most of the old landmarks still recognizable, but transformed in fundamental ways."[2] What can contain such a corrosive force without itself being consumed? *Nothing*. Darwin's so-called "dangerous idea" burns into all realms of human existence, radically transforming and redefining them. Yet, by unleashing the "universal acid" of Darwinism into all aspects of human existence, Darwinists have paved the way for the corrosive force to inevitably burn through Darwinism itself. As evolutionist Robert Wright notes, "If the theory of natural selection is correct, then essentially everything about the human mind should be intelligible in these terms."[3] In order for Darwinism to succeed as a satisfactory explanatory system, it

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[2] Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meaning of Life* (New York: Simon and Schuster, 1996), 63. One of Dennett's primary motivations is to expand the scope of Darwinism's explanatory power. In the preface of his book, he states his purpose as follows: "I want to get thinkers in other disciplines to take evolutionary thinking seriously, to show them how they have been underestimating it, and to show them why they have been listening to the wrong sirens" (12).

[3] Robert Wright, *The Moral Animal: Evolutionary Psychology and Everyday Life* (New York: Vintage Books, 1994), 28. Not all Darwinists agree with Wright's more rigid adaptationism. Stephen Jay Gould has been critical of the position. He argues that one must distinguish between genetic Darwinian evolution and human cultural change, which often unfold in antithesis of each other. He prophesied that the evolutionary psychologists, such as Dennett and Wright, will eventually suffer the fate of the Freudians, in that "they elevated a limited guide into a rigid creed that became more of an untestable and unchangeable religion than a science." Stephen Jay Gould, "Evolution: The Pleasures of Pluralism," *New York Review of Books* 44, no. 11 (June 26, 1997): 47.

must explain biological changes, such as the subtle variations in a finch's beak or the origin of new species, but it must also provide an account for the breadth and nuances of human existence—social relations, values, art, consciousness, morality, etc. Charged with explaining these latter experiences, the universal acid of Darwinism begins to consume itself. One such stopper that Dennett's "universal acid" is impotent to dissolve in its Darwinian wake is the existence and near-universal veneration of sublime literature.

The proposition that sublime literature is incompatible with Darwin's theory is pointedly rejected by most evolutionists. Evolutionary biologist Richard Dawkins is wholly dismissive of the charge:

> I have given up counting the number of times I receive the more or less truculent challenge: "how do you account for Shakespeare, then?" (Substitute Schubert, Michelangelo, etc. to taste.) The argument will be so familiar, I needn't document it further. But the logic behind it is never spelled out, and the more you think about it the more vacuous you realize it to be. Obviously Beethoven's late quartets are sublime. So are Shakespeare's sonnets. They are sublime if God is there and they are sublime if he isn't. They do not prove the existence of God; they prove the existence of Beethoven and of Shakespeare. A great conductor is credited with saying: "If you have Mozart to listen to, why would you need God?"[4]

Or, as Harold Bloom quips, "There is no God but God, and his name is William Shakespeare."[5] The issue in question, however, is not whether Beethoven's late quartets

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[4] Richard Dawkins, *The God Delusion* (Boston: Mariner Books, 2008), 110. Dawkins' dissatisfaction with the aesthetic argument is evident in the scant page and a half given toward it, the shortest among all of the book's rebuffs of theistic arguments. Despite his brevity, however, Dawkins manages to disclose his thorough incomprehension of the argument. His response not only fails to address the actual argument, but is also internally inconsistent. Dawkins makes the mistake of conflating God and religion. As a result, he shifts the argument onto the religious faith of the artist or art done for, or commissioned by, religious institutions (such as Michelangelo's painting the Sistine Chapel). By misconstruing the argument in this way, Dawkins can then counter that sublime art has clearly been created by non-religious artists and outside of a religious commission; therefore, religion cannot take credit for the existence of great art, and the argument from aesthetics is erroneous. The proposition that great art can be birthed only out of religion is indeed false, but this is not the actual claim of the aesthetic argument. The existence of sublime art itself, regardless of the personal religious or non-religious beliefs of the artist, and apart from the thematic content or context, is what theists argue requires the existence of God. It is interesting that Dawkins uses Shakespeare and Beethoven, artists with ambiguous religious beliefs, as his two primary examples, which is at odds with his framing of the argument in terms of specifically religious art. This raises the question of whether Dawkins truly misunderstands the argument or simply does not have much of consequence to say in response to it.

[5] Harold Bloom, *The Daemon Knows: Literary Greatness and the American Sublime* (New York: Spiegel & Grau, 2016), 32.

or Shakespeare's sonnets are "obviously" sublime or not. The more interesting question—and the more formidable one for Darwinism—is why? The real challenge to Darwinian theory is much larger than the existence of one or two particularly sublime works of art—it is the concept of art itself. What elevates a Shakespearean sonnet above the scribbles of a freshman English student? In fact, what gives any value to words written on a page? Where do these aesthetic urges originate? And can the answer to any of these questions be explained through purely naturalistic means? Dawkins remarks that the logic of theistic argument from aesthetics is never spelled out. The following chapters will do precisely that, demonstrating that, far from being a vacuous argument, the existence of sublime literature represents a legitimate challenge to Darwinian theory.

The Threefold Problem of a Darwinian Account for Sublime Literature

Anyone who has drunk deeply from the well of the literary masters has perhaps at times been overwhelmed by the almost transcendent experience of the work. For some, this transcendent experience alone is enough to justify belief in the existence of a divine being that is altogether other and beyond material existence. For example, Christian philosopher James Sire offers the following eccentric argument: "There is literature. Therefore there is a God. Either you see this or you don't."[6] Although more of a presuppositional assertion than a traditional argument, Sire elevates the experiential dimension of great literature and challenges a naturalist to supply an explanation worthy of such a mystical encounter. Thomas Weiskel, in his famous treatise *The Romantic*

[6] James Sire, *Apologetics beyond Reason: Why Seeing Really Is Believing* (Downers Grove, IL: IVP Academic, 2014), 10. Sire's argument is a reformation of the "Argument from Aesthetic Experience" syllogism offered by Peter Kreeft and Ron Tacelli: "There is the music of Johann Sebastian Bach. Therefore there must be a God. Either you see this or you don't." Peter Kreeft and Ronald K. Tacelli, *Handbook of Christian Apologetics: Hundreds of Answers to Crucial Questions* (Downers Grove, IL: InterVarsity Press, 1994), 81. The concept of beauty as a signifier of God has existed, in one form or another, since the church fathers. For example, in his Easter sermon (c. AD 411), St. Augustine posed the question: "Who made these beautiful changeable things, if not one who is beautiful and unchangeable?"

Sublime, purports that "the humanist sublime is an oxymoron."[7] The aesthetic sublime, seemingly by definition, rests apart from and beyond the human, beyond the material, and beyond the natural.

Naturalists are understandably quick to dismiss an aesthetic argument for the existence of a divine being that is built on transcendent experience alone. Their skepticism is warranted. After all, much significant scholarship has been written on the sublime from a naturalistic framework.[8] The existence of great literature, however, represents a more serious and nuanced challenge to a naturalistic worldview than simply an overpowering transcendent experience. The difficulty of a Darwinian explanation for great literature rests not merely in explaining the experience of sublime literature, but in explaining the existence of literature at all. Contained between the front and back covers of any exalted novel or collection of sublime poetry are some of Darwin's oldest and most toilsome problems. Darwinism struggles to provide a satisfying explanation for the existence of great literature because it fails to adequately account for several of the major aspects of literature individually. As such, there are at least three fundamental problems for a Darwinian explanation, corresponding to three central pillars of literature: language, aesthetics, and literary meaning.

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[7] Thomas Weiskel, *The Romantic Sublime: Studies in the Structure and Psychology of Transcendence* (Baltimore: The Johns Hopkins University Press, 1986), 3. Weiskel was not, however, making an argument for theism in his claim. Rather, he was attempting to emphasize the transcendent experience of the sublime. He explains further, "The essential claim of the sublime is that man can, in a feeling and in speech, transcend the human. What, if anything, lies beyond the human—God or the gods, the daemon or Nature—is a matter for great disagreement. What, if anything, defines the range of the human is scarcely less sure" (3).

[8] The philosophy of the sublime is often located, not with transcending the natural world, but with transcending the self. Edmund Burke, in his classic aesthetic treatise *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and the Beautiful,* famously associated the sublime with a feeling of terror. The relationship between the sublime and a produced emotional state would be picked up and expanded upon by Immanuel Kant in the book *Observations on the Feeling of the Beautiful and the Sublime,* as well as by Diderot and many others.

The Problem of Language

In a 2014 article titled "The Mystery of Language Evolution," eight neo-Darwinian power-players, including the eminent linguist Norm Chomsky, made a shocking admission: despite more than a century of Promethean efforts, the origin of language remains an unsolvable puzzle. Regarding the genesis of language, the collective of scholars acknowledged, "The richness of ideas is accompanied by a poverty of evidence, with essentially no explanation of how and why our linguistic computations and representations evolved."[9] The staggering admission is even more surprising when compared to other parallel advancements during that time. Tom Wolfe, in his book *Kingdom of Speech*, provides context:

> They can't figure out what language *is*. One hundred and fifty years since the Theory of Evolution was announced, and they had learned . . . *nothing* . . . in that same century and a half, Einstein discovered the speed of light and the relativity of speed, time, and distance . . . Pasteur discovered that microorganisms, notably, bacteria, cause an ungodly number of diseases, from head colds to anthrax and oxygen-tubed, collapsed lung, final-stage pneumonia . . . Watson and Crick discovered DNA, the so-called building blocks genes are made of . . . and 150 years' worth of linguists, biologists, anthropologists, and people from every other discipline discovered . . . *nothing* . . . about language.[10]

Wolfe's judgment that the linguists have learned *nothing* about language is, in one sense, hyperbolic. In another sense, however, his critique does not go far enough. Linguistic scholars have not been as fruitless in their pursuit as Wolfe implies; yet, what little they have managed to glimpse from behind the impenetrable veil has raised more questions than answers. Discoveries, such as the apparent language universals, the proficiency of children's language acquisition, and possible biological underpinnings for the linguistic faculty, all affirm how little is truly understood about the language phenomenon.

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[9] Marc D. Hauser et al., "The Mystery of Language Evolution," *Frontiers in Psychology* 5 (May 7, 2014): 1.

[10] Tom Wolfe, *Kingdom of Speech* (New York: Little, Brown, and Company, 2016), 5. Wolfe was not advocating for a divine origin for language or outright dismissing the possibility of a naturalistic account. Wolfe's criticism is more specifically leveled against Chomsky and his innatist theories, as well as a more general discontent with Darwinism. Instead, Wolfe champions Daniel Everett's theories of language as a created artifact, and not anything biologically wired into man.

For most of antiquity, language was almost unquestionably assumed to be a divine gift bestowed upon man from the gods. Despite his many advancements, modern man has seemingly developed no explanation for language more tenable than that of his ancient forbears. Linguist and evolutionist Derek Bickerton writes,

> These vast differences, qualitative as well as merely quantitative, between our species and those that are closest to it pose no problem for those who believe, as many still do, that we result from a unique act of creation, a supernatural irruption into the natural scheme of things. For those who do not believe this, and who find the evidence that we developed, as all other species did, through the natural processes of evolution, these differences must remain puzzling indeed.[11]

Although Bickerton follows this admission with an attempt to solve the puzzle through naturalistic means, his concession is significant. The burden rests squarely on the shoulders of the Darwinists to provide a more feasible solution to the puzzle of language's origin to warrant rejecting man's original impression of divine origin. By the admission of many evolutionists themselves, and as is demonstrated in detail in the following chapters, they have—thus far—fallen short in this endeavor.

The Problem of Aesthetics

Language is the foundation for literature, but language itself is not literature, just as a pile of lumber is not yet a house. Part of the composition of literature is that language is used and constructed in a certain way. Literature contains an aesthetic dimension, an element that elevates mere language to the loftier status of literature and art. Aesthetics, the second pillar of literature, represents the second significant challenge to a Darwinian account of literature. The baffling phenomenon of beauty and aesthetics has long been a thorn in the side of Darwinism.[12] The seemingly universal appreciation of

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[11] Derek Bickerton, *Language & Species* (Chicago: University of Chicago Press, 1990), 2. Bickerton, like Chomsky, argues for an innatist conception of language, produced in a sudden evolutionary adaption, akin to a "Big Bang." He, like his nativist colleagues, rejects the optimism of the linguistic behaviorists who downplay the communicative differences between man and animal.

[12] The problem posed by beauty in nature was largely responsible for the dissension between Darwin and Wallace, the co-discoverer of the theory of natural selection. See Alfred Russel Wallace, "The Colors of Animals and Plants," *The American Naturalist* 11, no. 12

beauty is not only at odds with the central tenets of Darwin's theory of natural selection, it is often in direct opposition to them. That beauty has not only evaded what allegedly should have been inevitable extinction, but has also flourished into a foundational value in human life has remained a headache for many Darwinists. Charles Darwin famously bemoaned, "The sight of a feather in a peacock's tail, whenever I gaze at it, makes me sick!"[13] He supposedly stumbled upon a way out of the labyrinth with the postulation of his second great theory—the theory of sexual selection.[14]

Darwin maintains that sexual selection "depends, not on a struggle for existence, but on a struggle between the males for possession of the females; the result is not death to the unsuccessful competitor, but few or no offspring."[15] The theory provided Darwin with a way to salvage his theory of natural selection by providing an account for the many facts of life, such as the inexplicable resilience of beauty and aesthetics, which had otherwise eluded the narrow requirements of natural selection and survival value. In the century and a half since Darwin introduced his theory of sexual selection, evolutionists' confidence in the theory's explanatory power has increased exponentially. What began as an almost desperate grasp to fill a conspicuous missing link in the Darwinist gospel is now championed as the key to understanding, defining, and appreciating beauty and aesthetics at all.

(December 1877): 713–28; Alfred Russel Wallace, *Darwinism: An Exposition of the Theory of Natural Selection With Some of Its Applications* (London: Macmillan and Co., 1889).

[13] Charles Darwin, "Letter from Charles Darwin to Asa Gray, April 3, 1860," in *The Life and Letters of Charles Darwin,* vol. 2, ed. Francis Darwin (London: John Murray, 1887), 296.

[14] The theory of sexual selection was already present in *On the Origin of Species,* but receives significant attention in *The Descent of Man.* Darwin's correspondence with botanist Asa Gray and Alfred Russel Wallace offers insight into the initial development of the theory as well as Darwin's early uncertainties toward it. Although convinced of the viability of his theory of sexual selection, Darwin did not share the wholesale confidence and expansive reach that defines many of his followers, such as Denis Dutton and Richard Prum.

[15] Charles Darwin, *On the Origin of Species* (1859; repr., New York: D. Appleton and Company, 1861), 83.

Evolutionists such as Denis Dutton now declare, "Darwinian aesthetics can restore the vital place of beauty, skill, and pleasure as high artistic values."[16] Far from merely accounting for beauty, Darwinism is now elevated as the source and savior of it. The ideology has trickled down into all the arenas of aesthetics. Literary Darwinism has emerged as a branch of literary criticism which, in true Darwinian fashion, aims not only to add a new perspective among many others to the interpretation of literature, but to be the "fittest" theory that swallows and unifies all others by transplanting them into Darwinian soil.[17] Upon closer examination, however, the zeal and certainty by which Darwinists have heralded the evolutionary account for beauty and aesthetics turns out to be little more than sleight of hand, distracting an unaware audience from the elaborate trickery required to reach their ambitious conclusions. In this way, they are like a man who climbed a tree and boldly pronounced that he was on his way to the moon. That sexual selection can explain many of the quirks, tendencies, and instincts in nature is indisputable. Yet, a sizable chasm remains and Darwin's theory of sexual selection provides no straight or logical path by which to cross it.

There is a monumental gap between the coloring of a male peacock's tail feathers and the staggering range and variety of sublime human art and literature. Yet, this is precisely the leap that Darwinists must take, pushing their theory to the brink of absurdity in order to preserve the integrity of their explanatory system. *Hamlet* and *Othello* did not appear as biological, mutated lumps on Shakespeare, like the genetic coloring of a peacock's tail. The masterful plays were birthed through a creative act

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[16] Denis Dutton, *The Art Instinct: Beauty, Pleasure, and Human Evolution* (New York: Bloomsbury Press, 2010), 12.

[17] See Joseph Carroll, *Literary Darwinism, Evolution, Human Nature, and Literature* (Abingdon, England: Routledge, 2004); Joseph Carroll, "Evolutionary Approaches to Literature and Drama." in *Oxford Handbook of Evolutionary Psychology*, ed. Robin Dunbar and Louise Barrett (Oxford: Oxford University Press, 2007); Brian Boyd, "Literature and Evolution: A Bio-Cultural Approach," *Philosophy and Literature* 29 (April 2005): 1-23; Marcus Nordlund, "Consilient Literary Interpretation," *Philosophy and Literature* 26, no. 2 (October 2002): 312-33.

which, despite passionate arguments to the contrary, has remained unique to the human species. For, while the aesthetic dimension in the animal world remains deeply rooted in the narrow and predictable function of mating and reproduction, the human creation of great literature shares no such limitations.

Thus, if literature is accepted, in part, as the fashioning of language into an aesthetic work, then an account for literature must include an explanation for beauty and art. Burdened with this task, Darwinists are confronted with a riddle that has tormented them since the birth of their theory, and one that has remained without a satisfying answer. Long after Darwin passed on, the sight of a peacock's tail feathers is still enough to make his followers sick.

The Problem of Literary Meaning

The inefficacy to produce viable explanations for both the origin and aesthetic dimension of language are two sizable obstacles for any satisfying Darwinian account for the existence of sublime literature. There remains a third mountain for the Darwinist to climb. Literature is far more than just aesthetically pleasing language. At its core, great literature *says* something. The greatest literary works weave rich narratives, and confront the reader with deep longings, increased understanding, and what it means to be human. Literature has meaning. American poet Ezra Pound wrote, "Literature is language charged with meaning. Great literature is simply language charged with meaning to the utmost degree."[18] The essence of his statement will be adopted here to speak of a collection of loosely related questions, which can be discussed under the umbrella of what will be called literary meaning.

If the acquisition of language and the development of an aesthetic sensibility paved the path toward the creation of literature, there still remains the important question

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[18] Ezra Pound, *ABC of Reading* (1934; repr., New York: New Directions Publishing, 2010), 28.

of what led ancient man to travel down it. Storytelling is a ubiquitous cultural rite. No people group has ever been discovered that lacked a narrative tradition. The act of storytelling is seemingly as natural for the human species as is language itself. Therefore, any account for literature must provide an explanation for the origin of this storytelling instinct. The question, however, is what Darwinian survival or reproductive advantages could have justified Pleistocene cave-men to sit around a campfire weaving tales of mythical beasts, heroic feats, and other marvelous fictions?

A related and logical question to follow the question of why, is the question of what. If the first is the intent of literature, then the latter is its content. Why did the original storytellers tell the stories they did, and why do we tell the stories that we do today? An answer to the first is difficult—impossible, even—as our knowledge of the stories told goes back only as far as written language, rendering any discussion on the original stories a game of highly speculative guesswork. Yet, if the later written stories and myths provide any analogy to the past, then some broad assumptions can perhaps be made. For example, one of the most intriguing aspects of the human storytelling tradition is the recurrent plot points and threads. Once again, Darwinism cannot easily account for these common—arguably universal—literary dimensions. Many of the universal narrative tropes and motifs such as the "Christ figure," altruism, and self-sacrifice elevate many of the qualities that—like aesthetics and language—fail to fit neatly within Darwinian theory. Such yearnings are uniquely human—an innate grasp for that which lies beyond a Darwinian world.

Lastly, much of the appeal of literature is the ability to delve deep into the depths of the enigmatic human mind. Whether stream-of-consciousness literature or the creation of secondary worlds to transport the reader into the mind of another, the magic of literature is not only in the sensory experience, but also in what it produces inside the human mind. Yet, as atheist philosopher Thomas Nagel and others have pondered, what

is consciousness?[19] The existence of immaterial thought and self-awareness would seem to stand in direct opposition to a thoroughgoing materialist worldview. Nagel puts the problem as follows:

> Consciousness is the most conspicuous obstacle to a comprehensive naturalism that relies only on the resources of physical science . . . . If we take the problem seriously, and follow out its implications, it threatens to unravel the entire naturalistic world picture. Yet it is very difficult to imagine viable alternatives.[20]

The experience of sublime literature, therefore, lives in a realm of human existence that has remained ambiguous, eluding simple scientific explanation. In other words, to experience literature at all is to step out onto a historically shaky Darwinian foundation.

Thesis

For many intellectuals today, Darwinian evolution is held with a near religious fervor. To question the sovereignty of Darwinism is to forfeit intellectual credibility and place oneself under the persecution of the increasingly militant evolutionist acolytes. From a position of power in the universities, Darwinists have spread their gospel into nearly every academic discipline and field of study. The aim of this project is to challenge the reign of Darwinism in one such field that has, thus far, received little attention by Christian scholars: literature. My thesis is that there is no feasible pathway from Darwinian evolution to the creation of mankind's great literature. Conversely, the Christian worldview and biblical theology offer a far more satisfying and coherent answer by providing a foundation for the creation of sublime literature precisely where Darwinism falls apart.

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[19] See Thomas Nagel, *Mind & Cosmos: Why the Materialist Neo-Darwinian Conception of Nature Is Almost Certainly False* (New York: Oxford University Press, 2012). Also, for an articulate version of this question raised from a theistic standpoint, see Alvin Plantinga, *Where the Conflict Really Lies: Science, Religion, and Naturalism* (London: Oxford University Press, 2011).

[20] Nagel, *Mind & Cosmos*, 35.

My argument unfolds in two stages. In the first, I critique the Darwinian explanation for literature. The goal is to level the playing field, push back against the stranglehold evolutionists have held on the subject, and expose the need to reconsider alternative solutions. The argument—that there is no clear path from Darwinian evolution to man's great achievement of sublime literature—is approached as a cumulative case argument. Darwinism cannot account for the existence of sublime literature because it cannot sufficiently account for any of the three major aspects of great literature—language, aesthetics, and literary meaning.

In the second stage, I argue that the Christian worldview and biblical theology provide a better, more consistent, and accurate explanation for the phenomenon. The argument in the second stage presents the Christian worldview's explanation for each of the three major aspects of great literature, and demonstrates how the explanations are supported by the current research in aesthetic philosophy, linguistics, and literary criticism.

In chapter 2, I provide a brief discussion on literature, attempting to establish a workable definition. Chapter 3 explores the question of the origin of language, by providing a brief survey and critique of the major historical and modern theories given out of a naturalistic worldview. Chapter 4 examines the aesthetic problem, demonstrating the shortcomings of the major Darwinian theories regarding beauty and aesthetics. In chapter 5, a collection of issues are discussed, including a critique of Literary Darwinism, as well as the problem of consciousness. Once the previous chapters have demonstrated the inadequacy of the Darwinian accounts for language, aesthetics, and literary meaning, chapter 6 offers the Christian worldview as a more viable account for literature.

Conclusion

This chapter began with Thomas Hardy's "Problem," as he wrestled with his place in the world following the world-changing event of Darwin's *On the Origin of*

Species. Therefore, it is fitting to end in like manner. T. S. Eliot is perhaps best known today for penning the celebrated poem "The Waste Land." In "The Burial of the Dead"—the first of five parts which make up the complete poem—Eliot surprises the reader with a jarring role-reversal on the theme of life and death. The famed opening, "April is the cruelest month, breeding/Lilacs out of the dead land," is starkly juxtaposed with the lines, "Winter kept us warm, covering/Earth in forgetful snow, feeding/A little life with dried tubers."[21] Several years later, he would write another poem centered on the theme of life and death, equally as unexpected, but for a drastically different reason. While the life-altering event for Hardy was his rejection of religion, Eliot's was the opposite, as he converted to Christianity.

In the poem "Journey of the Magi,"[22] the first composition influenced by his new faith, Eliot, narrating through eyes of one of the traveling magi, reflects on the lengthy journey. The opening lines echo "The Wasteland":

> A cold coming we had of it,
> Just the worst time of the year
> For a journey, and such a long journey:
> The ways deep and the weather sharp,
> The very dead of winter.

The magus proceeds to reminisce on the arduous journey, from the birth of the Christ child until the crucifixion, with "three trees on the low sky," before concluding with a final reflection:

> Were we led all that way for
> Birth or Death? There was a Birth, certainly
> We had evidence and no doubt. I had seen birth and death,
> But had thought they were different; this Birth was
> Hard and bitter agony for us, like Death, our death.

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[21] T. S. Eliot, "The Waste Land," in *The Waste Land and Other Writings* (New York: Modern Library, 2002), 38-58.

[22] T. S. Eliot, "Journey of the Magi," in *T. S. Eliot: Collected Poems, 1909-1962* (New York: Harcourt Brace Jovanovich, 1991), 99-100.

We returned to our places, these Kingdoms,
But no longer at ease here, in the old dispensation,
With an alien people clutching their gods.
I should be glad of another death.

The narrator, presumably acting as spokesperson for Eliot himself, faced a world turned upside down, the birth of Christ instantly putting to death the old way of life. While clearly still lacking full understanding of the implications of the dramatic events, the magus feels dissonance with his familiar world, full of people still clinging to their pagan deities.

Eliot's religious conversion would color the remainder of his poetic output, perhaps most profoundly with "Ash-Wednesday" and the "Four Quartets." Yet, reaction to his shift toward more liturgical writings was not wholly positive, much like the response to the magus in his poem, "With the voices ringing in our ears, saying/ That this was all folly." For some, Eliot's newfound spirituality was to the detriment of his poetry. What these critics did not realize, however, was that Eliot's poetry had always reflected the existence of God. Long before Eliot ever departed on his own magus's journey, his use of poetry pointed toward the transcendent reality waiting for him at the end. Unlike the clash between Hardy's poetic medium and Darwinian message, in Eliot's later work the two were brought into harmony. For every work of sublime literature—whether used for blasphemy or praise—pays tribute to God, without whom literature could not exist.

CHAPTER 2

THE PHENOMENON OF SUBLIME LITERATURE

"The universe is made of stories, not of atoms."[1]
—Muriel Ruykeser

"Is Dylan Literature?" This *The Wall Street Journal* headline appeared on October 14, 2016, the day after American singer-songwriter Bob Dylan became the first musician to be awarded the prestigious Nobel Prize in Literature.[2] Dylan received the reward for "having created new poetic expressions within the great American song tradition."[3] The unprecedented event sparked heated debate within the literary community on whether or not song lyrics can rightly be considered literature. An article in *The Atlantic* suggested that Dylan's acceptance of the reward paid tribute to "art's irreducibility."[4] In his unorthodox acceptance speech, Dylan observed that Shakespeare's plays were meant to be performed, just as the lyrics of his songs were intended to be sung. Although the remark was intended to disparage the consideration of his lyrics divorced from their proper musical context, the comment also pointed toward a larger question of how to define literature. In order to grant or deny song lyrics the status of literature there must first be a notion of what constitutes literature *per se*.

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[1] Muriel Rukeyser, "Speed of Darkness," in *Collected Poems Of Muriel Rukeyser*, ed. Janet Kaufman and Anne Herzog (Pittsburgh: University of Pittsburgh Press, 2006), 465.

[2] John Jurgensen and Anna Russell, "Is Bob Dylan Literature?" *Wall Street Journal*, October 14, 2016.

[3] "The Nobel Prize in Literature 2016," accessed July 12, 2018, https://www.nobelprize.org/nobel_prizes/literature/laureates/2016/.

[4] Spencer Kornhaber, "Bob Dylan's Nobel Lecture Says the Unsayable," *The Atlantic*, June 6, 2017.

Defining Literature

As with many aesthetic questions, the answer of *what* often poses less difficulty than the answer of *why*. Some works are easily identified as literature. There is little dispute that Homer's *Odyssey,* James Joyce's *Ulysses*, and the poetry of Emily Dickinson all deserve the title of literature. Other cases are less obvious—an exceptionally well-crafted instruction manual, the profane sentences etched onto the walls of a bathroom stall, or, as it were, the song lyrics of Bob Dylan. What about an exquisitely performed oral rendition of Edgar Allan Poe's *Raven?* Are the opening words, "Once upon a midnight dreary, while I pondered, weak and weary," literature when spoken orally, or only in written form? Likewise, must the work be complete or printed to become literature, or is it literature at creative conception? Nikolai Gogol's novel *Dead Souls* is widely considered one of the quintessential works in Russian literature despite ending in mid-sentence and remaining uncompleted due to the author's early death. These examples illustrate the difficulty posed by the task of defining literature. Nevertheless, in order to examine whether evolutionary theory can or cannot clearly account for the existence of sublime literature, a working definition of literature is required.

In the 1964 case *Jacabellis v. Ohio*, Supreme Court Justice Potter Steward, unable to provide a comprehensive definition of hardcore pornography, famously asserted, "But I know it when I see it." A similar approach can be taken toward literature. Establishing a "one-size-fits-all" definition of literature that accounts for all exceptions, outliers, and cultural variations is a fool's errand. Like the Twelve Labors of Hercules, the daunting task is best left for only the mightiest heroes to undertake. A more modest goal will be attempted here, although one that is sufficient for the purposes of this project. Although an all-inclusive definition is difficult to achieve, literature can be recognized by several frequent and foundational elements. American aesthetic philosopher Morris Weitz, building on the work of Lugwig Wittgenstein, proposed a

helpful "family resemblance" definition of art. Individuals share certain traits that distinguish them as belonging to a particular family (e.g., a son with his mother's eyes and hair color and his father's chin and skin complexion). While no one member possesses all such traits, the common features all point back to the same family. Weitz applies this concept to art:

> If we actually look and see what it is that we call "art," we will also find no common properties—only strands of similarities. Knowing what art is is not apprehending some manifest or latent essence but being able to recognize, describe, and explain those things we call "art" in virtue of these similarities.[5]

Therefore, rather than labor to discern the definitive substance of art, in a Platonic sense, a more fruitful starting point is to establish the shared elements frequently present in art, even though not every work will reflect all of the shared characteristics.

Three Pillars of Literature

In *Critique of Poetics,* A.R. Biswas defines literature as "an art by which expression is achieved in language."[6] The definition, while simple, touches on what is proposed in this work as three of the foundational pillars of literature: language, aesthetics (art), and literary meaning (what Biswas calls "expression"). These elements may loosely be correlated with the *how, what*, and *why* of literature and also represent a general progression in the origin of literature. Language provides the tools needed for communication and writing; man's aesthetic sensibilities expand that communicative ability beyond the boundaries of utility toward literary play and art; and the language faculty and aesthetic sensibilities are infused with meaning. Put another way, language is analogous to a pile of wood planks, aesthetics is the process of positioning and hammering that lumber together in an intentional way, and literary meaning is the

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[5] Morris Weitz, "The Role of Theory in Aesthetics," *The Journal of Aesthetics and Art Criticism* 15, no. 1 (1956): 33. See also Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe, 3rd ed. (Englewood Cliffs, NJ: Pearson, 1973).

[6] A. R. Biswas, *Critique of Poetics* (New Delhi: Atlantic Publishers & Distributors, 2005), 118.

purposing of that construction as a house. Whether or not this list of three is comprehensive is unimportant, although there are arguably no additional aspects more central to the essence of literature than these.

There are exceptions for each of the pillars, but these exceptions are inconsequential for the current discussion. That a children's picture book can feasibly be accepted as literature, despite the absence of language, does not nullify the importance of the lofty prose contained in *The Brothers Karamazov*, *Wuthering Heights*, and *Middlemarch*. Similarly, while every work of literature might not reflect each of these three elements, a work of literature is inconceivable in the absence of all three. Each of the three pillars have played a significant role in the history of literature and, when considered together, add up to a workable understanding of the phenomenon as a whole.

Literature and Language

Language is the vehicle for literature. That humans are the only species on earth with both language and literature is not coincidental. At its most base level, literature is a collection of words. More specifically, the foundation of literature is written language. The etymology of the word "literature" suggests as much. The Latin word *literature/litteratura,* derived from the root *littera* (meaning "letter"), means "writing with letters." In recent decades, some scholars have pushed for an increased fluidity for the concept of literature to include oral traditions and the many great epics and stories passed down through ancient cultures.[7] While there is some merit to the proposed shift,

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[7] Daniel P. Kunene, late Emeritus Professor of African Languages and Literature at the University of Wisconsin-Madison, wrote, "What to call this art then becomes a technicality, and our enlightenment—nay, our liberation—leads us, in turn, to liberate the term 'literature' from its erst-while over-literal definition, and by common consensus 'literature' comes to be used for all verbal art." Daniel P. Kunene, introduction to *Heroic Poetry of the Basotho* (Oxford: Oxford University Press, 1971), xi. For more discussion on the relationship between oral storytelling traditions and written literature, see Robert Kellogg, "Oral Literature," *New Literary History* 5, no. 1 (1973): 55–66; Robert Kellogg, "Literature, Nonliterature, and Oral Tradition," *New Literary History* 8, no. 3 (1977): 531–34; Ruth Finnegan, *Oral Literature in Africa* (Cambridge: Open Book Publishers, 2012); Leif Lorentzon, "Is African Oral Literature Literature?" *Research in African Literatures* 38, no. 3 (2007): 1–12.

the position taken here is the traditional view still held by the majority of literary scholars that, until these verbal stories were preserved in writing, they remained oral stories and should not be conflated with literature. Nevertheless, wherever the boundaries are drawn, both written literature and oral storytelling are built upon the necessity of language.

In fact, despite the assertion that literature is written language, this project gives little attention to the invention or development of writing systems. The reason for this is that the small step between language and a writing system is rather unremarkable when compared to the Olympian leap from no language to language. A writing system can be rightly thought of as a natural extension of a verbal language, whereas the development of language from non-language has proven to be perhaps the most unnatural and rare event in all of the animal kingdom. Furthermore, a language can exist without a writing system, whereas a writing system is inconceivable without a language.

Several objections might be given to the claim that language is a necessary pillar of literature. A blurring of mediums—children's picture books, comic books, graphic novels—would seem to challenge the necessity of language. In many cases, such as with comic books and graphic novels, the primarily visual narrative remains reliant on language to tell the story, through the use of speech and thought bubbles or captions. With purely visual works, such as a textless children's book, the work is better aligned with the visual arts than with the literary arts. Nevertheless, whether or not literature can be conceived of in the absence of language is irrelevant. The thirty-eight million books housed in the Library of Congress, as well as the countless other works in libraries around the world, reflect the importance of language to literature. Without language, works such as Achebe's *Things Fall Apart,* Defoe's *Robinson Crusoe,* Shelley's *Frankenstein,* or Dumas' *The Count of Monte Cristo* would not exist, and any understanding of literature that excludes such works is insufficient and left wanting.

Literature and Aesthetics

Literature is language, but language is not always literature. A second pillar that is needed in order for language to become literature is the *aesthetic dimension*. As with literature as a whole, this element is easier to distinguish in practice than to explain in theory. In a general sense, the aesthetic dimension is what leads most people to differentiate between novelist Stephen King's fantasy epic *The Dark Tower* and Stephen King's Sunday afternoon shopping list (or the scribbles from his wife reminding him not to forget the eggs again). What exactly this aesthetic dimension is, however, is not always immediately clear.

The concept of art is notoriously difficult to pin down. Due in no small part to the Dadaists and modernists such as Marcel Duchamp, Andy Warhol, and John Cage, the boundaries of art have been stretched to the point where the very notion of artistic boundaries is questionable. Is the aesthetic dimension something added to language, such as a poetic rhyming scheme?[8] Or, is it derived from artistic intent and context, such as the difference between Duchamp's *Fountain* and the common urinals beneath the bleachers at Wrigley Field? The answer likely finds its most suitable resting place in a combination of both of these, among many other elements.

To the formalists, what distinguished literature from ordinary language was that literature was language "made strange."[9] They defined literature by how it formulated and changed words beyond their regular usage. Literature was language that drew attention to itself. The literary theory has been rightly criticized as being too

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[8] The perceived presence of literary design is often taken as a signifier of an aesthetic work, rather than a simple proposition. For example, the propositional statement, "The cat perched on the carpet," is transformed into poetry with the addition of rhyme, as in the classic children's verse, "The cat sat on the mat." In the 1989 Academy Award winning film *Dead Poets Society,* English teacher John Keating, played by Robin Williams, accepts a recitation of the verse for a poetry assignment, criticizing it only for being ordinary.

[9] Terry Eagleton, "What Is Literature?," in *Aesthetics: A Reader On Philosophy and the Arts*, 3rd ed., ed. David Goldblatt and Lee B. Brown (Upper Saddle River, NJ: Pearson Education, 2011), 214.

limited. Consider Edward Bulwer-Lytton's opening sentence to his novel *Paul Clifford*:

> It was a dark and stormy night; the rain fell in torrents—except at occasional intervals, when it was checked by a violent gust of wind which swept up the streets (for it is in London that our scene lies), rattling along the housetops, and fiercely agitating the scanty flame of the lamps that struggled against the darkness.

The above sentence, as purple as prose can be, lives on in infamy as the poster child of overly written sentences.[10] Sublime literature is not merely that which draws attention to itself. Often times, as any competent sound engineer knows, the more people notice the technical craftsmanship, the more amateurish the performance. In his excellent essay, "The Defects of English Prose," literary critic Arthur Clutton-Brock writes: "In the best prose . . . we are so led on as we read, that we do not stop to applaud the writer: nor do we stop to question him."[11] The formalists may have overemphasized the importance of form, but literature does represent a certain artistry and craftsmanship of language. While form alone is insufficient to define literature as a whole, form and aesthetic presentation remain some of literature's key and foundational features.

In 2018, the editors of the Oxford English Dictionary revealed that the word "run" had surpassed the word "set" as the single English word with the most potential meanings—a staggering six hundred and forty-five usage cases in its verb form alone! The three-letter word will demand seventy-five columns of type in the dictionary's third edition. The semantic range of a single word is also evident in the grammatical correctness of the famous linguistic constructs: "Buffalo buffalo Buffalo buffalo buffalo buffalo Buffalo buffalo," and "fish fish fish fish fish fish fish."[12] While these examples

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[10] The infamy of the sentence led to the creation of the Bulwer-Lytton Fiction Contest, which, since 1982, has been sponsored by the English Department at San Jose State University. The contest awards the entrant who manages to compose what is deemed to be the worst and most wretched opening sentence of the year.

[11] Arthur Clutton-Brock, "The Defects of English Prose," in *More Essays on Books* (London: Methuen & Co., 1921), 84.

[12] The construct depends on the three different meanings of the word 'buffalo'; the noun adjunct (the city of Buffalo, NY); the noun (buffalo the animal, also known as bison), and the verb (meaning "to intimidate"). Thus, the sentence can be alternatively translated as "Bison from Buffalo, which other bison from Buffalo intimidate, intimidate the bison from Buffalo." In the second example, the sentence might be translated as follows: "The fish that other fish catch,

suggest a stingy and economic usage of words, there is no disputing that language is largely a phenomenon of astonishing excess.

One of the most baffling and inexplicable of all human artifacts is the thesaurus—an entire book purposed with listing words with the same or near-indistinguishable meanings. Is there any necessary difference between jumping, leaping, and hopping? Does the person who darts across the football field do so in a manner different from the person who dashes across it? Language, it would seem, has expanded well beyond the borders of simple utility. Linguist John McWhorter observes, "The world's languages are densely overgrown . . . . In any language on earth, the structure of the grammar and subdivisions of meaning it can convey far overshoot what would be necessary to even rich and nuanced communication."[13] If the sole purpose of language is the utilitarian transfer of ideas and information, then modern language is the equivalent of bringing a nuclear weapon to a knife fight.[14] The vast breadth of language is not only a well from which authors may draw, but is one largely dug by the authors themselves. Not coincidentally, many of the chief culprits responsible for swelling the vocabulary are writers, as with words such as "chortle" by Lewis Carroll, "eyesore" by Shakespeare, "nerd" by Dr. Seuss, and many others by the likes of Charles Dickens, J.R.R. Tolkien,

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catch other fish that the fish catch."

[13] John McWhorter, *The Power of Babel: A Natural History of Language* (New York: Harper Perennial, 2003), 178.

[14] Word frequency studies suggest that just twenty-five words account for one third of all published material. Also, the one hundred most frequent words account for 50 percent and the top three hundred words make up 65 percent of all written material. Lastly, a vocabulary of approximately four thousand of the most frequent words accounts for 80-90 percent of all words in a typical text a child or adult may encounter. These studies demonstrate the vast range of written communication possible with only a fraction of the vocabulary range available today. Michael F. Graves, *The Vocabulary Book: Learning and Instruction*, 2nd ed. (New York: Teachers College Press, 2016), 15. See also Edward Fry, *1000 Instant Words: The Most Common Words for Teaching Reading, Writing and Spelling* (Westminster, CA: Teacher Created Resources, 1999).

and Jonathan Swift. In fact, it has been claimed that Shakespeare introduced his audience to as many as six hundred new words in *Hamlet* alone.[15]

Historically, aesthetic impulse has always been one of the driving forces behind the inflation of language. An amusing thought-study was recently conducted to determine the breadth of Shakespeare's vocabulary. According to his concordance, "The Bard" used 31,534 distinct words in his canon (out of the 884,647 total written words). Of those words, 14,376 were used only once. Using various algorithms, researchers estimated that he knew approximately 35,000 words that were not used in his writings, giving him an estimated total working vocabulary of around 66,534 words.[16] While such approximations remain highly speculative, the fact remains that mankind possesses a vocabulary range that far exceeds any pragmatic communicative needs. Other studies, most notably by William Nagy and Richard Anderson, have calculated that the average American high school graduate knows approximately 45,000 words—fewer than Shakespeare, but surely nothing to scoff at.[17]

The remarkable excess of language is a significant aspect of literature's aesthetic dimension. The guttural utterance, "Tarzan love Jane," communicates affection in three succinct words, leaving little room for misunderstanding. Yet, humans seemingly take joy in complicating matters, such as with these poetic words by Ella Wheeler Wilcox: "How does love speak? In the faint flush upon the telltale cheek, and in the pallor that succeeds it; by the quivering lid of an averted eye; the smile that proves the

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[15] Marvin W. Hunt, *Looking for Hamlet* (New York: St. Martin's Press, 2007), 80.

[16] John D. Barrow, *100 Essential Things You Didn't Know You Didn't Know about Math & the Arts* (New York: W. W. Norton & Company, 2014), 184-87. The algorithm seemingly received validation when, several years later, a new Shakespearian sonnet was discovered and added to the canon. By using the data on word frequency throughout Shakespeare's existing canon, researchers were able to correctly predict with some accuracy the number of new words that should appear in the sonnet, as well as the number of words used just once or twice.

[17] William E. Nagy and Richard C. Anderson, "How Many Words Are There in Printed School English?" *Reading Research Quarterly* 19, no. 3 (1984): 304–30.

parent to a sigh; thus does love speak."[18] Mark Twain famously said, "The difference between the *almost right* word and the *right* word is really a large matter. 'tis the difference between the lightning bug and the lightning."[19] The sentiment that not just any word will do, and that vocabulary matters beyond the baseline of a simple transferal of information, is part of the aesthetic pillar of literature.[20]

Another element, closely related to the excess of language, is wordplay. Literature's aesthetic dimension is not just about which word among many to use, but also about how the words are used. Literature is a form of play. This can be seen in the use of poetic rhyming. Take the opening four lines from Shakespeare's *A Fairy Song*, from the second act of his play *A Midsummer Night's Dream*:

> Over hill, over dale,
> Through bush, through brier,
> Over park, over pale,
> Through flood, through fire!

Now, consider the verse again, but with two of the words exchanged for synonyms:

> Over hill, over dale,
> Through bush, through brier,
> Over park, over fence,
> Through flood, through flame!

Rhyming is unnecessary to communicate information or plot. In fact, the restricting

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[18] Ella Wheeler Wilcox, "Love's Language," in *Poems of Passion* (Chicago: W. B. Conkey Company, 1883), 9.

[19] The famous quote is written in Mark Twain's contribution to George Bainton, ed., *The Art of Authorship: Literary Reminiscences, Methods of Work, and Advice to Young Beginners, Personally Contributed to by Leading Authors of the Day* (New York: D. Appleton and Company, 1890), 88.

[20] Novelist Stephen King writes, "Throw your thesaurus into the wastebasket . . . . Any word you have to hunt for in a thesaurus is the wrong word. There are no exceptions to this rule." Stephen King, "Everything You Need to Know about Writing — In Ten Minutes," in *The Writer's Handbook*, ed. Sylvia K. Burack (Boston: The Writer, 1988), 3–9. King's disparagement of the thesaurus is motivated in part by the disruption of an author's momentum caused by stopping to search for a word. However, the advice is consistent with King's overall philosophy on writing and emphasis on simplicity, outlined in *On Writing: A Memoir of the Craft* and elsewhere. For King, not only is the excess of language unnecessary for literary utility, it can be a determent.

requirements of a rhyming scheme can arguably be limiting to the clarity of the information. Despite this, humans have been taking pleasure in rhymes for as long as they have been writing.

Another example of wordplay is with a patter song, such as the "Major-General's Song" from Gilbert and Sullivan's comic opera, *The Pirates of Penzance*:

> I am the very model of a modern Major-General,
> I've information vegetable, animal, and mineral,
> I know the kings of England, and I quote the fights historical
> From Marathon to Waterloo, in order categorical;
> I'm very well acquainted, too, with matters mathematical,
> I understand equations, both the simple and quadratical,
> About binomial theorem I'm teeming with a lot o' news,
> With many cheerful facts about the square of the hypotenuse.[21]

Enjoyment of the song is derived less from the meaning of the words and more from the way the sounds flow together. Similar are the well-known children's tongue twisters, "Peter Piper picked a peck of pickled peppers," and, "She sells seashells by the seashore." The subject of the latter rhyme is widely believed to have been inspired by real-life fossil collector Mary Anning (1799-1847), who was named by The Royal Society in 2010 as one of the most influential British women in science. That most people who have recited the tongue twister know nothing of Anning or her historical significance is an example of the aesthetic dimension of literature disconnected from any information it might convey.

A final example of literary play is man's enduring fascination with puns. For some people today, the lingering existence of puns is itself an argument against the gradual improvement promised by Darwinism! On the other hand, Alfred Hitchcock once mused, "Puns are the highest form of literature."[22] Hitchcock was not the only great artist to have had a particular fondness for puns. Scholars have estimated that Shakespeare used

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[21] W. S. Gilbert and Arthur Sullivan, *The Pirates of Penzance: Or The Slave of Duty Vocal Score* (New York: G. Schirmer, 1986).

[22] Alfred Hitchcock, interview by Dick Cavett, *The Dick Cavett Show*, June 8, 1972.

upwards of 3000 puns in his plays. In *Romeo and Juliet,* the fatally stabbed and dying Mercutio bemoans, "Ask for me tomorrow and you will find me a grave man."[23] In *Hamlet,* Claudius, in reference to Hamlet's mourning of his father, asks, "How is it that the clouds still hang over you?" Hamlet, frustrated by Claudius' constant references to him as son, responds, "Not so, my lord, I am too much in the sun."[24]

In "The Mouse's Tale" from *Alice's Adventures in Wonderland*, Lewis Carroll stacks puns upon puns. The mouse declares, "Mine is a long and sad tale," to which Alice responds, "It *is* a long tail, certainly . . . but why do you call it sad?"[25] The mouse's tale is then typeset on the page in the visual shape of a spiraling mouse's tail, while the narrative itself follows the rhyming structure of a tail-rhyme.[26] The humor of any pun derives primarily from the wordplay. As a result, the intended joke is often lost when a work is translated into a different language.

The above examples signify that the aesthetic use of language is and has always been a defining feature in literature. With the acquisition of language, man could already claim the most sophisticated and nuanced communication in the animal kingdom. Yet, ever since, he has been playing with the ability by constantly tinkering and finding new uses for it. The expansion of language into the aesthetic realm has arguably come at the expense of utility, but, for anyone who has ever spent an evening absorbed in a gripping novel, the price was well worth paying.

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[23] Shakespeare, *Romeo and Juliet,* act 3, scene 1, lines 94-95.

[24] Shakespeare, *Hamlet,* act 1, scene 3, lines 66-67.

[25] Lewis Carroll, *Alice's Adventures in Wonderland* (1898; repr., Mineola, NY: Dover Publications Inc., 1993), 16.

[26] A tail-rhyme (also called a tailed rhyme) is verse form where rhyming lines of couplets or triplets are followed by a 'tail', a line generally of shorter length that does not rhyme with the lines preceding it (e.g. AAABCCCD). With a tail-rhyme stanza, multiple tails may be rhymed with each other (e.g. AABCCB).

Literature and Literary Meaning

Literature is unique in the pantheon of art forms in that it requires a certain prerequisite of skill and ability in order to be enjoyed. Literature requires something beyond an appeal to the senses. By contrast, visual art can be enjoyed by anyone with properly working senses (i.e., not blind or color-blind) as a strictly visual experience. A child can enjoy Vincent van Gogh's *Café Terrace at Night* for its vivid yellow and blue colors and its soft shapes, without any concept of post-impressionism or deeper thematic possibilities and allusions to the Last Supper.[27] Similarly, any person with unimpaired hearing can enjoy Frédéric Chopin's *Nocturne No. 20* as an auditory experience, without any comprehension of a legato or a Picardy third. Literature, on the other hand, is not encountered as a straightforward sensory experience. A young child will stop to listen—and frequently dance—to music and stare intently at a colorful picture, but give little interest to a page of unintelligible words.[28] There is something more required; an ingredient that can be called literary meaning.

The presence of meaning allows for distinction between man's sublime literature and a page of letters typed by a monkey at a keyboard or randomly generated by a computer algorithm.[29] Consider the first two stanzas of the bizarre *Jabberwocky* poem,

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[27] Jared Baxter, "Van Gogh's Last Supper Transforming 'the Guise of Observable Reality,'" *Art History Supplement* 4, no. 1 (January 2014): 18–45.

[28] Two objections might be raised here. First, it may be argued that certain literature can be enjoyed as a strictly sensory experience, as in the visually striking forms of certain Chinese characters, or the extravagant Arabic calligraphy adorning the walls of a Mosque. In such cases, however, the letters are being experienced as a form of visual art, not as literature. Second, it might be observed that young children often find enjoyment in books read orally to them long before they can speak or grasp the meaning of the words. However, this is best understood as an auditory experience whereby the child takes pleasure in the sound of the words or, more likely, in the sound of the parent's voice.

[29] Edoardo Maggio, "There Is a New Chapter in Harry Potter's Story — and It Was Written by Artificial Intelligence," *Business Insider*, December 13, 2017, accessed July 18, 2018, http://www.businessinsider.com/there-is-a-new-chapter-in-harry-potters-story-and-it-was-written-by-artificial-intelligence-2017-12. In 2017, Botnik studios used a predictive keyboard to create a new chapter for J. K. Rowling's Harry Potter series. The new chapter, entitled "Harry Potter and the Portrait of What Looked Like a Large Pile of Ash," is an entertaining and bizarre work of fan-fiction, but is not comparable to the creation of human literature. The new chapter was possible only by feeding the seven original books into a computer program. Any meaning or sensibility of the computer-created work is derived from prior association and familiarity with the human created work. Despite rapid advances in AI technology, machines cannot create a work of literary

from Lewis Carroll's *Through the Looking Glass*:

> Twas brillig, and the slithy toves
> Did gyre and gimble in the wabe;
> All mimsy were the borogoves,
> And the mome raths outgrabe.
>
> Beware the Jabberwock, my son!
> The jaws that bite, the claws that catch!
> Beware the Jubjub bird, and shun
> The frumious Bandersnatch!

The reader may sympathize with Alice and her conclusion, "Somehow it seems to fill my head with ideas – only I don't exactly know what they are!"[30] Perhaps due to its necessary reliance on words—which are, themselves, innate vehicles for meaning—literature is deeply infused with meaning. Even the so-called nonsense literature of Dr. Seuss—filled with Zizzer-Zazzer-Zuzz, Wickershams, and Bippo-No-Bungus—is not without meaning. The children's author once mused, "I like nonsense, it wakes up the brain cells. Fantasy is a necessary ingredient in living. It's a way of looking at life through the wrong end of the telescope . . . that enables you to laugh at life's realities."[31]

A painting, musical symphony, and choreographed dance are praised as sublime works without the audience needing to grasp any implied meaning. Literature, on the other hand, if presented as just a series of words without any unifying meaning ("hook mook shook took shatterrook"), is merely tiresome. The experience is akin to an English-only speaker listening to Victor Hugo' *Les Miséerables* read orally in French. The eloquence of the French language alone is unlikely to keep the listener captivated for

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meaning *ex nihilo*.

[30] Lewis Carroll, *Through the Looking-Glass* (Mineola, NY: Dover Publications, 1999), 10.

[31] Theodor Seuss Geisel, quoted in TJ McCue, "6 Lessons from Dr. Seuss," *Forbes,* January 1, 2013. Much has been written on the importance of reason and logic in nonsensical or fantasy literature. For example, in his influential essay, "On Fairy-Stories", J. R. R. Tolkien writes, "Fantasy is a natural human activity. It certainly does not destroy or even insult Reason; and it does not either blunt the appetite for, nor obscure the perception of, scientific verity. On the contrary. The keener and clearer is the reason, the better fantasy will it make." J. R. R. Tolkien, "On Fairy-Stories," in *Tree and Leaf* (London: HarperCollins Publishers, 2001), 55.

long, nor would he be likely to perceive the mastery of the work. Sublime works of literature are predicated largely on the basis of literary meaning. Robert Louis Stevenson contended, "The difficulty of literature is not to write, but to write what you mean."[32] Any consideration of literature must go beyond its form and structure and include literature as a medium of meaning.

That is not to say that a reader must grasp any deeper message intended by the author. A child can appreciate the anthropomorphic pigs in George Orwell's *Animal Farm* without any notion of its political commentary. Literary meaning should not be confused with a work's message. Literary meaning is broader in its application, implying the degree of understanding and purpose that extends beyond the linguistic form or structure. While other major art forms operate primarily on a sensory level, the arena for literature is in the reader's consciousness. This fact can be seen in literature's unique capability to have its aesthetic form radically altered without losing the essence of the work. Charles Dickens' *Bleak House* is still a sublime work of fiction when translated into Portuguese or Mandarin, whereas to alter the form of da Vinci's *The Last Supper* or Bach's *St. Matthew Passion* would be to compromise the artwork dramatically.

In a classic sense, literature can communicate meaning through narrative, such as the classic framework of Aristotle's *Poetics*, or in archetypal stories such as J. R. R. Tolkien's *The Lord of the Rings* or Robert Louis Stevenson's *Treasure Island*. Some, perhaps the most famous being Joseph Campbell, have hypothesized that certain story motifs and plots are universal. Regardless of whether particular narrative elements are universal, the importance of narrative itself is a universal rite.

Literature does not, however, always require a traditional narrative, with characters, a plot, or even structure. Some of the greatest literary artifacts are diaries, as

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[32] Robert Louis Stevenson, "Truth of Intercourse," in *Selections from Robert Louis Stevenson*, ed. Henry Seidel Canby and Frederick Erastus Pierce (New York: Charcles Scribner's Sons, 1911), 161.

in the following passage:

> The town is breathlessly waiting in anticipation, and this anticipation is the worst of all. I wish it would end already! This is torment; this is hell. I try to escape from these thoughts, of the next day, but they keep haunting me like nagging flies. If only I could say, it's over, you die only once. But I can't, because despite all the atrocities I want to live, and wait for the following day. That means, waiting for Auschwitz or labor camp. I must not think about this so now I'll start writing about private matters.[33]

The words taken from a February 20, 1943 diary entry, were penned by Rutka Laskier, a fourteen-year old Jewish girl living in Poland during World War II. They possess a haunting beauty that is colored tragic by the reality of her death in Auschwitz later that same year.

Poetry is another example of literary meaning without the use of narrative. In "Nature Rarer Uses Yellow," Emily Dickinson uses poetry to reflect on nature's beauty:

> Nature rarer uses yellow
> Than another hue;
> Saves she all of that for sunsets,—
> Prodigal of blue,
>
> Spending scarlet like a woman,
> Yellow she affords
> Only scantly and selectly,
> Like a lover's words.[34]

The simple poem is experienced not just through its form and minimal rhyming, but through the visual image it creates in the reader's mind.

Stream-of-consciousness literature might be said to be the closest literary equivalent to abstract visual art. The following excerpt, from William Faulkner's *The Sound and the Fury,* might seem, at first glance, to lack any unifying meaning:

> Nonsense you look like a girl *A face reproachful tearful an odor of camphor and of tears a voice weeping steadily and softly beyond the twilit door the twilight-colored*

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[33] Rutka Laskier, *Rutka's Notebook: A Voice from the Holocaust*, ed. Daniella Zaidman-Mauer and Kelly Knauer (New York: Yad Vashem Publications, 2008), 36.

[34] Emily Dickinson, "Nature Rarer Uses Yellow," in *The Complete Poems of Emily Dickinson*, ed. Thomas Johnson (Boston: Little, Brown and Company, 1960) 47.

smell of honeysuckle. Brining empty trunks down the attic stairs they sounded like coffins French Lick. Found not death at the salt lick.[35]

The genre offers perhaps the closest example of literature as a seemingly random assemblage of words. Nevertheless, despite abandoning many of the traditional structural elements, steam of consciousness works are not void of literary meaning, or even of narrative. The literature communicates meaning, even when that meaning is abstract and random, as it explores and provides insight into the narrator's consciousness.

Conclusion

One of literature's defining features is its difficulty to define at all. The immense range of available literature testifies to the heights of human creativity and linguistic potential. French literary theorist Roland Barthes mused, "Literature is the question minus the answer."[36] Perhaps the most puzzling of all the questions posed by literature, however, is the riddle of its own existence. What path must have been traveled from the origin of man to the creation of his sublime works of literature? Whatever twists and turns the journey takes must include pivotal landmarks such as the acquisition of language, the development of aesthetic sensibilities, and the infusion of literary meaning. As demonstrated in the following pages, this is not a path easily traversed by a Darwinist.

It is neither necessary nor, perhaps, viable to demonstrate that evolutionary theory fails to sufficiently explain every aspect of literature. However, the inability to account for any one or more of these foundational aspects challenges evolutionary theory's ability to explain the existence of literature as a whole. Whether or not these three pillars are an exhaustive list or if every work of literature possesses each of the three is irrelevant. What matters is that so much of what is generally accepted as sublime

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[35] William Faulkner, *The Sound and the Fury* (1929; repr., New York: Vintage, 1990), 95.

[36] Ronald Barthes, "The Last Word on Robbe-Grillet?," in *Critical Essays*, trans. Richard Howard (Evanston, IL: Northwestern University Press, 1972), 202.

literature does encompass these three elements. For example, while a handful of animals do not have eyes, the majority do. Therefore, evolutionary theory must give an account for the evolution of the eye. In the same way, while exceptions to the three literary elements proposed here are conceivable, much of man's sublime literature includes these elements. Therefore, there must be a Darwinian account for each of these three. An evolutionary explanation of language but not aesthetics, or aesthetics but not language, is inadequate to explain the larger phenomenon of sublime literature.

CHAPTER 3

THE DARWINIAN PROBLEM OF LANGUAGE

> Human language is an embarrassment for evolutionary theory because it is vastly more powerful than one can account for in terms of selective fitness.[1]
>
> —David Premack

The ancient story of Psammetichus' Children, as told by the Greek historian Herodotus, illuminates man's enduring captivation with the mystery of language's origin.[2] According to the tale, the Egyptian king Psammetichus (664-610BC) conducted an experiment to discover which people were the world's oldest inhabitants. He reared two children in isolation for two years to find out which language they would use first. Eventually, the children spoke the word "bekos" (the Phrygian word for *bread*). Thus, the king concluded that Phrygian was mankind's oldest language. The famous linguistic experiment—whether truth or legend—reflects man's curiosity with the age-old question of where language came from. Deborah Gera writes,

> The solution proposed by Psammetichus to the question of the world's first language would not satisfy anyone today, but his interests in the earliest form of speech is certainly valid. We must not forget that we are no more capable of identifying humankind's first tongue than the king was.[3]

Centuries later, many scholars continue to join in Psammetichus' quest for the answer to

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[1] David Premack, "Gavagai! On the Future History of the Animal Language Controversy," *Cognition* 19 (May 1, 1985): 281.

[2] Herodotus, *The Histories*, trans. Robin Waterfield (Oxford: Oxford University Press, 2008), 95-96. Notably, Psammetichus' interest was not directly aimed at the question of how language originated, only which language existed first. The king assumes that the children's instinctive language must reflect the original language, and that the first language must belong to the first people.

[3] Deborah Levine Gera, *Ancient Greek Ideas on Speech, Language, and Civilization* (New York: Oxford University Press, 2003), 69.

one of the world's oldest mysteries.

The implications of language's enigmatic origin reach far beyond a simple linguistic curiosity. In the classic 1772 essay, *Treatise on the Origin of Language*, Johann Herder writes, "One can see that if one misses the exact point of genesis, then the field for error on both sides is immeasurably large! – then language becomes now so superhuman that God has to invent it, now so inhuman that any animal could invent it if it gave itself the trouble."[4] For scholars committed to a materialist worldview, any divine origin for language is obviously out of bounds. If naturalism is true, then language is no more a gift from the gods than lightning is a result of Zeus' unquenchable rage.

The second of Herder's two extremes, however, raises just as many legitimate questions.[5] If language is to be dragged down from the celestial realm of the gods and grounded in the natural realm, then why is it so rare? Whether or not any animal could have invented language "if it gave itself the trouble," the fact remains that no other species has invented language—at least, not one comparable to the sophistication of human language.[6] Many Darwinian scholars have wrestled with this question, positing

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[4] Johann Gottfried von Herder, *Herder: Philosophical Writings*, trans. Michael N. Forster (Cambridge: Cambridge University Press, 2002), 96. The treatise was the prize winning essay to the 1769 contest by the Berlin Academy of Sciences to answer the questions: "Supposing men were abandoned to their natural faculties, are they in a position to invent language? And by what means will they come to this invention of their own accord?" The essay is directed toward refuting the positions of Süßmilch (a literal divine explanation), Condillac (a gradualist approach to language acquisition), and Rousseau (an interjectional theory of language). Although important as a work on language's origin, the essay also raises other significant and relevant questions, such as the distinction between man and animal and the relationship between language and thought, which remain at the heart of the modern language debate.

[5] Herder's own theory attempted to find a resting place between the two extremes (represented by Süßmilch and Condillac, respectively). His theory, which will be discussed later, plays only a minor role in the language debate today. However, because of his inversion of the traditional conception of language, and emphasis on human language as a faculty of thought rather than communication, he has been called "the first Chomskyan in the history of linguistic theory." Jurgen Trabant, "New Perspectives on an Old Academic Question," in *New Essays on the Origins of Language*, ed. Jurgen Trabant and Sean Ward (Berlin: Mouton de Gruyter, 2001), 5.

[6] The concepts of *communication* and *language*, while related, are best kept distinct. All animals communicate, but, as demonstrated later in this chapter, only humans can rightly be said to possess language. Also, human communication is possible in the absence of language (e.g. the cries of a hungry infant), and language possible in the absence of communication (e.g. internal thought).

various explanations with differing degrees of success. Much like the theory of common descent, Darwinian theory is strongest when tasked to explain the development of language—the spread of languages and formation of new dialects—but becomes significantly more attenuated when challenged to explain the origin of the first language.[7] Where did language come from? A question for the ages, or more pointedly—for the Darwinian age.

Evolutionists have neither shied away from the question nor downplayed the difficulty it poses to their theory. Hungarian evolutionary biologist Eörs Szathmáry admits, "The origin of the eye, once considered one of the hardest problems for evolutionary science, now looks almost trivial compared with the problem of the origin of human language."[8] Likewise, in the 2014 article "The Mystery of Language Evolution," linguist Noam Chomsky and a collection of other neo-Darwinian heavyweights observe, "The richness of ideas is accompanied by a poverty of evidence, with essentially no explanation of how and why our linguistic computations and representations evolved."[9] While other Darwinian linguists have distanced themselves from Chomsky's pessimistic conclusions, there remains scant unanimity on an alternative.

Pre-Darwinian Theories of the Origin of Language

The search for a Darwinian explanation for language is a relatively recent endeavor which did not take serious root until the seventeenth century. Ancient man felt

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[7] In fact, the later stages of language development and formation of dialects do not even fall under the range of a traditional Darwinian explanation, as they have been shaped by cultural and historical pressures rather than evolutionary pressures. McWhorter is correct in his assertion, "Language change is neither decay nor even evolution; rather, it is transformation—a term I have deliberately used in place of *evolution*, with its connotation of progress." John McWhorter, *The Power of Babel: A Natural History of Language* (New York: Harper Perennial, 2003), 40.

[8] Eörs Szathmáry, "The Origin of the Human Language Faculty: The Language Amoeba Hypothesis," in Trabant and Ward, *New Essays on the Origins of Language*, 42.

[9] Marc D. Hauser et al., "The Mystery of Language Evolution," *Frontiers in Psychology 5* (May 7, 2014): 1.

little need to wrestle with the mystery of the origin of language, because, for them, there was no mystery. Language was assumed, along with most other realities of life, to have a divine origin—a powerful gift bestowed on man from the gods.

Little attention is given directly to the question of language, because divine origin was widely assumed and unchallenged. However, under the umbrella of an assumed divine origin are two related but differing branches of thought. In the first, man originally existed in a golden age, during which time speech is frequently attributed to beasts as well.[10] During this time, language is believed to have existed in one perfect, pure, and uncorrupted form.[11] According to the second branch, man first began in a bestial state and later acquired language in the same manner as he did every other aspect of culture. Despite man's role in the acquisition of language, however, language itself remains primarily the property of the gods.[12]

Although primarily focused on the relationship between words and meaning, not on the origin of language, the differing approaches taken by Plato and Aristotle are also relevant. In *Cratylus*, Plato addresses several issues for a conventional or arbitrary relationship between a word and a thing. Although the dialogue ends inconclusively, Plato seems to lean closer to the verdict that words are somehow connected to the thing

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[10] In his introduction to Aesop's Fables, the Greek poet Babrius writes, "Now in the Golden age not only men but all other the other living creatures had the power of speech and were familiar with such words as we ourselves now use in speaking to each other." Babrius, "Prologue," in *Babrius and Phaedrus,* trans. Ben Edwin Perry (Bury St. Edmundsbury, UK: St. Edmundsbury Press, 1965). Although Babrius had a clear vested interest in the teaching of speaking animals, his emphasis is echoed elsewhere throughout ancient Greek writing.

[11] In *Cratylus,* Plato, through the voice of Socrates, indicates that the perfect, original language was the "language of the gods." He distinguishes between the language of the gods, "who call things by the names that are naturally right," and the language of common man (ll. 391d-391e).

[12] While gods play the central role in man's acquisition of language there is no consensus on the gift-giver. In *Supplicies,* Euripides suggests that the gift-giver is an anonymous god: "First he implanted in us intelligence, then gave us speech, words' messenger, so that we might understand discourse" (ll. 203-204). In different texts, Hermes is attributed both as the inventor of language and as the divider of language. With other gods, such as Prometheus, the god's role in gifting language is implied but not explicitly stated in the text. Nevertheless, while the specific gift-giving god or gods varies, language is primarily seen as ultimately being the property of the divine.

which they name.[13] Aristotle, on the other hand, held a conventionalist philosophy on language, whereby words are symbols of things.

To a degree, the modern Darwinian approaches to the origin of language have continued to echo that of the ancient philosophies, only re-contextualized in a naturalistic framework. The modern naturalistic theories have largely maintained these two theoretical branches—that language either appeared near-instantaneously or else it was gradually created by man—with the nativists echoing Plato and the behaviorists continuing in the line of Aristotle.

Evolutionary Explanations for the Origin of Language

The secularization of western culture in the aftermath of the Enlightenment was reflected in a secularization of language. Rejecting the ancient beliefs of divine origin, German linguist Jürgen Trabant writes,

> These stories have informed the conception of language for centuries. But they are still just stories . . . . Only when theology and religion loosened their grip on European intellectual life was it possible to take a critical view of religious myths. And it is exactly at such moments that the question of language origin arises.[14]

Although pebbles had already begun to trickle down the slope, the major landslide from divine origin to natural origin of language occurred in the seventeenth century. Deborah Gera observes, "Language became secularized . . . and assigned to humans: speech dropped from its high status as God's creation and became a property of ordinary creatures, even lowly and uneducated ones, in the seventeenth century."[15] So voluminous were the attempts to provide a naturalistic explanation for the origin of language, and so meager the results, that in 1866 the Linguistic Society of Paris banned all future papers on the topic. Significant discussion on the topic faded to near obscurity during the end of

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[13] Plato's position on language is blurred further by later writings. For example, he returns to the issue in his later dialogue, *Parmenides*, which also ends largely inconclusively.

[14] Trabant, "New Perspectives on an Old Academic Question," 6.

[15] Gera, *Ancient Greek Ideas on Speech*, 131.

the nineteenth century, until Darwinism "gave final impetus to interest in the topic."[16]

To speak of a Darwinian position as a single approach is an oversimplification of a collection of theories. On the issue of language, evolutionists are united only in their shared conviction that its genesis must firmly be located in the natural world. If a supernatural explanation is to be ruled out *a priori,* then a natural solution must be found, regardless of how incomplete or unsatisfying; indeed, the Darwinian explanations for the origin of language are riddled with deficiencies. As John McWhorter acknowledges, "The fit between language evolution and biological evolution is not perfect."[17] American linguist William Dwight Whitney states the issue more directly:

> No theme in linguistic science is more often and more voluminously treated than this, and by scholars of every grade and tendency; nor any, it may be added, with less profitable result in proportion to the labor extended; the greater part of what is said and written upon it is mere windy talk, the assertion of subjective views which commend themselves to no mind save the one that produces them, and which are apt to be offered with a confidence, and defended with a tenacity, that are in inverse ratio to their acceptableness.[18]

Naturalists have had a century since Whitney's scathing remarks to strengthen their positions. Contemporary theories, spearheaded by linguistic heavyweights such as Chomsky, Pinker, Bickerton, and Everett, have done much to elevate the evolutionary position beyond the often ridiculed "bow-wow" and "pooh-pooh" theories.

The major theories for a natural origin of language can be loosely grouped into two distinct and opposing branches of thought: the behaviorist and the nativist theories. The first holds that language is a cultural tool invented by man for various purposes or tasks. Behaviorists stress continuality, with man developing language out of existing animal forms of vocal or gestural communication. Language is understood to be

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[16] James H. Stam, *Inquiries into the Origin of Language: The Fate of a Question* (New York: Harper & Row Publishers, 1976), 242.

[17] McWhorter, *Power of Babel*, 43.

[18] William Dwight Whitney, *Oriental and Linguistic Studies: The Veda; the Avesta; the Science of Language* (New York: Charles Scribner's Sons, 1893), 279.

primarily an instrument of communication, and, thus, they emphasize the social evolutionary pressures in its genesis.

The second major branch champions language as an innate, universal instinct—a capability that has its foundational elements biologically wired into human beings from birth. To the nativists, communication is a secondary function. They argue instead that language "is evolved, and is designed, primarily as an instrument of thought."[19]

Formal Theories of the Origin of Language

Before discussing the more formidable modern theories on language, several of the traditional hypotheses should be noted. In his classic work, *Language: Its Nature, Development, and Origin,* influential Danish linguist Otto Jespersen provides a helpful typology. The credibility of several of these hypotheses has been challenged from all corners of the debate, a fact demonstrated by the rather ridiculous monikers attached to them by critics of the theories. Nevertheless, each of the positions below has notable supporters and each continues to color the modern language debate to some extent.

The Bow-Wow Hypothesis

Language first arose as humans imitated animal noises—"bow wow" for dogs, "meow" for cats, "oink" for pigs, etc. Problematic, however, is that onomatopoetic sounds amount to a highly limited portion of language and different languages do not reflect any unity in their linguistic representations of natural sounds, despite animal vocalization sounding the same in any part of the world (the Chinese and Russian equivalents of the English "bow-wow" are "wu-wu" and "tyaff-tyaff," respectively). The nineteenth century linguist Max Müller commented, "The onomatopoetic theory goes

[19] Noam Chomsky, *Of Minds and Language: A Dialogue with Noam Chomsky in the Basque Country,* ed. Massimo Piattelli-Palmarini, Juan Uriagereka, and Pello Salaburu (New York: Oxford University Press, 2011), 29.

very smoothly as long as it deals with cackling hens and quacking ducks; but round the poultry-yard there is a high wall, and we soon find that it is behind that wall that language really begins."[20] The hypothesis is now generally rejected, although elements such as the role of imitation have endured in several modern theories.

The Ding-Dong Hypothesis

Language began as humans named objects to correspond with their related sounds ("boom" for thunder, etc.). Jespersen describes the theory as a "mystic harmony between sound and sense," in which each substance has a peculiar ring that resonates with some instinctual faculty within man.[21] There remains the question, however, of how names of the many non-noisemaking objects, such as a rock or tree, or abstract concepts would have developed. Few—if any—serious linguists today accept this theory.

The Pooh-Pooh Hypothesis

Jespersen articulates the theory in this way: "Language is derived from instinctive ejaculations called forth by pain or other intense sensations or feelings."[22] Over time, the articulated emotional responses to certain feelings such as joy or pain (*"ha, ha, ha"* and *"ouch"*) were adopted to correspond with the actions, and eventually developed into more sophisticated emotional expressions. Such expressions, however, represent an extremely limited part of any language, and actually depend on language rather than the other way around (e.g., expression of discomfort in English is *ouch* and in Russian is *oi*).

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[20] Max Müller, *Lectures on the Science of Language* (London: Longmans, Green, and Co., 1873), 2:97. Müller is also responsible for the unfavorable monikers attached to the formal theories, with labels such as the bow-wow theory or ding-dong theory reflecting his dissatisfaction with the hypotheses.

[21] Jespersen, *Language,* 291.

[22] Jespersen, *Language,* 291.

The La-La Hypothesis

Language arose as a consequence of the sounds made in response to love, play, and other socio-affective states. These sounds eventually developed into song and poetic feeling—the protoforms of language.[23] Although the theory plays only a minor role in the language debate today, it remains relevant to the larger discussion of literature and aesthetics. For several notable scholars—Rousseau, among others—aesthetics is not just closely related to language, but was also the soil from which it first grew.

Each of these four hypotheses remains too limited to stand as an explanation for language's origin. Although they may succeed in explaining the development of a particular range of occurrences within a language, they fail to offer a sufficient account for how language itself arose. Jespersen rightly concludes, "Each of the . . . theories enables one to explain parts of language, but still only parts, and not even the most important parts – the main body of language seems hardly touched by any of them."[24] If the theories are to maintain any value, it must be in support of a more comprehensive explanation.

Language as a Human Invention (The Behaviorist Approach)

The behaviorist approach finds its roots, in one form or another, far back into antiquity.[25] Max Müller offers the following summary:

> Language is the work of man; it was invented by man as a means of communicating his thoughts when mere looks and gestures proved inefficient, and it was gradually, by the combined efforts of succeeding generations, brought to that perfection which we admire in the idiom of the Bible, the Vedas, the Koran, and in the poetry of Homer, Virgil, Dante, and Shakespeare.[26]

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[23] Marcel Danesi, *Vico, Metaphor, and the Origin of Language* (Bloomington: Indiana University Press, 1993), 7.

[24] Jespersen, *Language*, 292.

[25] As earlier noted, Everett and other behaviorists have occasionally traced their theory back to Aristotle's conventionalist philosophy of language.

[26] Max Müller, *Lectures On the Science of Language* (New York: Charles Scribner,

While the theories differ in aspects, they all can be rightly related under the prevailing conviction of human's cultural involvement and continuality from simpler, less sophisticated animal communication systems.

Language as Cultural Tool

For anyone who was served a hearty dose of *Walt Disney* films in their childhood, the name of the "yo-he-ho" theory—another formal theory in Jespersen's typology—will likely conjure memories of the Seven Dwarfs from the 1937 Disney classic *Snow White and the Seven Dwarfs*. In the film, the seven loveable dwarfs return from a hard day of work in their diamond mine with the infectious melody, "Heigh-ho, heigh-ho. It's home from work we go." The dwarfs' song is not far removed from the linguistic theory.[27] According to the "yo-he-ho" theory (what Marcel Dansi appropriately calls *pragmo-communicative* theories or *language-as-need* theories), language originated in the context of labor and the necessity for humans to communicate in order to successfully or more efficiently accomplish a particular task.[28] The first words would therefore have been "communal grunts" as fellow laborers sought to achieve a rudimentary form of cohesion and coordination.[29]

The theory is too narrow to stand as a comprehensive theory, but echoes of it continue to reverberate in the behaviorist approach, particularly with the emphasis on

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1862), 1:31.

[27] According to the *Oxford English Dictionary*, the archaic phrase "hey-ho," first appeared in print in 1471, where it was used as a form of linguistic rendering of the rhythmic movement of heaving or hauling. In 1532, "hey-ho" was conflated with the similarly pronounced "heigh-ho," which itself carries the meaning as an expression of "yawning, sighing, languor, weariness, and disappointment."

[28] Danesi, *Vico*, 12-13.

[29] Another traditional example of the principles of the theory are the communal chants used by marching soldiers to guide their feet into united rhythm. The Russian folk tune "The Song of the Volga Boatmen" serves a similar function, with the lyrics "Yo, heave ho! Yo, heave ho! Once more, once again, still once more! Ay-da, da, ay-da! Ay-da, da, ay-da! Now we pull hard: one, two, three. Now we pull hard: one, two, three."

community and labor. The behaviorists assert that language is primarily a tool for communication, and therefore they elevate the importance of social influence. They are critical of nativists' conviction of a biological "language organ," noting that there are clear differences between language and evolved biological organs. Complex biological organs such as the eyeball are present at birth, whereas language must be learned. Also, biological organs function properly in isolation, whereas language is clearly and necessarily social.[30] If language is necessarily social, then social relations would seem a fitting context for its genesis. In his book *The Making of Language,* Mike Beaken writes,

> Language is a social creation, originating not from the individual speaker, but from the interaction between speaker and audience. Therefore when we look for the origins of language, we are simultaneously looking for the origins of the social life of human beings.[31]

For Beaken, as well as others, the most sensible social context which gave birth to language is labor:

> Language is not to be seen as the primary force in human history. That role should be ascribed to human labour, expressed in social relations surrounding different historic forms of collective activity. In the course of this activity human beings created their own language. Nevertheless, the central role of language in human activity, as an organizer of labour, and as an embodiment of notions, concepts, and ideal forms, has to be acknowledged. Without the creation of language, human labour and social consciousness could not have developed.[32]

Thus, it was through the context of labor and for the purpose of labor that humans developed the ability for more nuanced and effective communication.

Daniel Everett expresses similar beliefs with his formulaic construct: *Language = Cognition + Culture + Communication*.[33] He argues that there is not a

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[30] Mike Beaken, *The Making of Language* (Edinburgh: Edinburgh University Press, 2006), 10.

[31] Beaken, *Making of Language,* 21.

[32] Beaken, *Making of Language,* 42.

[33] In a review of Everett's book, *Language: The Cultural Tool,* Raymond S. Weitzman, Professor of Linguistics at California State University, observes that there is something odd about the formula: "Following Everett, if certain cognitive preconditions must be in place before a species of animal can have language and given that language was invented by human communities and reflects a particular community's culture, then it makes sense that cognition and culture are prerequisites for language. But according to Everett, language *was* the

language instinct (as the nativists propose), but a social instinct that acted as the driving force behind the need for language as a means to communicate, cooperate, and catalogue the world in meaningful ways. This instinct—sometimes referred to as an *interactional instinct*—gave birth to both language and culture, and both played a key role in the development of the other. If the need for social interaction and communication is the force behind the invention of language, there remains the question of how. Several theories have been offered.

From Gesture to Language

Before man talked with his mouth, he may have talked with his hands. The formal "ta-ta" theory purports that language developed with man's unconscious vocal imitation of certain physical gestures. Richard Paget—known for his extensive work in sign language—postulated that the word *mama* mimics the movement of the infant's opening and closing mouth as it approaches the mother's breast for milk. In *The Expressions of the Emotions in Man and Animals,* Darwin gives some credence to the notion, observing that when using a pair of scissors, people often unconsciously move their jaws simultaneously with the blades, and that children learning to write often twist their tongues as their fingers move. [34] Modern research has further validated the belief of some biological link between hand gestures and the mouth. The two motor systems are so closely entwined that when either gesture or speech is disrupted, the other becomes delayed.[35] As with the other formal theories, the "ta-ta" hypothesis is unconvincing and

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solution to fulfilling our need to communicate and the need of a community to maintain social cohesion. So how can communication be a precondition for language?" Raymond S. Weitzman, review of *Language: The Cultural Tool* by Daniel L. Everett, *The Analysis of Verbal Behavior* 29, no. 1 (2013): 189.

[34] Charles Darwin, *The Expression of the Emotions in Man and Animals* (London: John Murray, 1872), 2.

[35] Gillian Forrester and Alina Rodriguez, "Slip of the Tongue: Implications for Evolution and Language Development," *Cognition* (April 1, 2015): 5.

too limited. The more general gestural theory, however, has historically been one of the most popular and influential theories.

The approach posits that the use of the physical body—particularly, the use of the hands—acted as the seeds of language. Over time, as humans developed the need to refer to objects that were not physically present, there was a process that Dansi has called *visual mimesis*—an "imitation and substitution process by which visual mimetic units are transferred osmotically to the vocal apparatus."[36] A gestural origin for human vocal communication has been an attractive approach, in part, due to the gestural communication still found with non-human primates, suggesting possible continuality.[37]

From Signs to Language

If Noam Chomsky is the champion of the nativist camp, then riding out to meet him at the opposite end of the jousting pit is Daniel Everett. The feud between the two prominent linguists, highlighted in riveting—albeit one-sided—prose in Tom Wolfe's book *Kingdom of Speech,* has been well documented. Chomsky famously called Everett a "charlatan" to a Brazilian newspaper, prompting Everett to respond, "So is it personal? Yeah I think so."[38] For all the friction that exists between the two linguists on a personal level, the real conflict lies between their two opposing theories.

Everett is a fascinating figure in the language debate. His bestselling book *Don't Sleep, There are Snakes: Life and Language in the Amazonian Jungle* cemented his status as an "instant folk hero."[39] The book recounts his time living as a missionary

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[36] Danesi, *Vico*, 11.

[37] See Simone Pika et al., "The Gestural Communication of Apes," in *Benjamins Current Topics*, ed. Katja Liebal, Cornelia Müller, and Simone Pika (Amsterdam: John Benjamins Publishing Company, 2007), 35–49.

[38] Daniel Everett, interviewed in "Daniel Everett: Battle for the Origin of Language," *52 Insights*, February 9, 2017, accessed August 24, 2018, https://www.52-insights.com/daniel-everett-battle-for-the-origin-of-language-language-interview-amazon/.

[39] Tom Wolfe, *Kingdom of Speech* (New York: Little, Brown, and Company, 2016), 127.

among the Pirahã—a small tribe of Amazonian Indians in central Brazil. During that time, he broke away from both Chomsky's nativist theories and his own Christian faith. The Pirahã language, according to Everett, lacked many of the hallmarks that were associated with Chomsky's theory of universal grammar.[40] The main point of contention, which has spawned an ongoing controversy, is the apparent lack of recursion—the ability to embed one phrase within another— in the language.[41] Recursion, what Chomsky calls *unbounded merge,* has been argued as a possible candidate for the evolved adaption responsible for Chomsky's generative grammar. That the Pirahã had language without such an ability convinced Everett that Chomsky's hypothesis was wrong.[42] Thus, he presents an alternative position:

> Evolution did not create symbols or grammars. Human creativity and intelligence did. And that is why the story of how language began must also be about invention rather than about evolution alone. Evolution made our brains. And humans took over from there.[43]

In other words, increased brain size enabled humans—within the context of community— to create culture, which led to the invention of cultural signs, which eventually developed into language.

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[40] See Daniel Everett, "Cultural Constraints on Grammar and Cognition in Pirahã: Another Look at the Design Features of Human Language," *Current Anthropology* 46, no. 4 (August 1, 2005): 621–46. The Pirahã also lacked several other expected linguistic tools, such as abstract color words (beyond 'light' and 'dark'), or words for specific numbers (their counting system is limited to 'one,' 'two,' and 'many').

[41] An example of recursion is the phrase "Frank said that Jeremy thought that Susan was going to the party." The phrase 'Susan was going to the party' is embedded into the larger phrase 'Jeremy thought that Susan was going to the party,' which itself, is merged into the larger construction by adding 'Frank said that." Theoretically, such embedding could be extended endlessly, resulting in an infinite number of possible sentences, although any practical use would be lost for real communication.

[42] Chomsky and other nativists have downplayed the problem of the apparent lack of recursion in the Pirahã language. They contest Everett's assertion that the Pirahã lack the ability. However, even if they do, Chomsky argues that possessing the hardwired blueprints for a particular language faculty does not mean that every language must have every part. In other words, universal grammar represents the ability for recursive language, but does not necessitate that every language must utilize recursion in its grammar.

[43] Daniel Everett, *How Language Began: The Story of Humanity's Greatest Invention* (New York: Liveright, 2017), 18.

Everett sees no need to complicate matters with speculation of a biological linguistic blueprint when a simpler step-by-step process of gradual invention is conceivable. This gradual process, according to Everett, is: indexes, to icons, to symbols, to grammar, to gestures/intonation.[44] Thus, Everett flips the nativist paradigm by placing grammar as an end point rather than starting point. He concludes, "If one has symbols and sounds then there is no huge mental leap required to put these in some linear order . . . . Knowing the grammar . . . is just knowing the instructions for assembling the words into sentences."[45]

To the behaviorists, there is nothing mystifying about the origin of language. In order to accomplish tasks and build community, man needed a more sophisticated communicative tool. Due to their large brains, man invented one, piece by piece, out of simpler communication abilities until language and culture eventually entered into a reinforcing relationship, each allowing the other to grow and develop further. The behaviorist explanation is a simple story; but the simplest and most straightforward explanation is not necessarily the correct one.

The Inadequacy of the Behaviorist Account for the Origin of Language

Linguistic behaviorists are comparable to the clever students whose school science fair projects demonstrate astonishing ingenuity and mechanical proficiency, far beyond the simplistic volcanos or solar system dioramas of their pedestrian peers. The initial amazement felt by the competition judges is inevitably undercut by further inspection, and the suspicion that the student is claiming as their own an invention which far exceeds their ability, and more likely represents the handiwork of a creator with

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[44] Everett conceives of an *index* as a form linked to the actual physical entity it refers to (a cat-print to the cat that made the print). An *icon* physically evokes that which it refers to (a portrait of a cat). Lastly, *symbols* are conventional and arbitrary links to what they refer to (the word 'cat' or the name 'Garfield').

[45] Everett, *How Language Began*, 203-4.

superior intelligence and capability—namely, a parent. The behaviorists claim language as a human invention, but there remains a discrepancy between the known facts of language and what can be accounted for solely by means of human agency—a discrepancy which may point toward a superior creator.

More Than Monkeys: The Case For Human Uniqueness

In his quirky poem "A Little Language," American poet Robert Duncan voices a sentiment likely shared by many pet owners:

> I know a little language of my cat, though Dante says
> that animals have no need of speech and Nature
> abhors the superfluous. My cat is fluent. He
> converses when he wants with me. To speak
>
> is natural. And whales and wolves I've heard
> in choral soundings of the sea and air
> know harmony and have an eloquence that stirs
> my mind and heart—they touch the soul. Here
>
> Dante's religion that would set Man apart
> damns the effluence of our life from us
> to build therein its powerhouse.
>
> It's in his animal communication Man is
> true, immediate, and
> in immediacy, Man is all animal.[46]

Duncan is not claiming the ability to converse with his cat through a sequence of well-articulated meows. Rather, he is blurring the divide between human and animal communication—a distinction which, according to Duncan and many of the linguistic behaviorists, is a false dichotomy imposed by religion.

Man has long looked on great apes with wonder, awe, and a sense of mystifying familiarity. The famous Carthaginian explorer Hanno the Navigator, while

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[46] Robert Duncan, "A Little Language," in *Groundwork: Before the War/In the Dark* (New York: New Directions Publishing, 1984), 102.

exploring West Africa in the fifth century BC, observed that he encountered "savage people . . . whose bodies were hairy and whom our interpreters called Gorillas."[47] Man, almost instinctively, has found in apes muffled echoes of humanity. Recent advances in genetics revealing a shared DNA of as high as 98% has, for many people, validated these inclinations (although, that humans also share more than 60% of their DNA with a banana indicates that the seemingly small differences make all the difference in the world, while also giving new meaning to the phrase "you are what you eat").[48]

The potential kinship between man and ape remains at the center of the language debate. The success of the behaviorist approach hinges, in part, upon the plausibility of the notion that human communication is quantitatively different, but not qualitatively different. Everett argues,

> If communication is the basic function of language . . . then human languages are not quite so unlike the communication of other creatures as some linguists, philosophers and neuroscientists assume. Communication is, after all, pervasive in the animal kingdom. Humans are simply the best communicators, not the only ones.[49]

In other words, the difference between the communicative ability of man and monkey is one of degree, but not of kind.

An obstacle for the position, however, is the wide gap between human language and all other forms of animal communication. If language is a naturally created tool, then why have only humans thought to create it? More pointedly, why are humans

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[47] Quoted in Ian Tattersall, *Becoming Human: Evolution and Human Uniqueness* (Orlando: Harcourt, 1998), 30.

[48] Steven Pinker rightly argues that the declarations about humans sharing 98 percent or 99 percent of their DNA with apes are misleading. He observes, "Indeed, a 1% difference in total DNA does not even mean that only 1% of human and chimpanzee genes are different. It could, in theory, mean that 100% of human and chimpanzee genes are different, each by 1%. DNA is a discrete combinatorial code, so a 1% difference in the DNA for a gene can be as significant as a 100% difference, just as changing one bit in every byte, or one letter in every word, can result in a new text that is 100% different, not 10% or 20% different." Steven Pinker, *The Language Instinct: How the Mind Creates Language* (New York: HarperCollins Publishers, 2007), 361.

[49] Everett, *How Language Began*, 74.

the only species seemingly capable of developing or wielding the powerful language tool? Daniel Dennett puts the question this way:

> Culture has obviously been a Good Trick for us, but eyesight and flight are also obvious Good Tricks, and they have each evolved several times in different species. What barriers have stood in the way of other evolutionary lineages developing the same Good Trick?[50]

As seen in the arguments above, one approach to the problem is to reject the premise that language is rare.

In support of this line of reasoning are the studies and experimentation on the language acquisition of other primates. Two centuries before Darwin introduced his theories of common descent, British naval administrator Samuel Pepys, after observing a baboon which a sea captain had brought back to London, wrote in his diary: "I do believe it really understands English, and I am of the mind it might be taught to speak or make signs."[51] Centuries later, several experiments have been conducted to accomplish precisely that.

One of the earliest and most famous examples is the *Hayes' experiment* in the 1950s. Phycologists Keith and Catherine Hayes raised a chimpanzee named Vicki in their home.[52] Despite a quasi-human upbringing, as well as controversial methods of speech therapy to manipulate her lower jaw, Vicki was unable to acquire human language. By the end of the years-long experiment, Vicki could only produce four words: "mama," "papa," "up," and "cup." Cathy Hayes concluded, "The significance of Vicki's speech training lies not in the fact that she learned a few words, . . . but rather in her great

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[50] Daniel C. Dennett, *From Bacteria to Bach and Back: The Evolution of Minds* (New York: W. W. Norton & Company, 2017), 149. The belief that eyesight and flight evolved through natural selection several times, or even once, is itself a monumental challenge to a Darwinian worldview, although one that is not relevant to the current discussion.

[51] Quoted in Tattersall, *Becoming Human*, 58.

[52] The results of the study can be found in Cathy Hayes, *The Ape in Our House* (New York: Harper & Brothers, 1951).

difficulty in doing so, and in keeping them straight afterward."[53] The failure of the *Hayes' experiment* largely put an end to aspirations of teaching apes human speech.

Much of the failure of the *Hayes' experiment* was attributed to physiological differences that prevent primates from producing the necessary sounds.[54] Due to these physiological limitations, future experiments shifted toward non-vocal communication. The new focus instilled fresh hope into the enterprise**.** Cognitive scientist Philip Lieberman concludes, "The sole aspect of human linguistic ability that chimpanzees lack is speech."[55] Of these later experiments, the most famous involve the primates Washoe, Nim, and Koko. Yet, these subsequent ape experiments are often clouded by fanciful legend, selective facts, and, frequently, pure falsehoods.

On November 1, 2007, a *New York Times* headline read, "Washoe, a Chimp of Many Words, Dies at 42."[56] The famed west African chimpanzee was adopted and trained in American Sign Language (ASL) by psychologists Allen and Beatrix Gardner. By the end of *Project Washoe* the chimp was touted to have learned as many as 350 words. The success inspired *Project Nim*, in which a chimpanzee named Nim Chimpsky—a humorous play off of linguist Noam Chomsky's name—was raised as a human child, diapers and all, and taught ASL. While Nim was reported to have acquired approximately 125 signs, the five-year project was regarded as an overwhelming disappointment and failure by trainer Herbert Terrance, an effort which not only failed to

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[53] Hayes, *Ape in Our House,* 241.

[54] Philip Lieberman, *Eve Spoke: Human Language and Human Evolution* (New York: W. W. Norton & Company, 1998), 45-48. For example. Lieberman argues that the larynx was originally designed for stalling food and breathing, but was modified in humans and allows the production of more sounds. Thus, the uniquely human shared anatomy of breathing and eating that makes humans susceptible to choking to death on food lodged in the larynx also grants humans the ability for speech production.

[55] Philip Lieberman, "On the Subcortical Bases of the Evolution of Language," in Trabant and Ward, *New Essays on the Origin of Language*, 37.

[56] Benedict Carey, "Washoe, a Chimp of Many Words, Dies at 42," *The New York Times*, November 1, 2007.

replicate the results of *Project Washoe*, but also called into question the validity of that earlier success.

The third significant player in the chimp language experiments was Koko, a female western lowland gorilla. Koko's trainer, Francine "Penny" Patterson, taught Koko a modified version of ASL, which she called "Gorilla Sign Language" (GSL). She reported that Koko was able to understand more than one thousand words in GSL. As a result, Patterson declared boldly, "Language is no longer the exclusive domain of man**.**"[57] Koko, celebrated as "the gorilla who knew sign language" when she died, became a cultural icon, befriending fellow celebrities such as Robin Williams, Mister Rogers, and Betty White.[58] One tributary article in the *Chicago Tribune* was titled, "Death of Koko, the Signing Gorilla, Reminds Us What it Means to Be an Exceptional Human Being."[59] The language gap between man and ape, it seemed, was finally closed.

The actual facts of the experiments, when stripped of the sentimental and inspiring narratives, suggest otherwise. Patterson's bold declaration on the implications of Koko's success is less a reflection of the primate's language acquisition ability and more a testament to a willingness to accept suspect and flimsy data to support that conclusion. The lasting legacy of decades of experimentation is not the limited number of signs learned, but the overall failure to achieve its initial goal and a continual lowering of the bar. What began with aspirations of teaching vocal language to a primate was lowered to settling for teaching non-vocal ASL, to eventually accepting a simplified GSL. Even the meager success of the experiments remains questionable and arguably does more to

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[57] Francine P. Patterson, "Linguistic Capabilities of a Lowland Gorilla" (PhD diss., Stanford University, 1979), quoted in Tony Malim and Ann Birch, *Introductory Psychology* (New York: Palgrave, 1998), 385.

[58] Associated Press, "Koko, the Gorilla Who Knew Sign Language, Dies at 46," *Chicago Tribune*, June 21, 2018.

[59] Dahleen Glanton, "Death of Koko, the Signing Gorilla, Reminds Us What It Means to Be an Exceptional Human Being," *Chicago Tribune,* June 26, 2018.

affirm the gap between man and primate than to collapse it. One skeptic of the experiments' alleged success remarked amusingly that the primate subjects were most likely "making monkeys out of their keepers by imitating or Clever-Hansing them."[60]

Equally troublesome is the substantial gap that remains between the acquisition of a collection of signs and the possession of what can rightfully be considered language. Even if Chomsky's *unbounded Merge* is rejected as the dividing line between language and non-language, the primates lack an even rudimentary grasp of sentences or syntax. Are the primates truly acquiring language or are they merely learning a collection of actions which they have been conditioned to associate with a desired reward? The current evidence leans in favor of the latter. Just as dogs can be taught to roll over and shake a paw, chimps can be conditioned to make hand gestures; but neither is underlined by an understanding of the actions. Advocates of the innatist approach rightly conclude, "Though these studies are of potential interest to understanding the acquisition of specialized, artificial skills—akin to learning a computer language—they do not inform understanding of language evolution."[61]

The failure of the chimp experiments demonstrates that while culture is clearly important to the development of language, culture alone cannot account for a human's ability to learn language. Chimpanzees raised in human environments do not acquire human language, despite undergoing far more intensive training than any human child does while grasping language with remarkable ease. In fact, studies of deaf children

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[60] Nicholas Wade, "Does Man Alone Have Language? Apes Reply in Riddles, and a Horse Says Neigh," *Science* 208, no. 4450 (June 20, 1980): 1349. Clever Hans was an Orlov Trotter during the early 1900s. The horse became a German sensation that amazed crowds with the apparent ability to perform arithmetic. As complex mathematical questions were asked, Hans would tap his foot the correct number of times for the answer. An investigation into the sensation, however, discovered the truth behind the phenomenon. The horse was no math prodigy, but did demonstrate a keen aptitude for reading facial and body gestures. The horse was picking up on subtle body gestures from the questioners such as the release of facial tension, as he approached the correct number of hoof taps. The tests revealed that when the questioner knew the answer to the question, Hans was successful 89 percent of the time. When the questioner did not know the answers, Hans' success rate plummeted to a mere 6 percent.

[61] Hauser et al., "The Mystery of Language Evolution," 4.

further reveal the divide between human and chimp language abilities. These studies reveal that deaf children, lacking any auditory tutorship, can "spontaneously create signing systems that have many hallmarks of natural spoken language, with structure at both word and sentence levels."[62] Perhaps Steven Pinker says it best: "Even putting aside vocabulary, phonology, morphology, and syntax, what impresses one the most about chimpanzee signing is that fundamentally, deep down, chimps just don't 'get it' . . . . They never seem to feel in their bones what language is and how to use it."[63] Only by deconstructing language to a nearly unrecognizable state can one honestly find speech on the tongues or hands of primates. Anderson and Lightfoot correctly observe, "It is not far-fetched to compare the situation regarding language in other primates with the fact that humans, even with intensive training, are incapable of free flight."[64] The alluring image of the talking primate will for now, and likely forever, remain relegated to the domain of classic science fiction, such as the *Planet of the Apes* movie franchise.

The Inadequacy of the Continuality Model

Advocates of language continuality may rightly object that the criticism of primates' inability to learn human language is unfair and backwards. Instead of demonstrating that primates can make the same leap forward as humans, what really matters is that other animals provide a suitable jumping off point for the creation and development of human language. However, the continuality model finds no more solace

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[62] Gary F. Marcus and Simon E. Fisher, "FOXP2 in Focus: What Can Genes Tell Us about Speech and Language?" *Trends in Cognitive Sciences* June, no. 6 (2003): 257. See also Susan Goldin-Meadow and Heidi Feldman, "The Development of Language-Like Communication Without a Language Model," *Science* 197, no. 4301 (June 22, 1977): 401–3; Susan Goldin-Meadow and Carolyn Mylander, "Spontaneous Sign Systems Created by Deaf Children in Two Cultures," *Nature* 391 (January 15, 1998): 279–81; Ann Senghas and Marie Coppola, "Children Creating Language: How Nicaraguan Sign Language Acquired a Spatial Grammar," *Psychological Science* 12 (2001): 323–28.

[63] Pinker, *Language Instinct*, 349.

[64] Stephen R. Anderson and David W. Lightfoot, "The Human Language Faculty as an Organ," *Annual Review of Physiology* 62, no. 1 (March 2000): 18.

down this path than the other. There simply does not appear to be any animal model from which human speech could have developed. The two most commonly cited possibilities are songbirds and primates, yet neither delivers on its initial promise.

Birdsong. On the surface, songbirds provide an intriguing possibility. Darwin himself suggested that "the sounds uttered by birds offer in several respects the nearest analogy to language."[65] In fact, so connected is birdsong and Darwinian evolution that it was the sole example of animal sound in the 1997 Darwin College Lecture Series on "sound."[66] There are indeed several parallels between human language and birdsong. There is a necessary social element and learning process for both birds and humans, with critical periods where language or song acquisition is optimal. There is also a degree of geographical variation in the songs of songbirds that might be loosely equated with different dialects of human speech.

Another similarity between human speech and birdsong is the learning process. A wealth of research, as well as simple observation and experience, have widely demonstrated that a human's optimal period of language acquisition is in childhood rather than adulthood. Infants are "universal phoneticians" only until around ten months of age, after which they become largely restricted to the speech of their parents.[67] Human children suffer a steep drop off in their language acquisition ability around the age of six, after which the learning of a new language becomes markedly more difficult.[68] Birds undergo a similar learning process. They progress through a similar stage of babble before learning the proper songs. Analogous with human children, songbirds have an

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[65] Charles Darwin, *Descent of Man and Selections in Relation to Sex* (London: John Murray, 1871), 55.

[66] Rachel Mundy, "Birdsong and the Image of Evolution," *Society & Animals* 17, no. 3 (June 2009): 213.

[67] Pinker, *Language Instinct*, 272.

[68] Pinker, *Language Instinct,* 298.

early period of twenty to fifty days of "extreme plasticity," followed by a gradual decline in ability which is eventually lost after around 100-150 days.[69]

These initial similarities should not mask the enormous gap and the significant differences between the two. Despite arguing for the similarities, Doupe and Kuhl acknowledge, "Going beyond the superficial analogy . . . requires some caveats about what may be comparable and what clearly is not."[70] Although they follow relatively parallel tracks to acquiring their vocal communicative abilities, the ability itself is analogous only in the vaguest sense:

> The grammar and other aspects of meaning in human speech are the most obvious differences between birdsong and speech. These differences suggest that although human speech is undoubtedly built on preexisting brain structures in other primates, there must have been an enormous evolutionary step, with convergence of cognitive capacities as well as auditory and motor skills, in order to create the flexible tool that is language.[71]

Whatever similarities exist in the learning process are undone by the irreconcilable nature of the abilities themselves.

Primates. While the acquisition of human language has remained out of reach for other primates, their own communicative abilities have been a popular location to pin the birth of human language. The specialized vocal calls of the vervet monkeys are one of the more popular candidates. They famously have different alarm calls corresponding to their main predators: leopards, pythons, and eagles. Each of the alarm cries produces a different response from the monkeys (e.g., retreating into the bushes to escape an eagle, retreating up a tree to avoid a leopard, standing bipedally and looking down for a python). The likelihood of these calls as a possible protolanguage, however, is extremely

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[69] Allison J. Doupe and Patricia K. Kuhl, "Birdsong and Human Speech: Common Themes and Mechanisms," *Annual Review of Neuroscience* 22, no. 1 (July 1999): 612.

[70] Doupe and Kuhl, "Birdsong and Human Speech," 569.

[71] Doupe and Kuhl, "Birdsong and Human Speech," 620.

limited. In many ways, primates fall short of providing a feasible answer to the continuality problem for the opposite reasons as birdsong. Hauser et al note:

> Research on nonhuman primates has focused more on how sounds are produced than how they are acquired because our closest relatives exhibit no parallels (genetically, neurobiologically, and behaviorally) with child language acquisition: there is no vocal learning, no babbling, no sensitive period, no inductive leaps.[72]

Whereas birdsong paralleled human language in the learning process but not the ability, the primate alarm calls have no such resemblance.

In addition to a vastly different acquisition process, the primate calls lack many of the hallmarks of human language. For example. a significant distinction between humans and other primates is the ability to use language in the abstract or in absence of a referent. Berwick and Chomsky argue, "Crucially, even the simplest words and concepts of human language and thought lack the relation to mind-independent entities that appears characteristic of animal communication."[73] The alarm cries of the vervet monkeys seem to be instinctively triggered by the sight of the corresponding predator. In fact, infant apes raised in isolation or among other species of ape suffer no significant changes, and will still essentially produce all the instinctual species-specific calls.[74] This limitation is supported by the earlier primate language experiments, in which the modest success of those experiments was almost entirely dependent on the referent being present. The primates appear incapable of communicating about or referring to an object without that object being physically present, an ability that a normal human child demonstrates early on in their imaginative play.

Famed primatologist Jane Goodall, on the basis of her extensive research on chimpanzee social interactions, observed, "Chimpanzee vocalizations are closely bound

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[72] Hauser et al., "The Mystery of Language Evolution," 4.

[73] Robert C. Berwick and Noam Chomsky, *Why Only Us: Language and Evolution* (Cambridge, MA: The MIT Press, 2017), 84.

[74] Pika et al., "The Gestural Communication of Apes," 42.

to emotion. The production of a sound in the *absence* of the appropriate emotional state seems to be an almost impossible task for a chimpanzee."[75] Several more recent studies have suggested that the inability is biologically based:

> Even among chimpanzees, sound production appears to be controlled in the brain by the ancient structures of the limbic system and the brain stem . . . which are involved in emotional response . . . . This is a far cry . . . from language as we humans know it, which is initiated in those higher centers (the cerebral cortex) and is dependent on production and interpretation of sounds in isolation from the emotional states of the speaker and hearer . . . . Not only do chimpanzees not have language; they don't even have an incipient form of it.[76]

The ability for iconic or symbolic thought is impossible for apes. This is true in both vocal and gestural communication.

Ape gestural communication is highly limited, restricted to calling attention to themselves or requesting an immediate action toward themselves. On the basis of more than two decades of study on the gestural communication of non-human primates, Pika et al conclude, "Overall then, we have much evidence that nonhuman primates use their gestures much more flexibly than their vocal signals. But we still have very little evidence that they use any of their gestures symbolically or referentially."[77] In Everett's proposed gradual progression of language invention—indexes, icons, symbols, grammar, gestures/intonation—only humans have ventured beyond the initial stage.[78] This indicates

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[75] Jane Goodall, *The Chimpanzees of Gombe: Patterns of Behavior* (Boston: Harvard University Press, 1986), 125.

[76] Tattersall, *Becoming Human*, 61.

[77] Pika et al., "The Gestural Communication of Apes," 47-48.

[78] Everett, *How Language Began*, 90-91. Even with humans, the pathway is murky at best. In the same way that there is no intermediary language found in the animal kingdom, archeological evidence does not lend much support to Everett's gradual progression of human language. Everett relies on flimsy evidence to support his claim that pre-language man had the ability to think ironically or symbolically. The primary evidence for his claim is the Makapansgat pebble, a stone which bears resemblance to a human face, and was located in a cave a significant distance from where rocks of that sort would have been found. The assumption, then, is that the stone was taken and carried due to the iconic recognition of the facial features. However, such conclusions are entirely speculative. The stone may have been brought to the cave for a plethora of other reasons, and its importance is ascribed to it only on the basis of modern man's ability to recognize the resemblance to a human face. Arguably, the reason the Makapansgat pebble is displayed as a prominent piece at the British Museum is because of its rarity.

that there is some distinct quality in man, not found anywhere else in the animal kingdom, which enabled him alone to develop symbolic communication

In sum, the inadequacy of the continuality model is evident when examined in either direction—both in the failure of other animals to acquire human language and in the considerable difficulty in reverse-engineering human language back to any animal protolanguage. While it is theoretically conceivable that human language developed out of an unknown animal form, there are no known forms of animal communication that provide an attractive possibility.

The Circular Dependence of Reason and Language

Concerning speech in the animal kingdom, the Italian poet Dante Alighieri wrote:

> Man alone amongst the animals speaks and has gestures and expression which we call rational, because he alone has reason in him. And if anyone should say in contradiction that certain birds talk, as seems to be the case with some . . . and that certain beasts have expression or gestures, as the ape and some other seem to have, I answer that it is not true that they speak, nor that they have gestures, because they have no reason, from which these things need proceed.[79]

The relationship between speech and reason has long been an important element of the language debate. German pastor and demographer Johann Peter Süßmilch has been called the last strong voice for the divine origin of language.[80] In 1766, he published an article titled *An Attempt to Prove that the First Language Originated Not from Man, but from the Creator Alone*. His argument is built on what he viewed as a chicken-and-egg scenario and a circular dependence of language and rational thought:

> If [language] were acquired, it would either consist of random sounds, which would be unsystematic, or else it would be systematic and therefore reasonable. The latter is the case, therefore language is the product of reason. But reason cannot be

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[79] Dante Alighieri, *Convivio*, ed. and trans. Andrew Frisardi (Cambridge: Cambridge University Press, 2017), 161.

[80] Gera, *Ancient Greek Ideas*, 132.

> conveyed without signs (ie. speech or writing): therefore, language cannot be of human origin: therefore, it must be God-given.[81]

In other words, the development of a systematic language requires rational thought, while rational thought requires language. Thus, neither property can be created from within the circle and can only exist if given to man from something outside and apart from man—namely, God.

Writing in the 1700s, Süßmilch was a product of his age and lacked the breadth of cognitive and linguistic research available today. Even at the time of writing, his argument was criticized, most famously by Johann Gottfried Herder in his prize-winning essay *Treatise on the Origin of Language.*[82] Herder contested Süßmilch's suggestion that reason cannot exist without language, or language without reason.[83] He asserts,

> Why does thinking reasonably right away signify thinking with fully developed reason? Does the assertion that the infant thinks with reflection signify that it reasons like a sophist from his rostrum or a statesman in his cabinet?[84]

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[81] Johann Peter Süßmilch, "An Attempt to Prove That the First Language Originated Not From Man, But from the Creator Alone" (1766), quoted in Paul Salmon, "Origin of Language Debate in the Eighteenth Century," in *Concise History of the Language Sciences: From the Sumerians to the Cognitivists*, ed. E. F. K. Koerner and R. E. Asher (New York: Pergamon, 1996), 185.

[82] Süßmilch argued for a divine origin of language, in part, on the basis of the perfection of language, specifically, how all the sounds of all the known languages can be reduced to twenty odd letters. Herder, rightly, refutes the argument, declaring, "The fact is wrong, and the conclusion still wronger." Johann Gottfried Herder, "Essay on the Origin of Language," in *On the Origin of Language*, trans. John H. Moran and Alexander Gode (Chicago: University of Chicago Press, 1986), 92. Süßmilch's argument for the perfection of language, as he conceives it, does not measure up against a modern linguistic understanding. However, contemporary linguists such as John McWhorter, have argued that contemporary language is neither improving nor deteriorating, it is simply changing and adapting. In other words, the foundational rules of human language are perfectly suited for the task, and only on the surface level of dialects or standard speech is there any room for change.

[83] One of Herder's most pointed critiques is that Süßmilch's argument can be turned against him and his theory of divine origin. He writes, "How can man acquire language through divine instruction if he lacks reason?" Herder, "Essay on the Origin of Language," 121. Herder asserts that in order for Adam and Eve to have perceived the first divine words spoken to them they must therefore have had reason. In which case, they would have—in Süßmilch's approach—already had language. Thus, according to Herder, Süßmilch's divine origin theory is undone by the same circular dependence as the naturalist approach. Herder appears committed to the belief that one must have necessarily come out of the other—language from reason, or reason from language. As is discussed in chapter 6 of this work, however, a third option exists, whereby reason and language originate simultaneously as parts of a unified whole, given to man from God.

[84] Herder, "Essay on the Origin of Language," 112. The point Herder seems to be making is that even human infants are capable of a degree of reasonable thought beyond that of an animal, despite not possessing language. Therefore, an infant, with a higher reasoning ability than an animal, but less than a fully developed adult, demonstrates that reason is not an all-or-

The argument touches on a larger linguistic debate concerning the relationship between language and thought and to what degree, if any, thought is shaped or dependent on language.

This concept was explored in a fanciful way in the 2016 Academy Award-nominated science fiction film *Arrival.* In the film, the arriving aliens possess a circularly shaped language which grants them, and the human characters who learn their language, the ability to experience time in a non-linear fashion. While obviously exaggerated in Hollywood fashion, the notion that the experience of the real world is fundamentally determined by language is known as the linguistic relativity hypothesis.[85] The origin of the hypothesis is most frequently accredited to the Prussian linguist and philosopher Wilhelm von Humboldt, although it gained widespread popularity with Edward Sapir and his student, Benjamin Lee Whorf, and is now often called the Sapir-Whorf Hypothesis.[86] Sapir argues:

> The fact of the matter is that the 'real world' is to a large extent built upon the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached . . . . We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation.[87]

The most famous example of the hypothesis is the widely circulated fact that Eskimo have multiple words—sometimes claimed to be as high as one hundred—for the single

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nothing ability. Thus, Herder argues that it would have been possible for man to develop language even without having his full reasoning potential unlocked by the possession of language.

[85] Linguists distinguish between linguistic determinism and linguistic relativity, a hard and soft version of the hypothesis. Linguistic determinism states that thought and culture are determined by language. Linguistic relativity holds that worldview is significantly influenced by language, but not rigidly determined by it. Linguistic determinism is now widely rejected, while linguistic relativity still plays a role in modern linguistics.

[86] The name of the Sapir-Whorf Hypothesis is somewhat of a misnomer as Sapir and Whorf never published together on the hypothesis or presented the belief in a formal theory.

[87] Edward Sapir, *Culture, Language and Personality* (Berkeley: University of California Press, 1958), 69.

English word for snow. This fact is purported to reveal how the Eskimo have a fundamentally different perception and experience of nature, and how more primitive cultures understand and catalogue the world differently. But the narrative is a hoax, the result of misrepresented facts repeatedly passed on like a childhood game of telephone and propagated by eager imaginations.[88] The many Eskimo words for snow, rather than reflecting a different experience of reality, are simply a byproduct of linguistic choices in their language. They use distinct roots for different forms of snow, in the same way as English does for different forms of water (e.g., lake, rain, wave, river).[89] Far from providing any radical insight into worldview perception, the "Eskimo vocabulary for snow" story is merely a mundane reflection of a linguistic system which could well have been otherwise. In recent years, John McWhorter, among others, has argued convincingly against and all but discredited the Sapir-Whorf hypothesis.[90]

The refutation of the Sapir-Whorf hypothesis, however, does not invalidate the position that thought and reason are, to some degree, dependent on language. Süßmilch did not argue that any thought is impossible without language: "Man could indeed have thought without language, but he could not have thought rationally."[91] In this, Herder seems to agree:

> No animal, not even the most perfect, has so much as the faintest beginning of a truly human language. Mold and refine and organize those outcries as much as you wish; if no reason is added, permitting the purposeful use of that tone, I do not see

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[88] Geoffrey K. Pullum, "The Great Eskimo Vocabulary Hoax," *National Language and Linguistic Theory* 7 (1989): 275–81. The source of the belief can be traced to anthropologist Franz Boas, in his introduction to *The Handbook of North American Indians* (1911). Whorf then gave vague reference to Boas' example in an article in 1940.

[89] The proposition that English has only a single word for snow is debatable as well. For example, different forms of snow can be spoken of as snow, slush, sleet, or a blizzard.

[90] See John H. McWhorter, *The Language Hoax* (New York: Oxford University Press, 2016).

[91] Süßmilch, quoted in Salmon, "Origin of Language Debate in the Eighteenth Century," 186.

how . . . there can ever be a human language—a language of volitional speech.[92] Herder does not deny the premise that the invention of language requires man's reasoning faculties; rather, he claims that man's ability to reason did not require language. Just as animals have instincts, man is endowed with reason. Thus, Herder's main argument against Süßmilch's literal divine origin theory is merely to assume man's capabilities to invent language.

Herder's approach is reflected in the modern behaviorist approach. Everett declares, "If one has symbols and sounds then there is no huge mental leap required to put these in some linear order . . . . Knowing the grammar . . . is just knowing the instructions for assembling the words into sentences."[93] Everett takes the relationship between language and reason for granted. He operates on the assumption that with the increase in the human brain size comes reason and the ability to invent language: "*Homo erectus* is the evidence that apes could talk if they have brains large enough. Humans are those apes."[94]

The link between brain size and language, however, is not nearly as direct as Everett insists. Berwick and Chomsky observe, "Though brain size increased throughout the *Homo* lineage, with Neanderthal cranial capacity becoming on average larger than modern humans, the behavioral and material record lags behind."[95] Likewise, Bickerton notes that the fact that humans have large brains and are the only species with language suggests at least some connection between the two, but that there is no evidence that a larger brain results in language.[96] While large brains would seem to be a prerequisite for

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[92] Herder, "Essay on the Origin of Language," 99.

[93] Everett, *How Language Began*, 203-4.

[94] Everett, *How Language Began,* 194.

[95] Berwick and Chomsky, *Why Only Us*, 38.

[96] Derek Bickerton, *Language & Species* (Chicago: University of Chicago Press, 1990), 133. Bickerton observes that both dwarfs and microcephalics are capable of normal human speech despite having brains smaller than the human norm. Thus, contrary to some popular belief, he asserts that a "big brain" is little indication of intelligence or cognitive power. Similarly, when British neurologist Oliver Sacks was asked by travel writer Paul Theroux whether a

reason, and thus language, brain size is itself not a simple explanation for man's rational faculties and language ability. It would appear, then, that the vital aspect of man necessary for the invention of language—his reason—is itself partially a product of language. A suitable summary of the issue is given by Prussian philosopher, William von Humboldt:

> Language, I am fully convinced, must be looked upon as being an immediate given in mankind. Taken as a work of man's reason, undertaken in clarity of consciousness, it is wholly inexplicable. Nor does it help to supply man with millennia upon millennia for the "invention" of language. Language could not be invented or come upon if its archetype were not already in the human mind . . . . As natural as the supposition of the gradual development of languages is, yet the "invention" of language could only happen all at once. Man is man only through language; to invent language, he would have to be man already. As soon as one imagines that it happened gradually . . . , that by means of a bit more invented language, man became more human, and being more human, thus was enabled to invent a little more language, one fails to recognize the indivisibility of human consciousness and human speech, and the nature of the intellectual act which is necessary to comprehend but a single word, but which then suffices to comprehend all of language.[97]

On the one hand, human language is difficult to account for as a human cultural invention. On the other hand, to deny the gradual invention of language in favor of its sudden emergence, to quote Everett, is "just invoking a miracle."[98] For the Darwinist, therefore, if no divine source of this miracle is viable, then an evolutionary explanation must be provided. As the remainder of this chapter demonstrates, this has remained a difficult, if not impossible, aim to achieve.

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microcephalic person has language, Sacks replied, "Oh, yes, the brain may be smaller than a cat's, but they have language. Brain sizes are interesting. Turgenev's endocranial cast is 2,100 cc, versus Anatole France, who had barely 1,000 cc of brain." Paul Theroux, "Dr. Sacks, the Healer," in *Figures in a Landscape, People and Places, Essays: 2001-2016* (Boston: Houghton Mifflin Harcourt, 2018), 110.

[97] Wilhelm von Humboldt, *Humanist without Portfolio: An Anthology of the Writings of Wilhelm von Humboldt,* trans. Marianne Cowan (Detroit: Wayne State University Press, 1963), 30.

[98] Everett, *How Language Began*, 71.

Language as Innate Instinct
(The Nativist Approach)

Man understandably desires credit for what would undoubtedly be deemed the greatest invention, not just of our species, but of any species. In the words of Tom Wolfe, the creation of speech gave man a "veritable nuclear weapon," firmly fortifying him in a position of power above all other creatures on earth.[99] Yet, the most gratifying answer is not always the correct one. In opposition to the behaviorist approach are the linguistic nativists, who view the idea of man inventing language as no more than a romantic fantasy which falls well short of truly accounting for the reality of speech. Nativists assert that language is not a cultural artifact, but "a distinct piece of the biological makeup of our brains."[100] As Trabant observes, with the nativist theory "linguistics is, all of the sudden, surrounded in biology."[101] Although some presumptions of innate language universals have existed since antiquity, many of the specifics and biological implications remain unexplored or enigmatic. Guy Deutscher humorously remarks, "Let five linguists loose in a room and ask them to discuss innateness — chances are you will hear at least seven contradictory opinions, argued passionately and acrimoniously."[102] Despite several variants and disagreements, there are several shared pillars which, when taken together, prop up the position that makes up the nativist manifesto of a biological basis for language.

Language Universals

Steven Pinker notes, "The universality of complex language is a discovery that fills linguists with awe, and is the first reason to suspect that language is not just any

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[99] Wolfe, *Kingdom of Speech*, 163.

[100] Pinker, *Language Instinct*, 4.

[101] Trabant, "New Perspectives," 9.

[102] Guy Deutscher, *The Unfolding of Language: An Evolutionary Tour of Mankind's Greatest Invention* (New York: Metropolitan Books, 2005), 16.

cultural invention but the product of a special human instinct."[103] Historically, the emphasis when comparing languages has been on what makes them different. The nativists flip this paradigm, asserting that emphasizing the differences obscures the remarkable degree to which all languages are the same. This fact is highlighted through Chomsky's famous "Martian linguist" argument. In the hypothetical scenario, Chomsky postulates that were an alien from a distant planet to visit earth and study our human speech, the extraterrestrial would conclude that, despite mutually unintelligible vocabularies, all Earthlings were merely speaking different dialects of a single language.

The nativists contend that while there may be differences on the surface level of different languages, these are underscored by remarkable linguistic similarities at a deeper, foundational level:

> The universal plan underlying languages, with auxiliaries and inversion rules, nouns and verbs, subjects and objects, phrases and clauses, case and agreement, and so on, seems to suggest a commonality in the brains of speakers, because many other plans would have been just as useful. It is as if isolated inventors miraculously came up with identical standards for typewriter keyboards or Morse code or traffic signs.[104]

The significance of these highly specific commonalities is amplified if, as many nativists believe, there is no validity to the hypothesis of a single cradle language which then spread. The nativists claim we must thus locate the source of these astounding similarities elsewhere, as the result of shared biology rather than shared culture.

Derek Bickerton supports the conclusion by drawing upon his extensive work on the creole languages in Guyana and Hawaii and the process whereby pidgin languages transition into creole languages. According to *The Language Bioprogram Theory,* championed by Bickerton, the many structural similarities shared by different creole languages cannot be accounted for exclusively by the creole's *superstrate* and *substrate*

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[103] Pinker, *Language Instinct*, 14.

[104] Pinker, *Language Instinct,* 32.

languages, indicating the influence of a universal grammar instinct.[105] He hypothesizes that linguistic creolization happens when children, immersed in a highly unstructured pidgin, allow their innate grammar instinct to expand and develop the pidgin into a more structured creole language. Because the mechanism which facilitates the transition is innate and universal, the resulting creole languages share many universal similarities.[106]

Poverty of Stimulus

The second pillar in the innatist theory of language is what Chomsky has called the *argument from the poverty of stimulus.* The argument contends that children are language prodigies who acquire language at a speed and proficiency that far surpasses what they are taught**.** In order to account for their miraculous ability, children must already have some linguistic foundation in place that allows them to jump-start their development. The innate language instinct does not exist as fully formed language, but is what enables language acquisition to take place. Pinker clarifies, "Learning is not an alternative to innateness. Without an innate mechanism learning would be impossible."[107] According to the nativists, this fact is evident in several different ways.

Pinker asserts that we must "do away with the folklore that parents teach their children language."[108] Parents do not even speak regular language to their children. They speak in *motherese* or *child-directed speech*. The coddling speech, usually delivered with

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[105] A substrate language is the language established first, while a superstrate language is the new language that enters in to where there is already an established language.

[106] For more on The Language Bioprogram Hypothesis, see Derek Bickerton, "The Language Bioprogram Hypothesis," *Behavioral and Brain Sciences* 7, no. 2 (1984): 173–88; Derek Bickerton, "Pidginization and Creolization: Language Acquisition and Language Universals," in *Pidgin and Creole Linguistics*, ed. Albert Valdman (Bloomington: Indiana University Press, 1977), 49–69; Derek Bickerton, "Creolization, Linguistic Universals, Natural Semantax and the Brain," in *Issues in English Creoles*, ed. Richard R. Day (Heidelberg: Julius Groos, 1974), 1–18; Derek Bickerton, "Creole Languages and the Bioprogram," in *Linguistics: The Cambridge Survey*, ed. Frederick J. Newmeyer (Cambridge: Cambridge University Press, 1988), 1:268–84.

[107] Pinker, *Language Instinct*, 424.

[108] Pinker, *Language Instinct,* 28.

high pitched and elongated words, may teach the child new vocabulary (although many of these words, such as "beddy-bye time" or "pee-pee," are not even proper vocabulary), but is no substitute for a formal grammar lesson. Despite this lack of training, children generally grasp basic grammar even more quickly than they do vocabulary, and will frequently ask for unknown words to plug into their proper sentence structures.

Children also do not make the linguistic mistakes that would be expected of them. Long before they can articulate fully formed sentences, children already seem to have an innate understanding that sentences have a structure of "subject-verb-object." The routine and natural process of childhood language acquisition at so young an age has perhaps numbed people to the marvel that such a monumental achievement truly is. Arguably, the astonishing linguistic success of children is what causes the mistakes to stand out at all. Many sentences by a three-year old are likely ungrammatical, for one reason or another; but, given the vast number of opportunities for error, this is not surprising. More surprising, at least according to nativists, is how often a child is correct. Pinker argues that, when researchers narrow their attention to how often the child obeys or flouts any single grammatical rule, the errors occur in only around 0.1% to 8% of the usages, with the child making the proper choice on more than 90% of the occasions.[109] Furthermore, when a child does err, there is often an understandable excuse for doing so. The child who says, "My tooths," or "I holded the puppy," is operating on expected grammatical patterns, and only undone by the lack of memorized irregular forms. In short, the average child learns at a rate and proficiency that far surpasses what they are actually taught, even by the most diligent and intentional of parents.

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[109] Pinker, *Language Instinct,* 276. Pinker relies on the research of psychologist Karin Stormswold. Stormswold analyzed the speech of thirteen preschoolers, focusing on the sentences containing auxiliaries. In English there are estimated to be twenty-four billion, billion logically possible combinations of auxiliaries. Yet, she found no errors among sixty thousand sentences in which they could have occurred. See Karin J. Stromswold, "Learnability and the Acquisition of Auxiliaries" (PhD diss., Massachusetts Institute of Technology, 1990).

Age-Dependence of Language Acquisition

A third pillar in the nativist case is the timeline of the learning process. They observe the peculiar fact that many of the foundational developments in language acquisition occur before a child can even use or understand language. Children are born with the ability to learn and speak any language, but by ten months they are no longer "universal phoneticians" and have turned into their parents.[110] Many adults, faced with the mountainous task of learning an auxiliary language, express regret at having not learned the language as a child.[111] The diminishing of the ability to learn language so early in development is an oddity if language is a learned skill.

Language Organs and Grammar Genes

The previously stated phenomena—language universals, language acquisition despite a poverty of stimulus, and the age-dependence of language acquisition—combine into a cumulative case argument for the validity of the belief that language is, to a degree, biologically hardwired into humans and not merely a culturally created artifact. There remains the important question of how language is biologically wired. The most famous attempt to answer the question comes in the form of Chomsky's hypothetical Language Acquisition Device (LAD). Despite its influence and importance to the nativist program, Chomsky's proposed "language organ" has remained difficult to pin down.[112]

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[110] Pinker, *Language Instinct,* 268.

[111] Geoffrey Sampson, *The "Language Instinct" Debate*, rev. ed. (London: Bloomsbury Academic, 2005), 40. Sampson refutes the claim that the ability to learn a language is lost at a certain age. He points to the frequent success of people who learn a second language later in life. Sampson argues that a learner can still learn a language as long as they see the pursuit as "worthwhile." Sampson is correct in his accusation that the nativists over-state their case here. Yet, his argument arguably does more to validate the nativist position than to challenge it. That some learners, with enough perseverance and motivation, can achieve mastery of a language stands in stark contrast to the child who masters their native language with ease and in the absence of intensive study.

[112] According to some of Chomsky's critics, the indecisiveness of defining the Universal Grammar in concrete terms is a purposeful tactic to avoid confronting the inevitable challenges. One writer observes, "Chomsky's detractors have said that Universal Grammar is whatever he needs it to be at that moment. By keeping it mysterious, they contend, he is able to dodge criticism and avoid those who are gunning for him. It's hard to murder a phantom." Tom Bartlett, "Angry Words," *The Chronicle*, March 20, 2012, accessed August 24, 2018, https://www. chronicle.com/article/Angry-Words/131260; see also Ewa Dąbrowska, "What

Although often called a "language organ," Chomsky's LAD is better thought of in more general terms. Anderson and Lightfoot rightly conclude, "The linguistic capacity which develops naturally in every normal human being appears to be best understood in functional, rather than literal anatomical terms."[113] A better understanding of Chomsky's theory is not that language itself is innate—akin to the *Star Wars* droid C3PO and his pre-programmed six million forms of communication—but that the ability to learn language is innate. As discussed earlier in this chapter, Chomsky argues that this ability is *recursion* or *unbound Merge*. Therefore, the language organ can be thought of as the evolved adaption that enabled recursive thought in humans. Locating the adaptive source of this ability, however, has proven difficult.

The *Broca's area* of the brain, located in the frontal lobe of the dominant hemisphere, and the *Wernicke's area,* in the left temporal lobe, have historically been the most frequently linked to language and speech. Both areas are activated during language-related tasks. Pinker and others acknowledge that while there are no currently known smaller areas that can be said to be some "linguistic module," brain damage can lead to very specific defects, so there must be.[114]

The notion of a hypothetical grammar gene also gained significant traction with the identification of the *FOXP2* gene. The discovery came through analysis of an English family called the KE family. Tracing back three generations, half of the family suffered from developmental verbal dyspraxia (a speech and language disorder which inhibits children from saying certain sounds or words). A genetic analysis of the KE family traced the disorder to a mutation in the *FOXP2* which was shared by all family member affected by the disorder, but absent in in the unaffected members. As a result, the

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Exactly Is Universal Grammar, and Has Anyone Seen It?" *Frontiers in Psychology* 6 (June 23, 2015): 1-17.

[113] Anderson and Lightfoot, "The Human Language Faculty," 3.

[114] Pinker, *Language Instinct*, 320.

FOXP2 was heralded as the long-sought grammar gene. Conditions such as stuttering, dyslexia, and Specific Language Impairment all run in families, suggesting that they are genetically based and leading Pinker to the conclusion that "there is something in the sperm and egg that affects the language ability of the child that grows out of their union."[115] Therefore, while the actual language organ or grammar gene remains uncertain, the nativists maintain that the evidence continues to point toward its existence.

The Evolution of the Language Organ or Grammar Gene

In their basic belief—that every human child is endowed with a biologically hardwired instinct which provides the necessary foundation for quick and efficient language acquisition—the nativists are more-or-less united. There is divergence, however, regarding how such an instinct first evolved. The question is rendered all the more difficult by the lasting ambiguity over what exactly the biological device is or how it functions. The inability to determine clearly what the hypothetical language organ is makes determining how it might have evolved a challenge. The nativists agree that the Language Organ must be the product of evolutionary processes, but they disagree on how. In general, the nativists are divided between those who advocate a "big bang" approach and those accept a standard Darwinian explanation of gradual evolution.

The first of the two major branches places the origin of language somewhat at odds with the traditional understanding of Darwinian theory and gradual evolution. Chomsky believes that his generative grammar is an evolved instinct but is frequently skeptical—and occasionally outright dismissive—of the feasibility of Darwinism to explain the phenomenon. In his book *Language and Mind*, Chomsky writes, "It is perfectly safe to attribute this development to 'natural selection,' so long as we realize that there is no substance to this assertion, that it amounts to nothing more than a belief

[115] Pinker, *Language Instinct,* 330.

that there is some naturalistic explanation for these phenomena."[116] In other words, Darwinism and natural selection are accepted as a place holder, an imperfect explanation to stand in for an as-yet largely unexplainable mystery.[117] Only recently has Chomsky attempted a more concrete discussion on the specific problem of the evolution of his universal grammar, having historically been more focused on describing the faculty rather than how the faculty evolved.[118]

Derek Bickerton also rejects a gradual process for the evolution of language due to the absence of any intralanguage. Instead, he argues for a sudden and rapid "leap" between protolanguage and true language:

> The evidence . . . indicates that language could not have developed gradually out of protolanguage, and it suggests that no intermediate form exists. If this is so, then syntax must have emerged in one piece, at one time—the most likely cause being some kind of mutation that affected the organization of the brain. Since mutations are due to chance, and beneficial ones are rare, it is implausible to hypothesize more than one such mutation.[119]

In support of this conclusion, Bickerton has offered at least two arguments. The first is that the process of creolization offers a living parallel example of how a protolanguage can take large leaps to become a true language without the necessity of any "intralangauge."[120] His second proof is the fossil record and the rapid leap forward in the quality of tools rather than a gradual progression.[121]

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[116] Noam Chomsky, *Language and Mind*, 3rd ed. (New York: Cambridge University Press, 2006), 85.

[117] Philip E. Johnson, *Objections Sustained: Subversive Essays on Evolution, Law & Culture* (Downers Grove, IL: InterVarsity Press, 1998), 60.

[118] See Berwick and Chomsky, *Why Only Us*.

[119] Bickerton, *Language & Species*, 190.

[120] Bickerton observes that the transformation of a pidgin language to a creole is usually rapid, lacking any necessary intermediate forms between the two: "Creole languages form an unusually direct expression of a species-specific biological characteristic, a capacity to recreate language in the absence of any specific model from which the properties of language could be 'learned' in the ways we normally learn things." Bickerton, *Language & Species,* 171.

[121] Bickerton, *Language & Species,* 174. Bickerton argues that at that time the leap forward in tool quality, the average human brain size was smaller than that of the Neanderthal's. What then, can account for the rather sudden and rapid advancement in tool making? For Bickerton, the answer is 'language.' He postulates that, were language to have developed in a

Other nativists, such as Pinker, reject the skepticism in situating the language instinct within a traditional Darwinian framework of gradual evolution. In the influential 1990 article "Natural Language and Natural Selection,"[122] Pinker and Bloom offer the most direct argument for locating a universal grammar within a Darwinian framework, by theorizing a gradual process of language development and hypothesizing on the various adaptive benefits that a partial grammar would have provided. Thus, Pinker claims, "There were plenty of organisms with intermediate language abilities," although, somewhat conveniently, "They are all dead."[123] In a sense, Pinker reflects the behaviorist belief of gradual development, while maintaining the nativist conviction that the gradual steps are beyond the grasp of mere human invention and must be biological adaptions.

The Inadequacy of the Nativist Account for the Origin of Language

In the earlier metaphor of the school science fair, the behaviorists were akin to the student who attempted to pass off the work of a more intelligent creator as their own. The nativists, on the other hand, are like a student who claimed he simply found the project miraculously waiting for him by the front door and, realizing that he could never construct such a superior work, took advantage of his good fortune. When pressed further, and against the suggestion that his father or mother may have labored through the night on his behalf, the student might respond that he had not heard any sounds during the night, nor seen any evidence of craft material. Thus, the project must simply be an inexplicable stroke of good luck. In the same way, the linguistic nativists proclaim

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gradual process, or with an intermediate stage, then there would also be a gradual development in tools and tool qualities—but this is not found in the fossil record. Bickerton concludes that it is more likely that a protolanguage existed for a long time before abruptly and rapidly transforming into language.

[122] Steven Pinker and Paul Bloom, "Natural Language and Natural Selection," *Behavioral and Brain Sciences* 13, no. 4 (1990): 64.

[123] Pinker, *Language Instinct*, 355.

language to be an evolutionary miracle and, ruling out the possibility of an unseen creator, have largely contented themselves with explaining how the phenomena works, while leaving the more crucial questions of its origin and development unanswered. In doing so, the nativists tiptoe around many of the obstacles that hinder their behaviorist colleagues, only to fall into an equally large pit on the other side.

Will the Real Language Gene Please Stand Up?

With the exhilarating discovery of FOXP2—the so-called "language gene"—the childhood fantasy of speaking to animals appeared to be attainable. In 2009, researchers at the Max Planck Institute for Evolutionary Anthropology in Leipzig, led by decorated Swedish biologist Svabte Pääbo, genetically engineered a strain of mice whose FOXP2 gene was replaced by the human version. Pääbo declared that, by the end of the experiment, "We will speak to the mouse."[124] Of course, he made no promise that the mice would speak back. The experiment, unsurprisingly, did not produce human speech in the mouse (although it was reported to have altered their squeaks to a slightly lowered pitch). The predictable failure of the human FOXP2 gene to produce any semblance of speech in the mice demonstrates that the great complexity of the human language faculty cannot be contained to any single gene or language organ.

In fact, despite being widely heralded as the "language gene," the FOXP2 gene is not even directly involved in language. While the corruption of the gene has the consequence of distorted language, as in the case of the KE family, the gene is not itself directly responsible. The FOXP2 protein is a transcription factor which functions as a sort of biological "master switch" to control the expression of other genes which "promote the development of neurons that will be involved in language."[125] Thus, the FOXP2 is only

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[124] Quoted in Nicholas Wade, "A Human Language Gene Changes the Sound of Mouse Squeaks," *The New York Times*, May 28, 2009.

[125] David A. DeWitt, "FOXP2 and the Non-Evolution of Human Language," Answers

indirectly related to the human capacity, the same way a blown power fuse in an automotive assembly plant will prevent the creation of automobiles, despite not being directly involved in the assembly.

The Broca's area, the predecessor to the FOXP2 gene as the most attractive candidate to locate the universal language instinct, is equally implausible. Despite its linguistic function, the Broca's area is not really a language organ and is involved in more general motor-related activities. Everett puts it bluntly: "Focusing on language or grammar in a region of the brain such as Broca's area is like claiming that forks exhaust the function of the kitchen."[126] In fact, the Broca's area can be destroyed with only minor consequence. In 2009, a study was conducted on a patient whose Broca's area was destroyed by a tumor and the subsequent surgery to remove it.[127] The patient, a computer programmer, was able to return to work three months later with only minimal difficulties. In other words, while the Broca's area plays an active role in the human ability for speech, it does not play the critical or essential role required to be rightly labeled as the language organ.

The nativists fall victim to a problem similar to that which besets the behaviorists. Whereas the behaviorists claim continuality despite the lack of a feasible animal form for generating language, the nativists claim a biological language faculty despite no certainty of what, where, or how such a faculty actually works. Steven Pinker admits, "No one has yet located a language organ or a grammar gene, but the search is on."[128] This is a staggering concession, given with what amounts to little more than a

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in Genesis, May 3, 2006, accessed December 31, 2017, https://answersingenesis.org/human-evolution/foxp2-and-the-non-evolution-of-human-language/.

[126] Everett, *How Language Began*, 138.

[127] Monique Plaza et al., "Speaking without Broca's Area after Tumor Resection," *Neurocase* 15, no. 4 (July 8, 2009): 294–310.

[128] Pinker, *Language Instinct*, 34.

shrug. Granted, many brain operations remain a complete mystery to both naturalist and theistic scientists. In time, scientists may indeed gain greater understanding of the biological workings of the brain in relation to human language. Genetically transmitted language disorders and forms of brain damage linked to specific linguistic consequences suggest that some relation does exist—although, the distinction between a so-called language gene and a general cognitive impairment, which has a secondhand effect on speech, is often unclear.

The challenge for the nativists, however, is not only to answer the question of whether language may or may not be biologically wired. There remains a subsequent question that if language is a biological part of the brain, how could such a function have resulted through evolution? The hypothesis of an evolved "language organ" is most workable the more simple the hypothetical language organ. Yet, as the great treasure hunt for the language organ or grammar gene continues, the research indicates that human language ability is immensely more complex than could be explained by a single organ or gene.

Not only has the search for the biological language connection continued to reveal the complexity of the language faculty, some discoveries have further called into question a straightforward Darwinian explanation. One such discovery is the *visual word form area* (VWFA).The VWFA, located in the fusiform gyrus of the brain, has a specialized function for word processing and reading.[129] For example, people with dyslexia have also been found to have reduced activity in the VWFA. The implications of the VWFA are immensely problematic to Darwinian thought. Laurent Cohen and Stanislas Dehaene, the scientists who discovered the VWFA, explain the problem:

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[129] In one experiment, the insertion of electrodes was used to disrupt the VWFA of four patients, which resulted in their inability to read words. At the same time, all other visual recognition, such as the ability to name faces and objects, remained unaffected. For the results of the study, see Elizabeth A. Hirshorn et al., "Decoding and Disrupting Left Midfusiform Gyrus Activity during Word Reading," *Proceedings of the National Academy of Sciences* 113, no. 29 (July 19, 2016): 8162–77.

> Our starting point for thinking about the VWFA is the fact that the human brain cannot have evolved a dedicated mechanism for reading. The invention of writing is too recent and, until the last century, concerned too small a fraction of humanity to have influenced the human genome.[130]

In line with many of the Darwinian theories for language, the starting point is naturalism and the struggle is to fit the seemingly contradictory facts of language into that belief.

As a relatively recent discovery, ongoing research will continue to provide a fuller understanding of the VWFA. Arguments have been made for other functions the VWFA may have served before being deployed for its current linguistic purpose. Nevertheless, the questions raised by both the FOXP2 and VWFA, as well as the retention of language in the absence of the Broca's area, compound each other and paint a far more complicated picture of the connection behind biology and language than can be ignored in favor of a more simplistic language organ or grammar gene. Ironically, the single aspect upon which the tenability of the nativist theory depends most is the one that is the least understood, ambiguous, and mysterious.

The Peculiarity of the Age-Dependence of Language Acquisition

As detailed above, one of the arguments given in support of a biological language instinct is the age-dependence of the learning process. This aspect of the language phenomenon is a double-edged sword for the nativists. On the one hand, the fact lends support to the argument for some biological basis of language. On the other hand, the age-dependence of language acquisition also works contrary to what might be expected from an evolved trait. The critical periods and near-universal diminishing of the ability to easily master language by approximately the age of six would seem to go against the expected pattern of evolution.

Pinker attempts to resolve the problem by rejecting the premise that the ability

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[130] Stanislas Dehaene and Laurent Cohen, "The Unique Role of the Visual Word Form Area in Reading," *Trends in Cognitive Sciences* 15, no. 6 (June 2011): 254.

to acquire language later in life would be beneficial. He notes, "The genes, shaped by natural selection, control our bodies throughout our life span; designs hang around during the times of life that they are useful, not before or after."[131] Therefore, Pinker suggests that asking why the ability is lost is asking the wrong question. The better question is when is the learning ability needed? According to Pinker, "As early as possible."[132] He paints a picture of the brain as an overstuffed computer hard drive with the need to delete old photographs or the gigabytes of Mp3 files of the punk rock music that was hoarded in youth but long since outgrown. In other words, the language acquisition ability serves its initial purpose and then is discarded by the brain to make room for more useful abilities.

Pinker's solution is plausible but seems to underplay the usefulness of the ability later in life. There are obvious benefits for a child to acquire language, but there are also benefits for the ability later in life. The essential needs of an infant can be met without any sophisticated language. Moreover, the language faculty, according to both the behaviorists and nativists, must have evolved for the benefits and unique evolutionary pressures related to adulthood. The language faculty would have had little impact on a child but would have conceivably had advantages for the richer communication or cognitive capabilities of adults. The emphasis placed on secondary languages in higher education today is a continuing reflection of this premise. Also, according to the nativists, language is primarily a tool of thought, not of communication. Therefore, determining the optimal period of language learning must include consideration of its cognitive importance.

If language is accepted as arguably man's most powerful attribute—the ability which has enabled man to gain dominion over the rest of the animal kingdom—then it remains curious that evolution would discard the ability so early. If nothing else, it

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[131] Pinker, *Language Instinct,* 299.

[132] Pinker, *Language Instinct*, 299.

remains a curiosity that with the immense power and capabilities of the human brain, there was no room left over to warrant retaining something as foundational and important to man's cognitive and communicative life as language.

The Lonely Language Mutant:
The Paradox of Adaptive Selection

The benefits that the emergence of language would have provided the human species are not hard to imagine. The ability to strategize and coordinate on hunts or raids of rival tribes would have provided those with the language faculty a significant tactical advantage. Hyperbolic or not, Tom Wolfe declares, "Speech, and only speech, has enabled us, we human beasts, to conquer every square inch of land in the world, subjugate every creature big enough to lay eyes on, and eat up half the population of the sea."[133] Bickerton and others have suggested that the advent of speech is also largely responsible for the explosion of tool quality and, subsequently, the advancement of culture. That speech offers multitudinous benefits to the human species is indisputable. That the most dominant species on the planet is the only species in possession of language proves this. The real difficulty for a Darwinian explanation is that a language adaption provides little to no benefit for an individual outside of a larger community which shares the same ability. Manfred Bierwisch describes the paradox as follows:

> Explaining language capacity by adaptive selection presupposes the property which it attempts to explain. The theory of evolution has to cope with this problem for all cases of genetically determined social behavior. Yet it is of particular intricacy in the case of linguistic communication because the selectional advantage presupposes not only the population whose members previously developed the capacity, but also a language – that is, a system of knowledge based on this capacity – without which the capacity would be of no adaptive value.[134]

In other words, the language capacity is only of value in the context of a community that

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[133] Wolfe, *Kingdom of Speech*, 165.

[134] Manfred Bierwisch, "The Apparent Paradox of Language Evolution: Can Universial Grammar Be Explained by Adaptive Selection," in Trabant and Ward, *New Essays on the Origin of Language*, 67.

already possesses language.

This necessary social dimension has long been recognized as a difficulty posed by a singular origin of language. The Roman philosopher Lucretius argued against a single inventor of language by posing two pointed questions which still resonate today: First, how could one person have a preconception of speech and realize its power without anyone to talk to? Second, how could the person with speech convince others to learn what seemed to be just meaningless sounds?[135] Centuries later, these questions remain problematic.

In answer to the first, Pinker and Bloom argue, "Comprehension abilities do not have to be in perfect synchrony with production abilities."[136] By this, they suggest that the humans without the language mutation could still comprehend the basic speech, even if they themselves were incapable of processing or understanding the grammar. For example, the ungrammatical string of words, "skid crash hospital" is still understandable by way of general intelligence. The argument is odd, however, in that it essentially undermines the necessary benefits required for the adaption. If the ability of the so-called 'language mutant' for more complex recursive speech is limited to the comprehension and general intelligence already possessed by the non-mutated peers, then the communicative benefits provided by the evolved language faculty are nullified and rendered meaningless.[137] How might the language mutant perceive the power of their evolved language faculty if the ability was perceived as merely a more complex and

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[135] Danesi, *Vico*, 176.

[136] Pinker and Bloom, "Natural Language and Natural Selection," 38. They also suggest that any such mutation is likely to be shared by genetically-related individuals, so the language mutant would have perhaps been understood by his or her relatives. The explanation is highly problematic, however, and Pinker and Bloom are right not to linger on it.

[137] Also problematic in Pinker and Bloom's explanation is that according to the nativists, the universal grammar evolved primarily as a language for thought, not for communication. Therefore, on the one hand, the language mutation is alleged as the means by which humans could process more complex and sophisticated thoughts. On the other hand, Pinker and Bloom seem to suggest that a pre-adaptive level of general intelligence is already capable of comprehending the speech.

seemingly muddled version of the simpler communication of his peers?

The second of Lucretius' two questions is equally difficult. Even if the language mutant recognized the power of his ability, it is difficult to imagine how his peers would recognize it as well. A parallel can be found in H. G. Wells' 1904 short story "The Country of the Blind." The story tells of a mountaineer named Nuñez who falls down a mountainside and finds himself in a small village in the valley. All the inhabitants of the village have been rendered blind by a genetic disease and, after many generations, have adapted to life without sight. Realizing his advantage, Nuñez quotes to himself the proverb, "In the Country of the Blind, the One-Eyed Man is King." Yet, his attempts to instruct and gain rulership over the villagers are fruitless, as the blind perceive his talk of a fifth sense to be utter madness and decide to remove his eyes. The story ends with Nuñez fleeing back up the mountain, his survival chances slim.[138]

In the same way, the separation between non-language and language would have been nearly as drastic as the gap between blindness and sight. For the nativists, language is not just a tool for communication but represents the ability for a whole new level of complex and nuanced thought. This complex way of thinking would be inconceivable to those without the evolutionary gift, and the language mutant would likely have been seen as a rambling madman. Furthermore, even if the others in the tribe were inclined to learn from the language mutant, their ambition would have been futile. If the language faculty is an evolved biological adaption, then no amount of learning can bridge the language divide. The exchange would be as fruitless as if a human had suddenly sprouted wings and then endeavored to pass the gift of flight on to his wingless peers. The question, then, is whether the language faculty—stripped of any

[138] H. G. Wells later revised the story in 1939, altering the ending so that Nuñez sees that a major rock slide threatens to destroy the village. He returns to the village to offer warning, only to once again be scorned as a mad man. His warnings ignored, he once again flees, leaving the village to its grim fate. The expanded version of the tale provides an even more vivid example.

communicative benefits—would still have provided enough of a measurable survival or reproductive advantage to the language mutant to have allowed his biological gift to spread to all humanity. Or would he, like the mountaineer in H. G. Wells' story, have died with the vexing knowledge of a gift and experience that they alone could understand?

The Irreducible Complexity of Language

In the book *Darwin's Black Box,* Michael Behe, Professor of Biochemistry of Lehigh University, presents an argument against Darwinian evolution on the basis of *irreducible complexity*. He defines the principle as follows:

> A single system which is composed of several well-matched, interacting parts that contribute to the basic function, and where the removal of any one of the parts causes the system to effectively cease functioning.[139]

Behe uses the analogy of a mousetrap to demonstrate how, without every piece in place from the beginning, the entire structure ceases to function. Historically, this approach has been leveled most pointedly at the evolution of the eyeball and the wing, which, without being fully formed, offer no benefit of sight or flight, respectively. The argument from irreducible complexity has relevance to language as well.

The often used terminology of language organ or grammar gene is misleading, implying a degree of simplicity. No single evolutionary mutation or adaption is plausible to account for the complexity of the human language faculty. The perception of language and the production of speech must have evolved in conjunction with each other, with both cognitive and physiological changes moving in tandem toward a shared point. On the complexity of language, Pinker writes,

> [Language] is composed of many parts: syntax, with its discrete combinatorial system building phrase structures; morphology, a second combinatorial system building words; a capacious lexicon; a revamped vocal tract; phonological rules and

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[139] Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (New York: Free Press, 1998), 39.

structures; speech perception; parsing algorithms; learning algorithms.[140]

Due to the implausibility that language developed gradually out of a previously existing protolanguage and with the lack of intermediate forms, Bickerton claims, "Syntax must have emerged in one piece, at one time."[141] Likewise, Chomsky expresses his skepticism of a traditional conception of natural selection and gradual improvement to produce language:

> Language does indeed pose a severe challenge for evolutionary explanation. On the one hand, Darwinian thinking typically calls for gradual descent from an ancestor via a sequence of slight modifications. On the other hand, since no animal has language, it appears to be a biological leap, violating Linnacus's and Darwin's principle.[142]

As a result, there exists an ever-present tension at the heart of the nativist theory between the conviction that the language faculty must have evolved and the continual uncertainty of how it could have evolved.

In reference to the many necessary and interconnected aspects needed for language, Pinker asserts, "Those parts are physically realized as intricately realized structured neural circuits, laid down by a cascade of precisely timed genetic events."[143] The level of precision necessary for such a sequence of independent events is difficult to fathom and raises the question, what use or advantage is there in possessing only a fraction of a language? Pinker makes a comparison to an elephant's trunk as a complex, one-of-a-kind organ analogous to the human language organ. He suggests that, despite its uniqueness and in the absence of a proto-trunk, we would not conclude that trunk must be the result of a single, monumental evolutionary mutation in a previously trunk-less species.

The analogy is flawed, however. While the elephant trunk and human language

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[140] Pinker, *Language Instinct*, 373.

[141] Bickerton, *Language & Species*, 190.

[142] Berwick and Chomsky, *Why Only Us*, 3.

[143] Pinker, *Language Instinct*, 373.

are both unique, the organs themselves are radically different. It is hypothetically possible to imagine another species in possession of a proto-elephant trunk, even if no such species actually exists. On the other hand, as Johnson and Potter note, the universal grammar seems "digital."[144] In other words, the difficulty for a gradualist explanation is not only that no known intermediate forms exist today, but that it is difficult to imagine that such a form even could exist. Elizabeth Bates, the director of the University of California's Center for Research in Language, states the dilemma as follows:

> What protoform can we possibly envision that could have possibly given birth to constraints on the extraction of noun phrases from an embedded clause? What could it conceivably mean for an organism to possess half a symbol, or three quarters of a rule? . . . Monadic symbols, absolute rules and modular systems must be acquired as a whole, on a yes-or-no basis—a process that cries out for a Creationist explanation.[145]

Syntax, recursion, and the capability for symbolic/non-referential speech are comprehensible only in an all-or-nothing sense. Likewise, the multiple capabilities of the language faculty must have emerged in tandem. Recursion without symbolic thought or symbolic thought without recursion would offer few, if any, advantages. The many survival or reproductive benefits and advantages ascribed to language seem to begin at the point in which a larger community already shares a more-or-less fully formed language. The Darwinian account for language's origin is thus forced largely to leave Darwin behind, giving lip service to his theory while elevating a philosophy of language that continues to conflict with it.

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[144] Jeffery L. Johnson and Joyclynn Potter, "The Argument from Language and the Existence of God," *The Journal of Religion* 85, no. 1 (January 2005): 88.

[145] Elizabeth Bates et al., "Symbols and Syntax: A Darwinian Approach to Language Development," in *Biological and Behavioral Determinants of Language Development*, ed. Norman A. Krasnegor et al. (Hillsdale, NJ: Psychology Press, 1991), 31-57. Bates, one of the most formidable opponents of linguistic nativism, does not, herself, accept a creationist explanation. Rather, she is arguing for the brain's 'plasticity' in learning language, as opposed to a more singular and isolated language organ. To argue otherwise, according to Bates, is impossible outside of some divine creative act.

How Much Recursion is Needed to Hunt a Mastodon?

The final obstacle for the innatist account of language's origin is the role of selective fitness. Darwin's theory of natural selection involves two necessary propositions. The first pertains to genetic variation. The second is that every population is always multiplying beyond the available food supply, leading to a struggle for existence and the survival of the "fittest" individuals. For natural selection to operate, both of these principles must be at work. A beneficial trait, without survival pressures or competition, becomes largely obsolete.

In his book *Darwinian Fairytales,* David Stove makes a case for what he refers to as "Darwin's Dilemma." He argues that the second principle of natural selection is not currently working on the human species which has no observable struggle for life. Therefore, Stove asserts that Darwin's explanation of evolution "contains as an essential element a proposition which is false in the case of man."[146] The same question can be posed to the past. Language provides multiple benefits to those who possess it, but such advantages must be forged in the fires of natural selection and the struggle for survival and offspring. Any explanation of any adaptive trait must explain the selective fitness provided in the context of where and when the trait originally evolved. While humans eventually used language to become the dominant species on earth, the usefulness of sophisticated or recursive language during the time it must have evolved is unclear. David Premack puts the problem bluntly:

> I challenge the reader to reconstruct the scenario that would confer selective fitness on recursivness. Language evolved, it is conjectured, at a time when humans or protohumans were hunting mastodons . . . . Would it be a great advantage for one of our ancestors squatting alongside the embers, to be able to remark "Beware of the short beast whose front hoof Bob cracked when, having forgotten his own spear back at Camp, he got in a glancing blow with the dull spear he borrowed from Jack"? . . . A semantic language with simple mapping rules of a kind one might suppose that the chimpanzee would have, appears to confer all the advantages one

[146] David Stove, *Darwinian Fairytales: Selfish Genes, Errors of Heredity and Other Fables of Evolution* (New York: Encounter Books, 2007), 46.

> normally associates with discussions of mastodon hunting or the like. For discussions of that kind, syntactical classes, structure-dependent rules, recursion and the rest, are overly powerful devices, absurdly so.[147]

In other words, the question is not whether language is powerful enough for selective fitness, but whether it is too powerful.

Pinker has argued, to the contrary, that such complex language would indeed have been advantageous. There is indeed a significant difference between saying, for example, that a region has "animals that you can eat" or "animals that can eat you."[148] However, the explanation seems to impose modern man's dependence on language to his ancient ancestors who, after hunting and traveling across the African savannas for millions of years (according to an evolutionary worldview), undoubtedly possessed primitive methods of communicating warnings or information of the kind Pinker suggests. As Premack implies above, the pre-existing animal communication is arguably better suited for the tasks of primitive man. The question, then, is whether the addition of more complex or recursive speech would have offered a measurable enough advantage in the basic tasks over the methods already available.

Any reconstruction of the time period is highly speculative and untestable, so any answer to the problem is equally speculative. However, even if our forebears possessed a communally shared and fully developed language faculty (two concessions which are themselves highly problematic), it is not an inevitable conclusion that the language ability would have been beneficial enough to have passed the rigorous test of natural selection. As a whole, the nativist conception of language and its origin is conceivable only in a world in which language already exists.

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[147] Premack, "Gavagai," 281-82.

[148] Steven Pinker, "Language as an Adaptation to the Cognitive Niche," in *Language Evolution*, ed. Morten H. Christiansen and Simon Kirby (New York: Oxford University Press, 2003), 25.

Conclusion

Literature is built from language. If there is no feasible explanation for the origin of language, then there is no sturdy foundation for an account for literature. The Darwinian explanation for language—in both the behaviorist and nativist expressions—is far from a smooth, paved path through the mountain range. Rather, it is a perilous climb straight up the towering cliff side, with large portions offering few-to-no footholds and requiring several death-defying leaps which should caution even the most courageous, or foolish, climbers. Much of the language debate from a naturalistic perspective continues to operate in spite of Darwinism, rather than being inferred from it. If there is any common ground between the opposing linguistic camps, it is an unwavering faith in natural selection despite encountering inconsistencies, unanswerable questions, and conflicting data at seemingly every turn. Such faith leads to the conclusion, "Though we know few details about how the language instinct evolved, there is no reason to doubt that the principal explanation is the same as for any other complex instinct or organ, Darwin's theory of natural selection."[149] Or, similarly:

> Our conclusion is based on two facts that we would think would be entirely uncontroversial: language shows signs of complex design for the communication of propositional structures, and the only explanation for the origin of organs with complex design is the process of natural selection.[150]

The first of the two facts is indeed uncontroversial, but the second is curious. The implication seems to be that the origin of language is compatible with Darwinian evolution, not on the basis of substantial evidence, but because natural selection is the only choice available, and therefore it must be. If Darwinian evolution is the only allowable path, then there is little surprise that it is the one continually taken in the language debate. Yet, natural selection is not the only path up the mountain, nor even the most direct. The biblical gospel of John opens with the declaration, "In the beginning was

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[149] Pinker, *Language Instinct*, 342.

[150] Pinker and Bloom, "Natural Language and Natural Selection," 770.

the Word" (John 1:1), and man has yet to find a more suitable starting point for the discussion of language's origin than that.

CHAPTER 4

THE DARWINIAN PROBLEM OF AESTHETICS

The sight of a feather in a peacock's tail, whenever I gaze at it, makes me sick.[1]

—Charles Darwin

In 1917, Irish poet, William Butler Yeats, penned "The Wild Swans at Coole," one of the most exquisite poems in the English language:

The trees are in their autumn beauty,
The woodland paths are dry,
Under the October twilight the water
Mirrors a still sky;
Upon the brimming water among the stones
Are nine-and-fifty swans.

The nineteenth autumn has come upon me
Since I first made my count;
I saw, before I had well finished,
All suddenly mount
And scatter wheeling in great broken rings
Upon their clamorous wings.

I have looked upon those brilliant creatures,
And now my heart is sore.
All's changed since I, hearing at twilight,
The first time on this shore,
The bell-beat of their wings above my head,
Trod with a lighter tread.

Unwearied still, lover by lover,
They paddle in the cold
Companionable streams or climb the air;

[1] Charles Darwin, "Letter from Charles Darwin to Asa Gray, April 3, 1860," in *The Life and Letters of Charles Darwin,* vol. 2, ed. Francis Darwin (London: John Murray, 1887), 296.

Their hearts have not grown old;
Passion or conquest, wander where they will,
Attend upon them still.

But now they drift on the still water,
Mysterious, beautiful;
Among what rushes will they build,
By what lake's edge or pool
Delight men's eyes when I awake some day
To find they have flown away?[2]

The composition probes the depths of Yeats' conflicted intellectual, emotional, and spiritual self as he reflects upon a remnant of beauty in an ever-changing and tumultuous world. The reader not only learns about Yeats' mindset at one moment in time, he is made to feel the poet's emotions as well. He is invited to stand in Yeats' place, gazing out over the peaceful swans at Coole, and to confront his own human condition. In doing so, the poem makes a mockery of any reductive notion of literature as the mere transferal of information or ideas. Language is communicative by definition; but the five stanzas of "The Wild Swans at Coole" represent something more which cannot be accounted for as just the inevitable fruit of man's acquisition of language. Literature is composed of words, but literature is far more than words. Literature is art.

The veneration of sublime literature is not just a celebration of language—it is the celebration of a certain type and presentation of language. Literature embodies an element of craftsmanship and design. There is considerable room for diversity, variety, and experimentation; but at the foundation of this immense range of literary expression is the underlying constant of the aesthetic dimension. Debate within literary circles regarding which works of literature are sublime and which are not is secondary (and more subjective) to the more pivotal question of why these discussions take place at all. Different literary scholars may espouse a conflicting hierarchy of the Russian masters

[2] W. B. Yeats, "The Wild Swans at Coole," in *The Collected Poems of W. B. Yeats* (Ware, UK: Wordsworth Editions, 1994), 108.

Dostoyevsky, Tolstoy, Turgenev, or they may debate the superiority of Charles Dickens' *A Tale of Two Cities* to his *Great Expectations* or Shakespeare's *Hamlet* to his *Macbeth*. Without these different opinions, the study of literature would be markedly less interesting. Important for the present discussion is not to locate an objective, universal aesthetic standard—as some, such as David Hume attempted—but merely to acknowledge that such standards are assumed to exist and such judgments are made.[3] Which works of literature are sublime is of lesser importance than the acknowledgment that certain works of literature are sublime.

The fact that these discussions are possible at all should not be understated. The aesthetic dimension plays as foundational a role in the construction of sublime literature as does the use of language. For this reason, in order to answer the challenge posed by sublime literature, the Darwinian worldview must give a tenable account of not just language but also beauty and aesthetics. Such an account however, has proven to be a proverbial white whale for Darwinists, a lengthy and obsessive search which, like the unfortunate fate of the tortured captain Ahab, ultimately threatens to pull their theory under.

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[3] In his classic essay, "On the Standard of Taste," Hume differentiates between judgment and sentiment. Aesthetic sentiment, as a subjective property of the mind, is neither true or false, with no reference beyond itself. Hume rejects the philosophy which identifies beauty with sentiment alone, whereby beauty is wholly subjective and no objective standard is possible. He argues that while all sentiments are true, common sense indicates that some are better than others (such as the work of a lesser poet to the sublime work of Homer). He argues, "Among a thousand different opinions which different men may entertain of the same subject, there is one, and but one, that is just and true; and the only difficulty is to fix and ascertain it." David Hume, "Of the Standard of Taste," in *Aesthetics: A Reader in Philosophy and the Arts,* 3rd ed., ed. David Goldblatt and Lee B. Brown (Upper Saddle River, NJ: Pearson Education, 2011), 399. Hume offers two different but related approaches, but both are problematic and even contradictory of the other. The standard for proper judgment is an aesthetic work's timelessness. For example, the works of Homer were celebrated in Athens and Rome two thousand years ago and remain celebrated in Paris and London today. Such thinking, however, seems to elevate universal or popular consensus as the proper standard of taste. This contradicts his second, and more developed, proposition that the standard of taste is revealed through the verdict of "true judges"—critics in possession of good sense and purged of prejudice, among other qualities. Yet, Hume's argument eventually falls into a trap of circular reasoning, in that the status of the "true judges" is validated by demonstrating good taste toward certain superior aesthetic works, while such works are validated as superior on the basis of the judgment of the true judges. In the end, Hume is unable to establish a workable philosophy to support his common sense conviction of an objective standard of taste.

Beauty, Aesthetics, and Darwinism

Beauty and aesthetics have always posed a challenge to Darwinian theory. From Darwin until today, evolutionists have wrestled with how to account for the prevalence of beauty and art in a world that supposedly operates on the principles of utility and survival. On the surface, the existence of beauty, art, and aesthetics are antithetical to these main tenets of Darwinism. That much current understanding of man-made art is seemingly at odds with Darwinism is not, in itself, an insurmountable problem, insofar as an account can be provided to explain how modern aesthetics arrived at its current destination through strictly Darwinian roadways. Thus far, however, this enterprise has proven more difficult than most Darwinists are ready to admit.

Beauty and aesthetics clearly play a role in nature. No scholar today, whether naturalist or theist, is likely to deny this observation. Despite their often tumultuous relationship with the theory of sexual selection, Darwinists have not refuted the fact of beauty and aesthetics, only Darwin's original explanation for it. While they disagree on the specifics of how aesthetics fits into their evolutionary worldview, they agree that, one way or another, it must. Multiple theories have been offered to address the problem. Five representative approaches will be examined in this chapter: Darwin, who proposes that beauty belongs to a second theory of sexual selection; Wallace, who links aesthetics to utility and conflates it with natural selection; Dutton, who seeks to explain it through plethoric instincts and fitness signifiers; Prum, who embraces the arbitrariness of animal aesthetics; and Pinker, who suggests art is a by-product of evolved adaptions designed to satisfy the pleasure circuits of the brain. Despite the wide range of approaches, the answer of how sublime works of aesthetics could have emerged out of a Darwinian worldview remains largely unconvincing. The fish in the fisherman's story is always larger than the one in his cooler, and such is the case with Darwinian aesthetics. Each of the explanations accounts for a few specific aspects of the aesthetic dimension, while failing to achieve a comprehensiveness which makes sense of the phenomenon at large.

Charles Darwin – The Theory of Sexual Selection

For a man who spent a substantial amount of time traveling and observing nature, it is perhaps unsurprising that beauty would play an important role in Darwin's theory of evolution. He had little hesitancy in declaring that the endless forms of evolution were indeed "most beautiful."[4] In fact, the word "beauty" appears more than 280 times in *The Descent of Man* alone. Darwin toiled, however, at fitting the concept of beauty into his evolutionary paradigm. Not only did the prevalence of beauty seem to elude explanation through natural selection but it often appeared to stand in direct opposition to the foundational tenets of the theory. In his frequently quoted letter to colleague Asa Gray, Darwin bemoaned, "The sight of a feather in a peacock's tail, whenever I gaze at it, makes me sick!" The iridescent coloring of the peacock's tail, seemingly antithetical to camouflage and survival value, was a challenge to his theory. Richard Prum muses, "If the problem of explaining the evolution of the human eye was an intellectual problem, the problem of explaining the peacock's eyespot was an intellectual nightmare."[5] Darwin understood that unless these quirks of nature could be accounted for through some other evolutionary explanation, the existence of beauty and aesthetics would continue to be a stain on his grand project. If a trait was found to have evolved merely for the purpose of beauty, Darwin concluded, "This doctrine, if true, would be absolutely fatal to my theory."[6]

Darwin appeared to find a path out of the labyrinth with his second grand theory. The theory of *sexual selection*, already present in *On the Origin of Species,*

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[4] Charles Darwin, *On the Origin of Species* (1859; repr., New York: D. Appleton and Company, 1861), 384.

[5] Richard Prum, *The Evolution of Beauty: How Darwin's Forgotten Theory of Mate Choice Shapes the Animal World—and Us* (New York: Doubleday, 2017), 21. Darwin himself seem to perceive the problem of beauty as a more difficult challenge to his theory than the evolution of a complex organ such as the eye. In his letter to Asa Gray, he writes, "I remember well a time when the thought of the eye made me cold all over, but I have got over this stage of the complaint," before making his famous declaration about the peacock's tail making him sick. Darwin, *Life and Letters*, 296.

[6] Darwin, *Origin of Species*, 166.

receives significant attention in *The Descent of Man.* Despite being most frequently associated with Darwin's application of the principles of natural selection in animals to man, the book is largely an answer to the challenge of beauty. In *On the Origin of Species,* Darwin had maintained that sexual selection "depends, not on a struggle for existence, but on a struggle between the males for possession of the females; the result is not death to the unsuccessful competitor, but few or no offspring."[7] Beauty, therefore, is a significant factor in the mating rituals of many species, giving the most attractive animals an advantage over others in the infinite quest for mates. Thus, while natural selection remains a driving force in evolution, it is not the only force at work in determining which genes are passed on. In fact, the process of sexual selection can often work against natural selection in a game of evolutionary tug-o-war.

According to Darwin, the theory of sexual selection manifests itself in two ways**:** *The law of battle* and the *taste for the beautiful*. In the law of battle, two males struggle against each other like jousting knights aspiring to win the favor of a desirable female. While such battles are not struggles of life and death, and the improvements which come as a result are not necessarily needed to enhance survival chances, they manifest themselves in nature due to their spoils of war—offspring. As the mightier males prevailed, they were rewarded by passing on their advantageous genes to their offspring. Darwin hypothesized that these conflicts would result in the evolution of increased body mass, larger horns, and so forth as the traits which enabled the victorious male to overpower his foe were passed on to its offspring.

The second of the two mechanisms in the theory of sexual selection, the taste for the beautiful, shifts the agency from the male to the female. Rather than evolutionary change occurring through the struggle of males to win the female, here the female takes

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[7] Darwin, *Origin of Species,* 80.

charge by selecting mates on the basis of her own aesthetic preferences. In *The Descent of Man*, Darwin writes,

> He who admits the principle of sexual selection will be led to the remarkable conclusion that the cerebral system not only regulates most of the existing functions of the body, but has indirectly influenced the progressive development of various bodily structures and of certain mental qualities. Courage, pugnacity, perseverance, strength and size of body, weapons of all kinds, musical organs, both vocal and instrumental, bright colors, stripes and marks, and ornamental appendages, have all been indirectly gained by the one sex or the other, through the influence of love and jealousy, through the appreciation of the beautiful in sound, color, or form, and through the exertion of a choice.[8]

The significance attributed to female preference and taste for beauty, as discussed below, casts Darwin's evolutionary theory into tumultuous waters in the opinion of many Darwinists. By introducing a mechanism of arbitrary beauty to his theory, Darwin had opened his own Pandora's box, unleashing a concept for beauty which has, to this day, never been able to fit back into the neat and tidy box of Darwinian theory.

Sexual Selection and the Aesthetic What/Why Divide

By introducing a second evolutionary mechanism, Darwin believed he had finally solved the problem of beauty and, in doing so, preserved the integrity of his larger evolutionary explanation. As evident by the near instantaneous backlash, however, the thorn in his side was not to be so easily removed. Ironically, the biggest hurdle for Darwinian aesthetics was Darwinism itself. The main dilemma for Darwin's theory of sexual selection, according to many of his contemporaries, was not that it failed as a potential explanation for beauty in nature, but that it floundered as a Darwinian explanation. For many of his critics, Darwin's theory of sexual selection was like the false-front buildings that made up the classic western main streets during Hollywood's Golden Age. While a suitable backdrop for John Wayne or Clint Eastwood to gun down outlaws, the cinematic magic is lost when the structures are viewed from behind,

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[8] Charles Darwin, *Descent of Man and Selections in Relation to Sex* (London: John Murray, 1871), 556.

revealing them to be nothing more than a one-dimensional façade. Darwin's theory appeared to provide a suitable framework to describe the appearance of beauty and aesthetics, while lacking a solid foundation to ground the concepts themselves.

Whatever success is to be attributed to Darwin's theory of sexual selection, its explanatory power works strongest to describe the *what* of aesthetics. For example, sexual selection gives a viable account for the great lengths taken by the male bowerbird to construct their nests (the desire to attract female mates). What has been explained far less convincingly is why the female bowerbirds are attracted to such elaborate mating pads at all. In the years since Darwin, many experiments have been done to determine how sexual selection operates in nature and its implications in the mating rituals of various species. Yet, as Amy Maxmen notes, "These studies do not explain why female fish are so taken by a wash of blue, or why the female butterfly is so dazzled by bursts of light. Their preferences are determined by what their senses tune into—but what do these traits mean?"[9] This problem can be called the *aesthetic what/why divide*.[10] To explain what beauty does is far from explaining what and why beauty is. A Darwinian aesthetic must do more than catalogue certain aesthetic quirks in nature by offering the desire of beauty as an explanation; it must also account for those desires as well.

With the debate being waged on other fronts, the conspicuous gap in Darwin's theory was not originally given much attention. Yet, by 1903, some, such as the Nobel Prize awarded biologist Thomas Hunt Morgan, began to confront the question: "Darwin assumes that the appreciation on the part of the female is always present, and thus

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[9] Amy Maxmen, "Animal Behaviour: Come Mate with Me," *Nature* 526 (October 1, 2015): 509.

[10] There is an old comic strip where a scientist declares to God that with the power of modern science he can now create man as God had. As the scientist bends to the dirt and begins to work, God says, "Hey, get your own dirt!" The admittedly silly comic strip illustrates the *What/Why Aesthetic divide.* This problem is similar to the "is/ought" divide for a naturalistic philosopher of morality and values. According to many theistic philosophers, science can illuminate what is, but cannot sufficiently explain why that particular value or action ought to be.

simplifies, in appearance, the problem, but leaves half of it unexplained."[11] Even evolutionists favorable to Darwin's theory of sexual selection were eventually troubled by his unanswered questions regarding arbitrary mate choice. British geneticist R. A. Fisher recognized, "The question must be answered 'Why have the females this taste? Of what use is it to the species that they should select this seemingly useless ornament?"[12]

Fisher attempted to answer the question himself, providing arguably the most influential model of sexual selection after Darwin's original theory. He proposed a 'runaway model' which attempted to explain how ornamentation and the desire for it could have evolved in a mutually reinforcing relationship.[13] However, Fisher's runaway model does not answer the original question. The problem is illustrated in the following summary of the theory by Geoffrey Miller:

> Now, suppose that some of the females become sexually attracted to tails that are longer than average. (It doesn't matter why they evolve this preference—perhaps there was a mutation affecting their sexual preferences, or their vision happened to respond more positively to large than to small objects.) Once this female preference for long tails arises, we have the third requirement for evolution: selection.[14]

The question of why or how such a preference evolved, however, would seem to be of considerable importance. Like a man questioned by a private investigator on his whereabouts Monday evening who begins his alibi with what he had for breakfast on Tuesday morning, the theory seems to begin right where the most important question

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[11] Thomas Hunt Morgan, *Evolution and Adaptation* (Basingstoke, UK: The Macmillan Company, 1903), 216.

[12] R. A. Fisher, "The Evolution of Sexual Preference," *The Eugenics Review* 7, no. 3 (October 1915): 185.

[13] R. A. Fisher, *The Genetical Theory of Natural Selection*, ed. J. H. Bennett (Oxford: Oxford University Press, 2000). Fisher suggests three phases in his approach. First, aesthetic traits would have been more common in the healthy, strong, and vigorous, while others would have been more noticeable in the less well-endowed or vigorous (e.g. red cheeks and bad breath with humans). In the second phase, the traits become detached from, or even opposed to natural selection, yet continue to increase in splendor, due to the association of the trait as an advantage by the opposite sex. Third, some level of equilibrium is achieved between natural selection and sexual selection. Eventually, however, new points of aesthetic interest will disturb the equilibrium, leading to a gradual decay of both the aesthetic feature and the interest for it.

[14] Geoffrey Miller, *The Mating Mind: How Sexual Choice Shaped the Evolution of Human Nature* (New York: Anchor, 2001), 71.

ends. Fisher's model, and the subsequent expansions upon it by Russell Lande and Mark Kirkpatrick, fail to cross the aesthetic what/why divide by assuming aesthetic preferences rather than accounting for them.[15]

The arbitrariness introduced by Darwin's taste of the beautiful mechanism is problematic today for the same reasons it failed to take root among many of Darwin's peers: it failed to answer the pivotal question of beauty beyond merely observing that beauty exists. The implication seems to be that beauty is valued because it is beautiful, but such circular reasoning is far from helpful. For a theist, a theory of beauty can be built on the foundation of the belief that beauty is the gift of a divine creator who constructed a colorful world and endowed humans with the sensory ability to "suck out all the marrow of life," as Thoreau famously wrote.[16] By introducing his theory of natural selection, Darwin did away with this foundation for aesthetics and never found a suitable replacement.

Alfred Russel Wallace – Adaptationism

While the theory of natural selection is now widely revered and accepted, the theory of sexual selection has long played the role of the proverbial neglected stepchild. Of the many skeptics and opponents of Darwin's theory of sexual selection, most have historically been able to accept the law of battle but are dubious to the arbitrary and aesthetic implications of the taste of the beautiful. For many of Darwin's contemporaries,

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[15] See Russell Lande, "Models of Speciation by Sexual Selection on Polygenic Traits," *Proceedings of the National Academy of Sciences* 78, no. 6 (June 1, 1981): 3721–25; Mark Kirkpatrick, "Sexual Selection and the Evolution of Female Choice," *Evolution* 36, no. 1 (1982): 1–12. For a recent application of the theory, see Richard Prum, "The Lande-Kirkpatrick Mechanism Is the Null Model of Evolution by Intersexual Selection: Implications for Meaning, Honesty, and Design in Intersexual Signals," *Evolution* 64, no. 11 (November 2010): 3085–3100.

[16] For example, Christian philosopher Michael Jones builds a theological account for beauty and art: "God created people with the ability to fashion and appreciate beauty, implying that He expected them to do so. If this is so, then beauty and art are natural and necessary aspects of human existence. They have intrinsic value in their own right, and do not need to be justified by any extrinsic utility. Human creativity and appreciation of beauty are both a right and a duty." Michael Jones, "Imago Dei and the Appreciation of Beauty," *Philosophia Christi* 18 (1995): 46.

the theory of sexual selection was not only flawed but an affront to Darwinism itself. In his 1871 review of *The Descent of Man*, G. J. Mivart was the first of many to paint Darwin as a traitor to his own theory:

> Mr. Darwin's convictions have undergone grave modifications . . . the opinions adopted by him now are quite distinct from, and even subversive of, the views he originally put forth. The assignment of the law of 'natural selection' to a subordinate position is virtually an abandonment of the Darwinian theory; for which the one distinguishing feature of that theory was the all-sufficiency of 'natural selection.'[17]

As some scholars have suggested, the initial dissent may have been driven in part by the incompatibility of Victorian era philosophies and the power and autonomy sexual selection allotted to females.[18] Skepticism for the theory goes deeper than any misogynistic concerns, however, for several more enduring reasons.

A chief concern, as noted previously, is the degree of arbitrariness involved in the theory and the sentiment that Darwin never established a foundation for such capricious aesthetic desires. Perhaps the most pointed critique of sexual selection, however, was that it was an affront to the exquisite simplicity of the Darwinian explanation. Much of the initial appeal of the theory of natural selection was that it represented a *theory of everything*, which provided clarity to all of life's greatest mysteries. The addition of a second theory, especially one which appeared to conflict and work against the first, undermined Darwinism's captivating simplicity. Thus, from the beginning, the stake for the debate over the theory of sexual selection was recognized to be the tenability of Darwinism as a whole.

Leading the charge against the arbitrariness of Darwin's theory of sexual selection was Alfred Russel Wallace, the co-discoverer of evolution by natural selection. In his introduction to the book *Darwinism*, Wallace wrote,

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[17] G. J. Mivart, review of *The Descent of Man, and Selection in Relation to Sex* by Charles Darwin, *Quarterly Review* 131, no. (July) (1871): 48. The review concludes with the razor sharp criticism, "The author of 'Descent of Man' has utterly failed in the *only* part of his work which is really important" (89).

[18] Prum, *Evolution of Beauty*, 30-31.

> In rejecting that phase of sexual selection depending on female choice, I insist on the greater efficacy of natural selection. This is pre-eminently the Darwinian doctrine, and I therefore claim for my book the position of being the advocate of pure Darwinism.[19]

In a strange turn of events, Wallace had postured himself as being more Darwinian than Darwin himself. Like two comic book junkies debating ad nauseum whether Superman or Batman would win in a fight, Darwin and Wallace's disagreement on the issue of sexual selection has resulted in an ongoing civil war of sorts between the Darwinists who cling to the original intent of Darwin's theory and those who embrace Wallace's refashioned adaptionist version.

Although Wallace rejected Darwin's terminology of sexual selection, he recognized that beauty and aesthetics did play a role in the evolutionary process. He diverged from Darwin not on the facts of beauty in nature but only in the belief that a second theory is needed to explain them. Wallace rejected the notion that the aesthetic traits, even those which appeared antithetical to survival value, conflicted with Darwin's original theory of natural selection.

He proposed several solutions to the problem. First, rather than seeking an explanation to harmonize these prevalent facts of nature with natural selection, Wallace reversed the paradigm. Instead of puzzling over how natural selection could produce such vibrant and beautiful colors, which are found predominantly with the males, he proposed the opposite—that natural selection is responsible for repressing the bright colors in the females.[20] In a letter to Darwin concerning the coloration of caterpillars and butterflies, he writes,

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[19] Alfred Russel Wallace, *Darwinism: An Exposition of the Theory of Natural Selection With Some of Its Applications* (London: Macmillan and Co., 1889), viii.

[20] The heightened aesthetic traits in the males of a species, and the more muted aesthetics of the females, is a frequent occurrence. For example, compared to the vibrant colors of the peacock's tail feathers, the peahen has both a shorter tail and drabber colors. The elaborate bowerbird nests are built exclusively by the males, and only the males perform the Great Argus mating dances. Similarly, birdsong has historically been thought to be predominantly reserved for males, although more recent research has challenged this belief. See Karan J. Odom et al., "Female Song is Widespread and Ancestral in Songbirds," *Nature Communications* 5 (March 4,

> I sometimes doubt whether sexual selection has acted to produce the colours of *male butterflies*. I have thought that it was merely that it was advantageous for the females to have less brilliant colours, & that colour has been produced merely because in the process of infinite variation *all colors* in turn were produced.[21]

This line of thought, however, is limited. There remains the question of why the suppression of color would not have been as advantageous for males as it was for females. Also, the hypothesis is perhaps viable with physical ornamentation, such as the coloring of the butterfly wings and the peacock's tail feathers, but does not account for many of the other aesthetic displays and animal mating rituals (e.g., the Bowerbird nests, birdsong, or the mating dance of the Great Argus).

The main solution proposed by Wallace for the Darwinian problem of beauty, which arguably remains the dominant approach today, was to reject the notion that beauty and aesthetic preference are arbitrary. Instead, he conceives of beauty and coloration as advantageous survival traits: "The only way in which we can account for the observed facts is by the supposition that color and ornament are strictly correlated with health, vigor, and general fitness to survive."[22] If beauty can indeed be linked to health, vigor, and general fitness, then, according to Wallace, the theory of sexual selection becomes largely obsolete, as the facts of nature it was purposed to explain are already accountable through Darwin's original theory of natural selection:

> The sexual selection of color or ornament, for which there is little or no evidence, becomes needless, because natural selection, which is the admitted versa causa, will itself produce all the results . . . . Sexual selection becomes as unnecessary as it would certainly be ineffective.[23]

2014): 3379.

[21] Alfred Russell Wallace, "Letter from Alfred Russell Wallace to Charles Darwin, February 25, 1867," Darwin Correspondence Project, accessed August 24, 2018, https://www.darwinproject.ac.uk/letter/DCP-LETT-5416.xml.

[22] Alfred Russel Wallace, "The Colors of Animals and Plants," *The American Naturalist* 11, no. 12 (December 1877): 724.

[23] Wallace, "The Colors of Animals and Plants," 723.

Wallace argued that the frequent superiority of male birds and insects in terms of the brightness or intensity of color is directly related to the superior vigor, activity, and higher vitality over the female. Furthermore, he observed that animal coloration fades with disease and increases during breeding-season, when male vitality is at its peak. If coloration is an indicator of strength and vitality, then the males most often victorious in their conquest for mates will also be the most colorful, thus passing on "attractive" genes. Similarly, Wallace suggests that in species where body size variance is narrow, coloration is an important indicator of fitness.[24]

Several years ago, the British tabloid *The Daily Express* ran the headline, "Red Faces Like George Clooney's Are Ruddy Gorgeous."[25] The declaration was based on a study conducted by researchers at the University of St. Andrews, which claimed that the red complexion (oxygenated blood coloration) is frequently perceived by humans as a sign of good health. Another study revealed that red clothing is the predominantly used color for females to express sexual interest to men.[26] The importance of the color red as a display of health or sexual interest is similar to that in other primate species, such as mandrills, macaques, and chacma baboons. In a general sense, these examples illustrate Wallace's aesthetic theory, whereby traits are originally perceived as attractive in relation to health, before eventually becoming established as symbols of beauty and desire. Whereas Darwin seemed to imply that beauty is valued because it is beautiful, Wallace suggested that beauty is valued because it is healthy, and outward beauty simply points us in the right direction.

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[24] Wallace, "The Colors of Animals and Plants," 713-6.

[25] "Red Faces like George Clooney's Are Ruddy Gorgeous," *The Daily Express*, October 8, 2012, accessed August 24, 2018, https://www.express.co.uk/news/uk/350723/Red-faces-like-George-Clooney-s-are-ruddy-gorgeous.

[26] Andrew J. Elliot and Adam D. Pazda, "Dressed for Sex: Red as a Female Sexual Signal in Humans," *PLOS ONE* 7, no. 4 (April 13, 2012): e34607.

Natural Selection, Aesthetic Decadence, and the Costliness of Beauty

Oscar Wilde said, "All art is quite useless."[27] As an artist himself, Wilde was clearly not proposing that art is without value, only that its value is not contingent on any usefulness. In fact, historically, one of the defining characteristics of art is its costliness in proportion to its utility. This fact has frequently elicited scorn from the population outside of the art world, such as when *Mirror, Blood Red* by German artist Gerhard Richter—a rectangular slab of glass painted entirely red—sells for $1.1 million or when one of ninety tin cans filled with thirty grams of Italian artist Piero Manzoni's own feces sells for as high as €270,000. Even more aesthetically pleasing artworks are often staggering in their attributed value, such as the record-setting sale of Leonardo da Vinci' *Savior of the World* in 2017 for $450.3 million. Camilla Power rightly notes, "From a Darwinian standpoint, the most salient and puzzling feature of ritual, religion, and art is its costliness."[28] Similarly, David Rothenberg notes,

> It is the temptation for all who want to connect art to evolution to find evolutionary justification for why we humans seem to be wasting so much precious time on the creation and appreciation of things that seem, to some, biologically useless.[29]

Wallace did not apply his theories directly to human art (others, such as Denis Dutton, would later do so), but he did attempt to overcome the complications raised by the costliness of sexual selection in nature. He did so primarily by rejecting the premise that there were complications. The problems would indeed be overcome if a direct link were possible between aesthetic preferences and general fitness or "good genes." The dilemma for Wallace is that a direct link is difficult, if not impossible, to make.

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[27] Oscar Wilde, "Preface," in *The Picture of Dorian Gray* (1891; repr., Mineola, NY: Dover Publications, 1993), viii.

[28] Camilla Power, "Sexual Selection Models for the Emergence of Symbolic Communication: Why They Should Be Reversed," in *The Cradle of Language*, ed. Rudolf Botha and Chris Knight (New York: Oxford University Press, 2009), 260.

[29] David Rothenberg, *Survival of the Beautiful: Art, Science, and Evolution* (New York: Bloomsbury Press, 2013), 77.

While some cases of intense coloration and sexual displays are conceivably related to health and vigor, many—perhaps most—are not. For example, the club-winged manakin was the subject of an amusing headline in *The New York Times*, "Are These Birds Too Sexy to Survive?"[30] The birds are so-named because, unlike most bird species, their wing bones are solid rather than hollow. Their unique wing compositions allow them to create songs with their wings, producing as many as 1400 sounds a second. These songs play an integral role in the birds' mating rituals, as the males attempt to woo females with their unique melodious ability. The ability to create songs with their wings, however, has come at the detriment to their ability for flight. This disparity between physical utility and aesthetic preference is difficult to reconcile by Wallace's adaptationist account for beauty.

In 1975, The Israeli ornithologist Amotz Zahavi, following in the footsteps of the Wallacean aesthetics, offered a "handicap principle" as an explanation for the costliness of beauty.[31] The theory was a hand grenade tossed into a stagnant debate, with more research published on sexual selection in the ten years following Zahavi's paper than had been published in the previous one hundred years.[32] According to Zahavi, the bright coloration was indeed antithetical to camouflage, and the sexual displays of animals a wasteful exertion of energy. Therefore, any animal that could survive the rigors of natural selection while bearing such handicaps was shown to be remarkably capable and fit. In other words, to return to the aforementioned examples of human art, a female suitor might conclude that any man able to afford a quarter of a million euros for a tin can of another man's excrement is not likely to be in want of food or shelter.

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[30] Richard Prum, "Are These Birds Too Sexy to Survive?" *The New York Times*, May 5, 2017.

[31] Amotz Zahavi, "Mate Selection—A Selection for a Handicap," *Journal of Theoretical Biology* 53, no. 1 (September 1, 1975): 205–14.

[32] Miller, *The Mating Mind*, 64.

There is some merit to Zahavi's principle in regards to human aesthetics. Mark Twain once mused that a classic is something that "everybody wants to have read and nobody wants to read."[33] Particularly in high society, the collecting or patronage of the arts is a status symbol of wealth and cultural sophistication.[34] However, the extent of the explanation is limited. The person who purchases a stack of novels at their local bookstore is unlikely to be doing so for the prestige they add to their bookshelf. Likewise, the reader who stays awake late into the night to reach the end of a mystery novel is hardly doing so to flaunt his luxury of recreation time.

The handicap principle is most feasible when tasked to explain the collection of art, but works less so with explaining the creation of it. The stigma of the "starving artist" sends a much different message. The master of horror, H. P. Lovecraft, was so impoverished toward the end of his life that he frequently went without food in order to afford postage for letters.[35] Despite penning one of the greatest literary works in the English language, Herman Melville was forced to sell his family farm and live off his wife's inheritance before dying depressed and impoverished. When Edgar Allan Poe died penniless, his obituary in the *New York Tribune* read, "This announcement will startle many, but few will be grieved by it."[36] Oscar Wilde learned firsthand the "uselessness" of

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[33] Mark Twain, "The Disappearance of Literature," in *Mark Twain's Speeches* (New York: Harper & Brothers Publishers, 1910), 194.

[34] Steven Pinker argues, "The value of art is largely unrelated to aesthetics." Steven Pinker, *How the Mind Works* (New York: W. W. Norton & Company, 2009), 522. In support of this idea, he points to the case of forgeries, in which a priceless work of art becomes worthless if discovered to be the work of a copy artists and not the original artist. Also, soup cans and urinals become valued artistic works if the art world decides they are. He asserts, "The very uselessness of art that makes it so incomprehensible to evolutionary biology makes it all too comprehensible to economics and social psychology" (522).

[35] Margaret Ronan, foreword to *The Shadow Over Innsmouth and Other Stories of Horror*, by H. P. Lovecraft (New York: Scholastic, 1971).

[36] R. W. Griswold, "Death of Edgar A. Poe," *New York Tribune*, October 9, 1849. The author of the condemnatory obituary was originally credited simply as "Ludwig." Eventually however, the author was identified as Rufus Griswold, an editor and literary critic with an unfavorable opinion toward Poe. As such, the degree to which Griswold's cynical sentiment reflected that of the general public is unreliable. Even so, the circumstances surrounding his death mark an unglamorous end to one of America's literary greats.

art. At the end of his life, on his deathbed in a rundown hotel, he wrote to his publisher, "This poverty really breaks one's heart . . . so utterly depressing, so hopeless. Pray do what you can."[37] The exertion of energy toward aesthetic desires has indeed been a costly pursuit, and an unreliable sign of the ability to thrive despite such burdens.

The handicap principle is also rarely, if ever, followed to its logical conclusions. Prum calls this fact the "Smucker's principle," based on the famous slogan for Smucker's jelly: "With a name like Smucker's, it has to be good!"[38] A *Saturday Night Live* sketch parodied the slogan, as comedians competed to sell their jams with escalating levels of off-putting names: Nose Hair, Death Camp, Dog Vomit, Monkey Pus, Painful Rectal Itch, Mangled Baby Ducks, Ten Thousand Nuns and Orphans ("who were all eaten by rats"), before concluding with a brand name so disgusting that it could not even be said on television (with the cheerful send off, "Ask for it by name!"). Zahavi's principle suggests a continually escalating costliness that is not realized in nature.

If brightly colored plumes are attractive as a signal of the ability to survive such a burden, how much more so would a true handicap be perceived as attractive? If the handicap principle is correct, then peahens would presumably have developed a desire for peacocks with stunted wings, crippled feet, or any other physical deformity, which would signal a greater burden to survive than colorful tail feathers. A scenario can be imagined where animals chew off a limb and cripple themselves in order to increase their attractiveness to a potential mate. Mark Kirkpatrick has mathematically demonstrated how the handicap principle inevitably crumbles in on itself, with the handicapped males never truly gaining any advantage.[39] As Prum notes, the handicap

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[37] Oscar Wilde, quoted in Lara Marlowe, "Wilde about Paris – an Irishwoman's Diary about Oscar Wilde's Life in Exile," *The Irish Times*, June 18, 2016, accessed August 24, 2018, https://www.irishtimes.com/opinion/wilde-about-paris-an-irishwoman-s-diary-about-oscar-wilde-s-life-in-exile-1.2689363

[38] Prum, *Evolution of Beauty*, 46-47.

[39] See Mark Kirkpatrick, "The Handicap Mechanism of Sexual Selection Does Not

principle fails to explain the fact that the sexual aesthetic displays are primarily ornamental. While Darwin's aesthetics failed to fit within his theory of natural selection, Wallace's theory of natural selection fails to fit with the aesthetic facts of nature.

Denis Dutton – "The Art Instinct"

Philosopher Denis Dutton charts a slightly different path than Wallace by pinning his theory of Darwinian aesthetics, not on evolutionary adaptations themselves, but rather on the lingering instincts of ancient man. In the book *The Art Instinct*, he declares,

> A Darwinian aesthetics will achieve explanatory power neither by proving that art forms are adaptations nor by dismissing them as by-products but by showing how their existence and character are connected to Pleistocene interests, preferences, and capacities.[40]

Dutton is not as pessimistic toward sexual selection as Wallace, but follows a similar course in advocating a more unified relationship between it and natural selection. There are three main components in Dutton's evolutionary aesthetics: First, to establish that the universality of certain aesthetic preferences indicates an evolutionary foundation, not merely a cultural one. Second, to reverse-engineer modern universal aesthetic tastes and preferences to discover how the instincts developed in man's ancient ancestors and what survival value they would have offered. Third, to establish human and animal aesthetics as fitness signifiers in the service of sexual selection.

Pleistocene Interests and the Universality of Art

Far from aesthetics posing a serious challenge to his naturalistic worldview, Dutton proposes that the state of the arts today is actually an argument in favor of the

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Work," *The American Naturalist* 127, no. 2 (1986): 222–40.

[40] Denis Dutton, *The Art Instinct: Beauty, Pleasure, and Human Evolution* (New York: Bloomsbury Press, 2010), 96.

validity of Darwinian evolution. The issue of the universality or subjectivity of art has provided ample fodder for much aesthetic debate, but Dutton urges that we must see the forest through the trees. He asserts that while art may appear to be largely cultural, the "art instinct that conditions it is not."[41] Thus, he does not advocate for a universal standard to measure specific works of art, but the universality of art itself. He writes,

> History and culture give us the artistic forms (epics, novels, paintings, poems) in which we evaluate skill and virtuosity, but our admiration of skill and virtuosity itself is an adaptation derived from sexual selection off the back of natural selection.[42]

The appreciation of art as art—the *aesthetic dimension*—is a universal phenomenon, evident by the similarity of art forms across cultures. Dutton suggests that, given enough time, all peoples and cultures would eventually discover for themselves the artistic forms of storytelling, drama, painting, music, bodily adornment, and so forth.[43]

Dutton pushes the theory of Darwinian aesthetics even further, arguing that not only is the aesthetic dimension as a whole a universal instinct but so, too, are many specific preferences. He notes that people around the world tend to be drawn toward the same types of landscape art, even when those people do not live in areas with access to the depicted landscapes.[44] Dutton argues that the aesthetic preferences which shape the art are determined by deep, innate human preferences that tie modern man back to his ancient ancestors. He writes, "The calendar industry has not conspired to influence taste but rather caters to preexisting, precalendrical human preferences."[45]

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[41] Dutton, *Art Instinct,* 206.

[42] Dutton, *Art Instinct,* 175.

[43] Dutton, *Art Instinct,* 34.

[44] Joann Wypijewski, ed., *Painting by Numbers: Komar and Melamid's Scientific Guide to Art* (New York: Farrar Straus & Giroux, 1997). From 1994 to 1997, Russian artists Komar and Melamid had polls conducted in eleven different countries to determine the general artistic preferences of the population. Using the collected data, they created a People's Choice series, which attempted to create the "most wanted" and "most unwanted" paintings for each of the eleven countries.

[45] Dutton, *Art Instinct*, 18. Dutton is opposing American art critic Arthur Danto, who argued that calendars have acted as a form of "visual enculturation," determining what people

To formulate a theory of evolutionary aesthetics, Dutton says that we must "reverse-engineer" man's current tastes and preferences in order to discover where they came from.[46] By doing so, Dutton offers a Darwinian explanation for beauty and aesthetics by relating our modern aesthetic impulses to ancient man's concerns of survival value and selective fitness—Darwin's theories of natural selection and sexual selection, respectively.

Modern Aesthetic Preference and Ancient Survival Value

Dutton offers landscape art as an example of how present aesthetic impulses and preferences can be explained by relating them to the survival values they once provided for ancient man. He refers to Gordon H. Orians' "Savanna Hypothesis."[47] Accordingly, the ideal landscape that human beings appear to find intrinsically pleasurable includes several uniform elements, such as open spaces of low grass and groupings of trees, the presence or evidence of a nearby water source, an unimpeded vantage on the horizon, evidence of wildlife, and a diversity of greenery, among other characteristics. Orians noted the many similarities that this ideal aesthetic landscape has with the East African savannas where evolutionists believe hominids first split off from chimpanzees. For Dutton, there is no coincidence in the similarities:

> These preferences turn out to be more than just vague, general attractions toward generic scenes: they are notably specific. African savannas are not only the probable scene of a significant portion of human evolution, they are to an extent the habitat

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initially think of when they think of art. In his view, aesthetic preferences are largely shaped to conform to the art around them. Thus, the reason a blue landscape initially appears to represent a universal aesthetic preference is simply because the prevalence of calendar art depicting blue landscapes had culturally conditioned many people for this inclination. He concludes, "It is altogether likely that what Komar and Melamid have unearthed is less what people prefer than what they are most familiar with in paintings." Arthur C. Danto, *After the End of Art* (Princeton, NJ: Princeton University Press, 1998), 214.

[46] Dutton, *Art Instinct*, 101.

[47] Gordon H. Orians, *Snakes, Sunrises, and Shakespeare: How Evolution Shapes Our Loves and Fears* (Chicago: University of Chicago Press, 2014).

meat-eating hominids evolved for.[48]

By "reverse-engineering" these desires, man's current aesthetic preferences can be attributed to the key survival value that they would have hypothetically offered their ancient ancestors. For example, the trees would have offered shelter and escape from predators, and the open vantage points would have provided a view of oncoming danger as well as potential food.

While modern man no longer overtly or consciously attributes these preferences for an open landscape or a grouping of trees to any survival advantages, such positive associations are deeply imbedded within the human species. Dutton concludes, "Since we still have the souls of those ancient nomads, these emotions can flood into modern minds with surprising and unexpected intensity . . . . At such moments we confront remnants of our species' ancient past."[49] In short, sight would have played an important function for survival on the East African savannas during the Pleistocene Age; therefore, it is understandable that sight has developed into one of the primarily vehicles for aesthetics.[50]

Fitness Signifiers

Having linked modern aesthetics with Pleistocene survival needs, Dutton must still provide a feasible pathway between the two, as there is a significant gap between the importance of hearing an approaching predator and the auditory pleasure of a Beethoven symphony. Dutton attempts to close this gap by advocating for an understanding of sexual selection similar to Wallace. While he maintains that the origin of the "art instinct" must be located in its survival value, this alone cannot sufficiently account for its vast

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[48] Dutton, *Art Instinct*, 19.

[49] Dutton, *Art Instinct,* 27-28.

[50] Dutton, *Art Instinct,* 208-11.

scope. Thus, Dutton postulates that human aesthetics came to function as fitness signifiers.

As noted in chapter 2, language is a phenomenon of excess. Dutton states that 98% of common speech today uses only four thousand words, despite the average English speaker having a vocabulary of sixty-thousand or more to choose from. The immense scope of vocabulary has swelled far beyond what is necessary for sufficient communication and survival advantage. Dutton believes that the excess vocabulary can be accounted for as a fitness signifier. Early man's wide vocabulary and mastery over language was a signal of intellectual fitness to potential mates, the same way that a man's large biceps or a woman's thin waist are indicators of physical fitness in modern society. What began in the arena of courtship must have gradually trickled into and permeated every other aspect of social life and culture.

Dutton argues that a Darwinian aesthetic does not require art to have a survival function in natural selection today but only in the genesis of the aesthetic instincts. He summarizes his position as follows: "Preoccupied as we are with the flashy media and buzzing gizmos of daily experience, we forget how close we remain to the prehistoric women and men who first found beauty in the world. Their blood runs in our veins. Our art instinct is theirs."[51]

A Critique of Dutton's "Art Instinct"

In his endorsement of Dutton's *The Art Instinct,* Steven Pinker declares, "This book marks out the future of the humanities."[52] The major difficulties for Dutton's theory, however, do not come from forecasting into the future but in reconstructing the past. Dutton confidently declares, "Darwinian aesthetics can restore the vital place of

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[51] Dutton, *Art Instinct,* 243.

[52] Steven Pinker, cover endorsement for *The Art Instinct: Beauty, Pleasure, and Human Evolution*, by Denis Dutton (New York: Bloomsbury Press, 2010).

beauty, skill, and pleasure as high artistic values."[53] Less clear, however, is where aesthetics and beauty are being restored to, or why such a restoration is necessary.[54] He summarizes his approach in this way:

> Darwinian explanation is always looking back into the past to adaptions that come to us from the ancestral environment, but then also toward the effects of history and culture on how evolved adaptions, strictly conceived, are modified, extended, or ingeniously enhanced—or even repressed—in human life.[55]

As previously suggested, this approach to art can be roughly divided into the influence and interplay between natural selection (the past adaptions) and sexual selection (the past and present cultural pressures). Despite his winsome penmanship, Dutton fails to provide convincing evidence or arguments to support either of these two aspects of this theory.

Natural Selection and a Critique of Universal Preferences

We have no knowledge of the first artists, nor is any of their ancient art preserved for examination. Reconstructing the lifestyle and environment of man's ancient forbears is an act of imaginary world creation not far removed from Frank Baum's *Oz* or George R.R. Martin's *Westeros.* Dutton acknowledges that his approach requires "a dependence on historical accidents we shall never fully know and prehistoric conditions which we can only speculate imperfectly."[56] This problem is not unique to Dutton and is unavoidable for all theories reliant on the distant past. However, while Dutton's theory cannot be proven or disproven on the basis of available evidence, it can still be evaluated on the feasibility of his speculation and assumptions.

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[53] Dutton, *Art Instinct*, 12.

[54] Rothenberg is critical of philosophers like Dutton who have a tendency to "identify conservative values in art as signs of a work closer in line with what is 'necessary' by virtue of human evolution." Rothenberg, *Survival of the Beautiful*, 55. As a result, according to Rothenberg, the marriage between Dutton's Darwinian aesthetics and traditional aesthetic values prevents him from being open minded about the full scope of the aesthetic discussion.

[55] Dutton, *Art Instinct*, 98.

[56] Dutton, *Art Instinct,* 98.

A frequent motif in high fantasy literature is the "false messiah." In Robert Jordan's classic fantasy series, *The Wheel of Time*, there are many competing claims to the title of the Dragon Reborn (the name given to the prophesied messiah). The characters, either nefariously or ignorantly, believe themselves to be the prophesied savior or hero. They then garner large followings by attempting to accomplish the feats detailed in the ancient prophecies or, in some cases, by writing new prophecies in accordance with their accomplished deeds. When prophecies are written after the fact, it is not surprising that they inevitably validate the claim of their author. This is essentially the position in which Dutton places himself. By claiming that man's current aesthetic preferences and values are a result of past circumstances, about which he can only speculate, it is not surprising that his speculative reconstruction of the past supports his position.

By beginning with the conclusion—that Darwinism accounts for human aesthetics—and then moving backwards in time, Dutton selectively chooses only that which fits the conclusion, while discarding anything that fails to fit neatly within it. He writes, "Since we still have the souls of those ancient nomads, these emotions can flood into modern minds with surprising and unexpected intensity . . . at such moments we confront remnants of our species' past."[57] However, because the emotions of those ancient nomads are unknown to us, Dutton fills in the gaps by attributing to them man's current aesthetic sentiments. As a result, the conclusion his theory is meant to validate becomes the starting point in his argument. As many children discover, a maze is always easier to complete when one starts at the finish and trace backwards to the start.

Another byproduct of beginning with the present and projecting into the past is that ancient man becomes notably similar to modern man, virtually unchanged by the millions of years (according to a Darwinian worldview) separating them. In an amusing

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[57] Dutton, *Art Instinct,* 27-28.

interview on the late night talk show *The Colbert Report*, Dutton begins, "It would have helped us survive in the Pleistocene—in the period, say, 1.6 million years ago until fairly recently. The kind of imaginative abilities that artists have and that we all have in the appreciation of art—to appreciate Jane Austen, the late quartets of Beethoven," before host Stephen Colbert interrupts with the quip, "How many cavemen were reading *Emma*?"[58] Along with his heavy reliance on a questionable reconstruction of the past, the inconsistency of Dutton's account is apparent in at least three other ways.

The first is the curious lack of a developed art tradition for smell.[59] Dutton acknowledges that expert perfumers might object to their exclusion, and that these fragrance experts certainly demonstrate an impressive ability to discern and produce smells.[60] Nevertheless, Dutton makes a convincing case that the olfactory sense has not yet manifested into an established art form in the same way as the senses of sight or hearing have. Indeed, there is no olfactory wing at the Musée du Louvre and pop-star Britney Spears' perfumes Midnight Fantasy and Cosmic Radiance are unlikely to be included in her catalogue of artistic compositions.[61] The lack of a developed art of smell

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[58] Denis Dutton, interview by Stephen Colbert, *The Colbert Report*, January 28, 2009.

[59] To claim that there is a lack of a developed art tradition for smell does not ignore that some artists have experimented with various approaches to olfactory art. In the last few decades, there has been a marginal increase in recognition of olfactory art as a legitimate art form. However, these artists, by their own accord, represent a new movement in the art world, in which success or longevity is inconclusive. The recent aesthetic expansion into the olfactory sense makes the historical lack of smell all the more curious, with urinals and human feces both accepted by the larger art world as legitimate material for art before smell received similar recognition. For discussion on the recent development of olfactory art, see Larry Shiner and Yulia Kriskovets, "The Aesthetics of Smelly Art," *The Journal of Aesthetics and Art Criticism* 65, no. 3 (2007): 273–86; Victoria Henshaw et al., eds., *Designing with Smell: Practices, Techniques and Challenges* (New York: Routledge, 2017).

[60] While only rarely recognized as an art style of its own, smell is often utilized as a component in other art mediums. For example, there is also synergy between the olfactory and gustatory senses. Within the culinary arts, the aroma of a meal is as crucial as taste and presentation. Contemplation of a succulent Thanksgiving dinner is incomplete and empty without giving consideration to the fragrance of the roasted turkey, cranberry sauce, or the aromatic wallop of sour cream, butter, and bacon on baked potatoes. Similarly, several visual artists, such as Marcel Duchamp, have experimented with an olfactory component to their work. See Caro Verbeek, "Surreal Aroma's: (Re)Constructing the Volatile Heritage of Marcel Duchamp," *RELIEF* 10, no. 1 (2016): 133-42.

[61] Despite the lack of a designated olfactory wing, a few museums have housed temporary exhibits dedicated to the art of smell. For example, in 2012 the Museum of Arts and

is surprising if Dutton is correct that our current aesthetic preferences are the residue of beneficial traits in the distant past. The survival advantages of an acute sense of smell are easy to imagine—the ability to detect approaching predators or a nearby carcass, among countless other uses.[62] Why, then, did the olfactory sense fail to produce an art tradition? Dutton reasons, "Sight and hearing are historically, and doubtless prehistorically, far more important than smell to human beings as survival tools."[63] He may be correct, but why would that fact hinder the development of an art of smell? What is the utilitarian threshold that divides the senses deemed important enough for art from those that are not?

Dutton also speculates that, in addition to being less advantageous to survival, smell is also restricted by its limited range. A smell can only convey the object from which it derives (lilac, orange blossom, strawberry, garlic, etc.). Thus, it fails to evoke or

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Design in New York City housed a three-month exhibition called *The Art of Scent 1889-2012.* The exhibit consisted of unadorned white walls with twelve dimples which, when a face leaned into it, used a motion sensor to release a fragrance. The exhibition attempted to present olfactory art removed from any visual, tactile, or auditory component. Exhibits of this sort, however, are exceedingly rare and of recent design. Regarding the exhibition, David McFadden, the chief curator for the museum, noted," This is a fascinating way to take a fundamentally new look at art and design. It is new to the public as an art." Mary Orlin, "Scent As Pure Art," *The Huffington Post*, November 30, 2012, accessed August 24, 2018, https://www.huffingtonpost.com/mary-orlin/museum-of-arts-and-design-perfume_b_2193247.html.

[62] Darwin, *Descent of Man*, 24. Darwin was not convinced of the utility of smell in evolutionary history. He claimed that smell "is of extremely slight service, if any, even to savages in whom it is generally more highly developed than in civilized races. It does not warn them of danger, nor guide them to their food; nor does it prevent the Esquimaux from sleeping in the most fetid atmosphere, nor many savages from eating half-putrid meat." At the same time, Darwin concurs with Dr. Maudsley that man's sense of smell "is singularly effective in recalling vividly the ideas and images of forgotten scenes and places," noting that animals with a highly developed sense of smell, such as dogs and horses, closely associate old recollections with persons and places. Therefore, while Darwin's low opinion of the usefulness of smell in an evolutionary context is debatable, the benefits which he did find in the olfactory sense would seem perfectly tailored for an art tradition within Dutton's approach.

[63] Dutton, *Art Instinct*, 208. Dutton is not the first philosopher to downplay the importance of smell in relation to the other senses. Immanuel Kant, writing nearly a century before Darwin, made similar claims: "To which organic sense do we owe the least and which seems to be the most dispensable? The sense of smell. It does not pay us to cultivate it or to refine it in order to gain enjoyment: this sense can pick up more objects of aversion than of pleasure (especially of crowded places) and, besides, the pleasure coming from the sense of smell cannot be other than fleeting and transitory." Immanuel Kant, *Kant: Anthropology from a Pragmatic Point of View*, ed. Robert B. Louden and Manfred Kuehn (Cambridge: Cambridge University Press, 2006), 50-51.

express emotions beyond that of personal association and nostalgia. Again, while Dutton is likely correct in this observation, it does not logically follow that this limitation would prevent an art of smell. The scents conveyed by an olfactory artwork would surely be perceived differently by different people, but subjectivity in this way is no stranger to the arts. American photorealistic artist Doug Bloodworth, for example, taps into a nostalgia-heavy conception of the quintessential American childhood.[64] His artwork is intended to evoke wistful sentiment for the past, allowing the viewer to complete the experience by way of their own personal and nostalgic association with the images. An olfactory work, similar to Bloodworth's composition, is possible to imagine.[65]

Dutton argues further that smells cannot be systematized or organized in a sequential way or in relation to each other in the way sounds and images can. He ponders the question, "Could the human mind be trained to place these separate experiences into an imagined whole, one that is available for disinterested contemplation? It seems impossible."[66] Dutton's skepticism is, again, misplaced, as several theoretical ways for smells to be presented in this way can be imagined. Two or more smells might be presented in a jarring contrast, such as the scent of dandelions or fresh grass accompanied with the fetor of rotting fruit or decay, evoking a sensation of lost innocence. Another possibility is a series of smells presented in a sequence, stirring emotions like a musical symphony does, or as a form of olfactory storytelling, similar to Sergei Prokofiev's musical composition *Peter and the Wolf.* The real impossibility, it would seem, is not in

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[64] Bloodworth's art presents realistic depictions of objects associated with an idyllic American childhood, such as comic books, soda cans, candy wrappers, and game boards. See his artwork at www.dougbloodworth.com.

[65] Yasmil Raymond, former visual art curator at The Museum of Modern Art in New York, said of olfactory art: "The work, when it smells, enters the realm of a living being, the living. This life component enters into it—which is very different from looking at a Monet." Quoted in Barbara Pollack, "Scents & Sensibility," *ARTnews*, March 1, 2011. The immersive potential of olfactory art, along with the close association of smell and memory, as Darwin observed in *The Descent of Man*, would seem to open the door for several intriguing possibilities for further development of olfactory art.

[66] Dutton, *Art Instinct*, 211.

imagining how an art of smell could have arisen but in accounting for why, according to Dutton's theory, it did not.

A second inconsistency in Dutton's theory regards music. That a keen sense of hearing offers survival advantages is obvious, but it does not necessarily follow that the importance of hearing would lead to a value of music. According to Dutton's logic, it was advantageous for ancient cave-men to hear an approaching sabretooth tiger; add several million years, and suddenly George Handel composes *Messiah*. This explanation is difficult to reconcile with the fact that music does not offer the same direct reference to hearing advantages as painting does to sight advantages. A painted tree can conceivably represent shelter and escape from predators, but what ancient benefits offered by keen hearing are echoed by Richard Wagner's "Ride of the Valkyries"? Likewise, in what way does the important ability for ancient man to hear a nearby water source return to us today in the chordal progression of G-Em-C-D? The content of music appears distinctive of any of the direct referents which Dutton's theory relies upon.

Similarly, a "musical ear" is an unreliable signal of good hearing. The ability to produce and perceive pitched sounds or harmonies would be of no use to man's distant ancestors fighting for survival on the savannas millions of years ago. Musical perception does not indicate the quality of hearing, only the ability to hear sound in a particular way. For example, Beethoven was nearly deaf when he composed his sublime Ninth Symphony. In the distant past, someone with Beethoven's keen perception for tonal relationships and harmonies but diminished overall hearing would likely not survive long. Dutton admits, "To trace a continuous route from primordial calls to *The Art of Fugue* will never be possible."[67] As with much of Darwinism as a whole, Dutton's theory requires enough faith to ignore the missing links, while providing little to validate that faith.

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[67] Dutton, *Art Instinct,* 218.

A third problem in Dutton's theory is the degree of universality in art and aesthetic preferences. Aesthetic universality is presented as a fact, despite a lack of convincing evidence to support this claim. Dutton's reliance on blue landscape art—his favorite example in support of his theory—exemplifies his thinly supported assumptions. He claims, "People in very different cultures around the world gravitate toward the same general types of pictorial representation: a landscape with trees and open areas, water, human figures, and animals."[68] How does Dutton come to this conclusion? One would expect that such a sweeping generalization, especially one as pivotal to the viability of his entire theory, would be built on the foundation of sizable research. Yet, Dutton relies almost exclusively on a single study: *Painting by Numbers: Komar and Melamid's Scientific Guide to Art*.

Komar and Melamid's conclusions, as well as Dutton's application of them, raise the question of what might rightly be considered a "universal" preference. For instance, while the highest voted aesthetic preferences scored higher than any of the alternatives, only rarely did they represent the majority. The "universally" preferred blue landscape is so named because 44 percent of the people polled by the Komar and Melamid surveys answered that they preferred blue. While this statistic suggests that blue is more popular than yellow (2 percent) or orange (1 percent), the best Vegas betting odds still take the field. Can a color be championed as a universal preference when 56 percent of people prefer something else? Even the preferences that claim the majority of the votes generally fall under three categories: aesthetic preferences with no correlation to ancient survival needs or experiences (66 percent prefer soft curves, 68 percent prefer colors to be blended, and 53 percent like to see the artist's brush strokes); marginal majorities (51percent prefer the presence of wild animals); and majority preferences with more

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[68] Dutton, *Art Instinct,* 14.

probable common-sense reasons.[69] For example, 68 percent said they would rather the people in the painting be fully clothed. Is an allusion to the protective needs of cave-men living on the African savannas millions of years ago necessary to explain why modern Americans prefer the figures hiking across a painted countryside to be wearing pants? The preference is most likely the result of cultural prudence or the expected by-product of the painting's setting (88 percent preferred outdoor scenes), where clothing is expected, rather than any mystical link to man's ancient nomad ancestors.

Dutton's emphasis on passed-down desires and preferences, therefore, is inexplicably absent in some cases (smell), inscrutable in others (music), and, even where promising (landscape art), based upon limited or questionable data. Dutton, at the conclusion of his chapter on the origins of his purported art instinct, writes,

> Evolution remains a kind of natural history—with twists, turns, and genetic bottlenecks we shall never know about. Olfaction, with its intense sensation, marked pleasure, discriminative capacity, and connections with personal memory, ought to have been the basis of a high art form. But for reasons we do not fully understand, this did not happen . . . . Pitched sounds, however, became the basis for a great art form despite having no survival implications whatsoever . . . . How these acoustic phenomena came to so stir the mind—spontaneously, pleasurably, effortlessly—is another mystery of evolution.[70]

Dutton's theory, it would seem, raises more question than answers; the largest being why such a Darwinian explanation for art should be accepted in the first place.

Art as a Poor Fitness Signifier

If ancient preferences and interests, in relation to natural selection, are what first sparked man's aesthetic sensibilities, then, according to Dutton, sexual selection is

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[69] For example, 88 percent revealed that they desired outdoor scenes. This is not surprising, however as the survey asks the questions in the context of what the voter might hang in their house (a person is presumably more likely to hang a painting of the Rocky Mountains on their living room wall than a painting of another living room). Similarly, 89 percent of the voters who preferred wild animals, preferred them to be in their natural setting. Again, it is common sense that people would rather see a cheetah on the African Plains than in New York's Central Park.

[70] Dutton, *Art Instinct*, 217-19.

what continues to fan the flames and guide their development. Dutton ultimately follows in the footsteps of Wallace by linking beauty and aesthetics with fitness. He argues that art began in a courtship context, although it eventually expanded far beyond it.[71] Indeed, for whatever the reasons that led John Lennon to write "Imagine" or drive a child to reread *Green Eggs and Ham*, it surely is not to win a mate and produce more offspring. While culture has influenced the development and evolution of art, the art instinct had to begin somewhere, and, for Dutton, this starting point was courtship:

> The number-one topic for poetic and sung language worldwide and through history is love. This is exactly what you would predict if poetry recited or sung had evolved in the context of courtship as a kind of cognitive foreplay. In the sense bequeathed to us by sexual selection's effects on the evolution of speech, love is poetry's natural subject.[72]

The idea is intriguing but plagued by several problems.

The romantic image of a man wooing a woman through his poetry is largely a storybook fantasy. The expectation that poetic proficiency leads to mating and offspring might inspire pubescent males to take up the craft, but the equation has never been so simple. Consider the following list: George Bernard Shaw, T. S. Elliot, Virgil, John Keats, Edgar Allan Poe, Ezra Pound, Marcel Proust, Walt Whitman, Washington Irving, Robert Louis Stevenson, William Blake, Thomas Hardy, D. H. Lawrence, E. M. Forster, Lewis Carroll, Virginia Woolf, George Eliot, Jane Austen, Emily Dickinson, Emily Bronte, Harper Lee, Theodor Geisel, and Charles Baudelaire. All are among the greatest literary masters, and all were childless.[73] Such an esteemed list must surely shatter the

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[71] The appreciation of the art of long-dead artists is another signifier that aesthetics has expanded well beyond the more narrow confines of love and courtship. In fact, many of the literary greats were valued only after they died. Authors such as Franz Kafka, Henry David Thoreau, Sylvia Plath, and John Keats all achieved fame posthumously.

[72] Dutton, *Art Instinct*, 149.

[73] When the list is expanded to include the creative arts as a whole, names such as Beethoven, Tchaikovsky, Vivaldi, Leonardo, Michelangelo, Salvador Dali, and Andy Warhol can be added. To include great intellectual minds in general allows Newton, Mendel, Plato, Aquinas, Bacon, Locke, Leniz, Hume, and Kant to join the childless group.

dreams of fledgling teenage poets! The fascinating trend of overwhelming infertility among many of the greatest literary masters can perhaps be largely attributed to factors such as sexual orientation or societal expectations, but this only reaffirms the initial problem. [74] The same cultural pressures that produce infertility in the artistically gifted today are proposed to have developed on the basis of reproductive benefits and correlation— an evolutionary plot twist worthy of some of the previously mentioned novelists.

Perhaps the most critical difficulty with Dutton's aesthetic approach is that he assumes his conclusion. According to Dutton, art developed as a human pursuit because it played a role in a courtship context. Yet, in order for aesthetic sensibilities and desires to factor into courtship, they must already be valued. Dutton creates a circular relationship whereby art is valuable because suitors desired it, and suitors desired art because it was valuable. To avoid this pitfall, Dutton charts a path similar to Wallace by linking sexual selection with natural selection and declaring that art served as fitness signifiers. In this way, man's first poetic utterances were not valuable as objects in themselves but because they provided a sort of advertisement of the intelligence and mental fitness of the poet.

Dutton uses an analogy between art and large biceps or physical beauty, whereby the creation of art signifies the fitness of the brain in the same way that muscular arms demonstrate the fitness of the body. The analogy is contrived, however, as physical strength has clear survival advantages, while artistic ability does not. Throughout the animal kingdom, the social order is almost universally determined by size and strength, not by cleverness. Aesthetic competency is also an unreliable sign of general intelligence. The literary world is filled with wordsmiths who possess impressive vocabularies,

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[74] David Stove, *Darwinian Fairytales: Selfish Genes, Errors of Heredity and Other Fables of Evolution* (New York: Encounter Books, 2007), 44.

mastery over complex poetic forms, and pristine spelling but cannot build a fire, erect a shelter, or hunt for food. The ability to write a haiku is an undependable indication of a person's ability to survive in a violent Darwinian world.

Even if aesthetic traits or abilities could be accounted for on the basis of general fitness, there is also the question of how a potential suitor would have recognized it as such. Without an already established aesthetic value, the creation of art would conceivably have had the opposite effect from what Dutton suggests. Would a female have discerned the fitness of a male who appeared to waste so much time on trivial aesthetic pursuits, such as carving elaborate designs into their tools, over males who excelled in matters more practical and immediate to their survival? There would also need to be some form of aesthetic standard to measure one suitor against another. If male birds attract mates on the intensity and extravagance of their coloration, were human males measured by the level of detail or realism of their carvings? Such aesthetic judgments presuppose the presence of certain aesthetic preferences and standards before Dutton's explanation for the original development of those preferences.

In the end, Dutton's initially promising aesthetic approach is undone by many of the same problems that stumped Darwin and undermined Wallace. Perhaps David Stove said it best when he included the love of beauty among mankind's heavy catalogue of errors, which "singles our species as being the most hopelessly stupid of all the pupils in the great school of natural selection."[75]

Richard Prum – Arbitrary Beauty

"Beauty Happens." This is the mantra of Richard Prum, curator at the Peabody Museum of Natural History at Yale University. Prum is dissatisfied with the adaptionist approach as offered by Wallace and Dutton, which places beauty and aesthetics only as

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[75] Stove, *Darwinian Fairytales,* 310.

outward signs or fitness signifiers of other characteristics essential to natural selection. Instead, Prum argues for a renaissance of Darwin's original aesthetic explanation by embracing the autonomy of sexual selection. He does not deny that beauty can occasionally function in an adaptionist sense, but he argues that adaption alone is insufficient to accurately account for most of the aesthetic realities in the world. He describes the adaptionist view of beauty as being similar to gold standard, wherein beauty has no inherent value besides the value that arises when beauty stands for extrinsic values such as good genes or direct benefits.[76] He writes,

> One of the problems with the concept of mating value is that it rests on the assumption that there *must be* something of greater value in sexual attraction beyond mere sexual attraction, and it excludes even the possibility of the sexual appeal of arbitrary aesthetic traits . . . They assume that sexual attractiveness must involve *encoded meaning* and that the beautiful individual is in some way *objectively* superior.[77]

He notes, contrary to that viewpoint, that there is a quirkiness in nature that has no readily discernable connection with fitness or health. In fact, as Darwin observed, many of these aesthetic quirks are actually a detriment to the animal. Prum refers to this occurrence as *aesthetic decadence*, whereby particular aesthetic displays or attributes exist in spite of fitness, rather than as a signifier of it.

One example is the human body, which cannot be accounted for through natural selection alone. Prum argues that big breasts and narrow waists are both the product of male mate preference, which goes beyond the optimum for natural selection. Of all the mammals on earth, permanent breast tissue is unique to humans. In other animals, breasts only increase when needed for nursing. Assumedly, millions of years of evolution have demonstrated that the lack of permanent breasts is perfectly suited for the function of nursing, which suggests that there must be some other explanation for the

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[76] Prum, *Evolution of Beauty*, 85.

[77] Prum, *Evolution of Beauty,* 257.

human female breasts. This variable, Prum proposes, is simply the arbitrary aesthetic preferences of human males. He makes a similar case for the hairlessness of the human body. The hairy coat of other primates can certainly be argued to provide survival benefits, and yet, somewhere along man's evolutionary journey, he shed this beneficial trait. Darwin surmised that the loss of hair may have been the result of sexual preference.[78] Prum agrees and takes the argument a step further by suggesting that the retention of patches of hair is ornamental and also the product of aesthetic preference based on the fact that these patches of hair—on the face, armpits, and pubic areas—do not appear until puberty.[79]

According to Prum, the same arbitrary sexual preferences which helped shape the human body are also at work in nature:

> If Beauty Happens, then sexual display traits do not always improve survival, and can instead evolve to be highly costly to the individuals that have them. Each display trait is predicated to evolve to an equilibrium between sexual advantage and its survival costs, and the equilibrium may be *far* from the optimum preferred by natural selection of male survival and fecundity alone.[80]

Animals, he surmises, are not exempt from the whims of fashion and aesthetic fancy. In this way, Disney's 2016 animated film *Zootopia*—in which anthropomorphized animals attend musical concerts, perform stage plays, and sport individualized fashion—is not far removed from the truth.

One of the most famous examples of aesthetic preferences in nature is the elaborate nests of the of bowerbirds. The nests play a crucial role in mating, whereby the males impress the females with their creations. The ritual is a classic case of the arbitrary preferences of the females. In the late 1980s, Jared Diamond conducted experiments with

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[78] Darwin concluded that the loss of hair was "an inconvenience and probably an injury" to man, and therefore, man's body, "Cannot have been divested of hair through natural selection." Darwin, *Descent of Man*, 386. Darwin also notes that in all parts of the world women are less hairy than men (a frequency shared with several species of monkeys).

[79] Prum, *Evolution of Beauty*, 255.

[80] Prum, *Evolution of Beauty,* 129.

the Vogekjio Bowerbird in Western Irian Jaya. In the experiment, he set out an assortment of supplies for the bowerbirds to use in the construction of their nests, including various colored poker chips. Without exception, the bowerbirds took the chips in the same specific descending order of blue, purple, orange, and red. Diamond then marked the chips with an identifier for each of the birds. When the birds proceeded to pillage their neighbors' nests for supplies, he found that the chips were stolen with the same strict hierarchy, with blue always first and red always last.[81] The birds have even been known to kill in order to obtain objects—any objects—in their favorite shade of blue. Both the artistry of the nests and the aesthetic obsession with the color blue suggest to Prum that animals possess aesthetic sensibilities quite removed from the influence of natural selection and survival.

Another frequently cited example is the elaborate mating ritual of the Great Argus pheasant. In the ritual, rarely observed by human eyes, the male Argus struts circles around the female and then bows before her and lifts his four-foot long wing feathers, exposing the intricate designs that are visible at no other time. With its beauty on full display, the male peeks out from beneath its wing to gage the female's reaction. In *Descent of Man*, Darwin wrote,

> The case of the male Argus pheasant is eminently interesting, because it affords good evidence that the most refined beauty may serve as a sexual charm, and for no other purpose . . . . It is utterly incredible that a female bird should be able to appreciate fine shading and exquisite patterns. It is undoubtedly a marvelous fact that she should possess this almost human degree of taste.[82]

Prum goes even further in attributing human aesthetic sense to the birds: "The full display behavior of the Great Argus is like an opera or a Broadway musical. It consists of music, dancing, elaborate costumes, lighting, and even trompe Poeil effects, albeit on an intimate

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[81] Jared Diamond, "Experimental Study of Bower Decoration by the Bowerbird Amblyornis Inornatus, Using Colored Poker Chips," *The American Naturalist* 131, no. 5 (1988): 631–53.

[82] Darwin, *Descent of Man*, 257.

stage with a solo cast."[83] In short, the perplexing question of why humans create art becomes simple: humans create art because they are animals, and that is what animals do.

Demythologizing Animal Artistry: The Human Uniqueness of Art

On September 26, 2011, *The Daily Telegraph* ran an article with the following sensational headline: "Monkeys at Typewriters 'Close to Reproducing Shakespeare.'"[84] The actual facts of the event were less spectacular than the attention-grabbing headline implied. The aspiring monkey bards were, in fact, virtual creations as part of a project designed by programmer Jesse Anderson to test the infinite monkey theorem.[85] The virtual monkeys were programmed to produce random nine-letter sequences of characters. If one of the nine-letter sequences appeared anywhere in Shakespeare's complete works it was crossed off the list like a game of linguistic bingo. A similar computer simulation experiment was conducted from 2003-2005, in which the virtual primates' crowning achievement was to generate a stretch of twenty-four characters matching the line "Rumor: Open your ears" from Shakespeare's *Henry IV Part 2*. This came only after 2,737,830 million billion billion billion years of random typing.[86] Real monkeys have fared no better than their virtual counterparts. A 2003 experiment was attempted with six real Sulawesi crested Macaques. The experiment was canceled after only a month, with the following lackluster—but highly entertaining—results: "The monkeys produced five pages of text, mainly composed of the letter S . . . broke the

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[83] Prum, *Evolution of Beauty*, 74.

[84] Nick Collins, "Monkeys at Typewriters 'Close to Reproducing Shakespeare,'" *The Daily Telegraph,* September 26, 2011, accessed August 24, 2018, http://www.telegraph.co.uk/technology/news/8789894/Monkeys-at-typewriters-close-to-reproducing-Shakespeare.html.

[85] The infinite monkey theorem holds that a metaphorical monkey typing on a keyboard for an infinite amount of time would type a complete text (such as the complete works of Shakespeare or a novel by Charles Dickens), although the probability of the accomplishment actually occurring is exceedingly slim (but, technically not impossible).

[86] John D. Barrow, *100 Essential Things You Didn't Know You Didn't Know about Math & The Arts* (New York: W. W. Norton & Company, 2014), 278.

computer and used the keyboard as a lavatory."[87] It would seem that Shakespeare's legacy is preserved.

One fact that the "monkey typing" experiments make abundantly clear is that literature is a uniquely human property. There are no monkey sonnets, zebra dramas, or giraffe stream-of-consciousness works of literature. The lack of any animal language equivalent to human language obviously eliminates the possibility of animal literature equivalent to human literature. Thus, it could be argued that the lack of great aesthetic works of literature is merely the consequence of a lack of language, not evidence of a larger aesthetic deficiency in the animal kingdom. The intrigue of artistically inclined animals combined with a hefty dose of anti-speciesism has led some evolutionists to proclaim that art is not confined to the human realm after all. Such claims, however, are built upon unsubstantiated claims, philosophical leaps, and misguided hope. The roadblock denying the animal kingdom the creation of sublime literature is not only an absence of language but also the lack of any aesthetic sensibilities toward art.

Aesthetic Versus Art

One fallacy occasionally made by scholars who argue for animal artistic sensibilities is to conflate all aesthetics with art. While art belongs to the aesthetic realm, not all aesthetics can rightly be called art. In a conversation between David Rothenberg and Richard Prum—detailed in Rothenberg's book *Survival of the Beautiful*—Prum seems to attribute the bright feathers in a peacock's tail as art. Rothenberg notes that, according to Prum, "These superbirds are artworks in themselves, rare and special, and can be compared to highly refined human genres of art."[88]

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[87] Collins, "Monkeys at Typewriters." The literary composition of Elmo, Gum, Heather, Holly, Mistletoe, and Rowan—the six Macaques—was collected and released in a published volume, with particularly inspiring passages such as "vvvvvvvpppssssgggggggggggg" and "aaavmlvvs- sajjjlsssssssssssssssssajjjajaa." Geoff Cox, ed., *Notes Towards the Complete Works of Shakespeare* (London: Kahve-Society, 2002).

[88] Rothenberg, *Survival of the Beautiful*, 80.

The comparison is deeply flawed. There are significant differences between the bright hues in a peacock's feathers and Johann Sebastian Bach's Brandenburg Concerto no. 3 in G Major. The former is a genetic trait of the bird; the latter an artistic creation. Bach did not possess a "Brandenburg Concerto no. 3" gene. The masterpiece was the result of a unique act of purposeful creation and intentionality. While the colorful tail feathers reflect one of nature's great aesthetics, the tail is something distinctly different than a Bach composition or any other human work of sublime art. Indeed, a bird's feathers are no more art than are the legendary beards of ZZ Top's two guitarists or Harrison Ford's strong chin. Any legitimate argument for the possibility of animals to create art must go beyond the aesthetic characteristics of the animals themselves and find traces of art as an animal creation. To this end, several such cases have been offered as proof, such as the whimsical "elephant art" and the stunning nests of the bowerbirds, but these examples fail to offer anything more promising than the Shakespearian monkeys.

Elephant Art

Perhaps the most sensational example of animal art in recent years is the emergence of "elephant art." The phenomenon began in the early 1980s when animal trainer David Gucwa noticed that Siri—an Asian elephant housed at the Syracuse Zoo—was doodling in the dirt with a stick. Much like a human parent perceiving a creative gift blossoming in his child, Gucwa encouraged Siri's aesthetic exploration by first providing her with pen and pencil and later with paint and paintbrush. Siri's work was eventually compiled and released in the book *To Whom It May Concern: An Investigation of the Art of Elephants.*[89]

Siri's drawings have evoked much praise. Rothenberg offers the following glowing appraisal: "The drawings seem right out of the minimalist canon of twentieth

[89] David Gucwa and James Ehmann, *To Whom It May Concern: An Investigation of the Art of Elephants* (New York: W. W. Norton & Company, 1985).

century art, and there is clearly something special about them," and he notes that the drawings reflect "the sudden release of a spirit that has been pent up for a long time, an animal in a cage."[90] Joel Witkin, Professor of Art at Syracuse University, was similarly impressed with the work. Upon later discovering that the artist was, in fact, an elephant, he concluded, "I am even more impressed. Our egos as human beings have prevented us for too long from watching for the possibly of artistic expression in other beings . . . . These drawings are wonderful."[91]

The stir created by Siri's discovery as an apparent art prodigy led to more intentionality in exploring the artistic talent in elephants. In 1998, The Asian Elephant Art & Conservation Project was founded as an "elephant art academy" where elephants are taught to paint. The elephant artworks have been received with much praise, selling for as high as $25,000 apiece. Although the elephants have a clear preference for abstract art, they have also wowed the general public with the creation of self-portraits. The popularity of the artwork, as well as widely viewed videos on the internet, have further fueled the narrative that art is no longer the property of man alone.

Does the emergence of the so-called "elephant art" refute the claim that art is a uniquely human endeavor? No. In fact, the study of elephant art further cements the singularity of human art. As explained above, there are two separate branches in elephant art—the self-portraits and the more minimalist, abstract creations. Ironically, the more sensational of the examples—the self-portraits—is the easiest to debunk, while the more modest example poses a more difficult challenge.

The elephant self-portraits are merely the result of manufactured human influence on the elephant, not any authentic aesthetic sensibility. Far from the vast diversity adorning the halls of the British Museum, elephants paint only one picture—the

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[90] Rothenberg, *Survival of the Beautiful*, 220.

[91] Joel Witkin, quoted in Rothenberg, *Survival of the Beautiful,* 220.

one they have been taught to paint through positive reinforcement by human trainers—and they do so in an identical manner each time. The portraits, stripped away from the enticing narrative, are a memorized set of actions the elephants have been conditioned to associate with a particular reward. There is nothing organic about the event, and no elephant in the wild has ever demonstrated the desire to sketch a self-portrait. The marvel of elephant self-portraits says much about the intelligence of elephants to memorize, master, and perform a proverbial parlor trick in order to gain a reward, but little about natural animal aesthetic sensibilities other than to reaffirm their absence.

The simplicity and innocence of Siri's original sketches, on the other hand, present a much stronger case for the existence of animal aesthetics. Unlike the human-manufactured elephant self-portraits, Siri's sketches were spontaneous and void of human interference, apart from the provision of supplies. Her artwork was born out of her own apparent creative desires, not the product of training at an elephant art academy. That Siri draws or paints something is undeniable—but is it art?

A 2017 *The New York Times* story carried the whimsical headline "How a Humble Pineapple Became Art."[92] The article recapped how two students had playfully placed a store-bought pineapple on a table at an art festival, only to return several days later and find that the modest fruit was now protected under a glass display case as one of the exhibition's most provocative pieces! Many attendees perceived echoes of Duchamp's readymades or Warhol's *Brillo Box.* When the origin of the stunt was discovered, the work—fittingly titled *Pineapple*—sparked widespread debate over what should qualify as art.[93] Notably, division over *Pineapple* had little to do with the fact of the work being a

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[92] Dan Bilefsky, "How a Humble Pineapple Became Art," *The New York Times*, May 11, 2017.

[93] Christopher Mele, "Is It Art? Eyeglasses on Museum Floor Began as Teenagers' Prank," *The New York Times*, May 30, 2016. A similar scenario occurred when two teenagers placed a pair of glasses on the floor of the San Francisco Museum of Modern Art. Before long, many of the museum's visitors stood around, contemplated, and took pictures of the spectacles, assuming them to be one of the artworks on display.

piece of fruit. The discord within the aesthetic community centered on whether this particular pineapple was presented in such a way, or possessed other important qualities, to be considered art. Paint brushed onto paper can be, and often is, art, but is every instance of pen or paint on paper art? Art implies a certain degree of presentation, intent, awareness, and sensibility—elements which distinguish the work of Rembrandt from the work of the man hired to paint the walls of a house. Likewise, that Duchamp presented *Fountain,* a store-bought urinal, as a widely accepted work of art has presumably not led anybody to confuse a hardware store with The Metropolitan Museum of Art.

Denis Dutton suggests a set of cluster criterion—a list of twelve characteristics that reflect "a vast realm of human experience that people have little trouble identifying as artistic."[94] Other aesthetic philosophers have presented similar but different criteria. The number of characteristics or the specific criterion included or excluded is not overly important, only that, in a broad sense, there is some general acceptance that a certain distinction exists between art and non-art. When approached from any angle other than the simplistic, base-level recognition of the physical materials, Siri's unpresuming sketches find little foothold by which to cling to its fragile status as art.

A 1986 *LA Times* review of *To Whom it May Concern* mused, "They have drawings, drawings which sometimes look like silly scribbles, but then—infinity symbols appear, and a butterfly, and a frog, and a *sensibility*."[95] Such praise seems to be a case of finding exactly what one is looking for—like a child gazing up at the clouds and finding all sorts of exciting and magical shapes. Yet, even with more tempered evaluations, there

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[94] Dutton, *Art Instinct*, 52-59. His list includes (1) direct pleasure, (2) skill and virtuosity, (3) style, (4) novelty and creativity, (5) criticism, (6) representation, (7) special focus, (8) expressive individuality, (9) emotional saturation, (10) intellectual challenge, (11) art traditions and institutions, (12) imaginative experience. Dutton does not suggest that every work of art will satisfy each of these criterion, but that these represent the characteristics frequently found that in which is considered to be art.

[95] Carolyn See, review of *To Whom It May Concern: An Investigation of the Art of Elephants* by David Gucwa and James Ehrmann, *Los Angeles Times*, February 23, 1986.

is a tendency to anthropomorphize. Many advocates of the validity of animal art—such as Prum—have applied human sensibilities to Siri, leading to assumptions of purpose or intentionality to the sketches. Yet, these conclusions are groundless.

First, elephants display no awareness of when to finish their artwork. The discernable shapes and symbols found in their work are not because the elephant stepped back, evaluated its work, and was satisfied with the results. Its artwork is complete only when its trainer pulls away the canvas. Left alone, the elephant will continue to paint, muddling up the canvas until the once-elegant and minimalist lines blend into a messy splotch.

Second, elephants are utterly indifferent to their artwork. No elephant ever returns to its artwork, much less considers the artwork of other elephants. There is no evidence that elephants place even modest value in the actual art. If elephants possess any aesthetic sensibility at all, it is fully rooted in the aesthetic experience and not in the artworks themselves. Of course, to value the aesthetic experience over the product is not, in itself, unprecedented. The folklore surrounding the great Japanese poet Matsuo Bashō tells of haikus floating behind him as he wandered the countryside, forever lost to the wind. For Bashō, what truly mattered was the act of writing the poetry, not the poems themselves. Yet, here, too, elephants appear indifferent to the experience. Some modern research has disputed the belief that the elephants receive any enrichment from the aesthetic experience at all. One study concluded,

> Our results suggest that painting does not improve the welfare of elephants and that its main benefit is the aesthetic appeal of these paintings to the public and their subsequent sale of which a percentage of funds might be donated toward conservation of the species.[96]

In the end, the elephants appear both disinterested in their art and indifferent to the aesthetic experience.

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[96] Megan English et al., "Is Painting by Elephants in Zoos as Enriching as We Are Led to Believe?" *PeerJ* 2 (2014): 471.

Elephant art is not a phenomenon naturally found in the wild, but rather the result of a well-meaning trainer watching a caged elephant amuse itself by drawing lines in the dirt with a stick and presuming artistic inclinations. Although the elephant wields the paintbrush, the existence of elephant art remains an aesthetic experience only to humans and in a strictly human sense. That Siri's sketches arguably represent some of the strongest arguments for aesthetic sensibilities in animals is itself a case for the singularity of human art.

Artistic Birds

Not all proposals for non-human aesthetic sensibilities are as sensational as the so-called elephant art. Birds play arguably the largest role in the discussion, at least from an evolutionary standpoint. The influence of birds on Darwinism can hardly be overstated. The instincts and sensibilities of birds formed a well from which Darwin frequently drew in the formation of his evolutionary theories. Darwin, in *The Descent of Man*, allocates nearly twice as much material to birds as he does to primates and other mammals. Birds have been deployed in the evolutionary aesthetics debate in three primary ways: birdsong, bird dance, and bird nests.

Regarding the first, Prum declares, "If we really think about what we know about birdsong, we would eliminate any definition of art as a human enterprise alone."[97] Count composer Wolfgang Amadeus Mozart among those amazed by the singing ability of birds. In 1784, he purchased a starling as a pet. Beneath the entry of the purchase in his expense book he jotted down two versions of the opening bars of the third movement of his Piano Concerto in G Major, K. 453. The first is his own motif (which he had only recently completed), and the second is attributed to the starling—who inserted a fermata in the first measure and sang G-sharp instead of the G in the next. Beneath the latter, he

[97] Richard Prum, quoted in Rothenberg, *Survival of the Beautiful*, 77.

wrote, "That was beautiful!"[98] When the bird died three years later, Mozart held a funeral for it and even recited an original poem—one great composer honoring another. Mozart was not the only virtuoso to find artistry among birds. In many ways, the songs of the nightingale have become the very symbol of artistry and beauty. [99] Shakespeare evoked the image in Sonnet 102; Virgil compared the grief of Orpheus to the lament of the nightingale; and Percy Shelley—in *A Defense of Poetry*—simply wrote, "A poet is a nightingale."[100]

Despite the poetic connotations that have become attached to them, there remains a significant gap between the melodies of a nightingale and the music of Tchaikovsky or Brahms. The nightingale's songs are beautiful to the human ear and assumedly attractive to the female nightingale as well. The singing has traditionally been believed to be predominantly reserved for the males, which indicates that the songs likely serve a function in sexual selection similar to the eyespots on the peacock's tail. That the songs can function as a form of artistic wooing, however, does not make them a clear comparison to human art and music.

There is no coincidence that birdsong has historically been a popular place to try to locate the origin of human language. In *Descent of Man*, Darwin mused, "The sounds uttered by birds offer in several respects the nearest analogy to language."[101] The frequent association of the two is largely due to the highly communitive function of birdsong. The songs are used to relay sexual interest to a mate (although whether the

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[98] In fact, because the first known public performance of the composition did not occur until a month later, some music historians have playfully entertained the idea that Mozart was not only impressed by the starling, but actually took inspiration from it. Although the more likely scenario is that Mozart taught the bird the song in the pet store before purchasing it, the alternative narrative of a great composer looking to a bird as his muse is an endearing one.

[99] See Frank Doggett, "Romanticism's Singing Bird," *Studies in English Literature, 1500-1900* 14, no. 4 (1974): 547–61.

[100] Percy Bysshe Shelley, "A Defense of Poetry," in *English Essays from Sir Philip Sidney to Macaulay,* ed. Charles W. Eliot (New York: P. F. Collier & Son, 1910), 352.

[101] Darwin, *Descent of Man*, 59.

female's decision of submission or rejection is based on aesthetic pleasure and the quality of the male song or merely on the persistence and intensity of the pursuit is impossible to know). The songs are also used to thwart rivals, with songs effectively canceling or drowning out rival songs like the elevated voices of two sports talk show hosts. Also, while the various species-specific songs may initially appear analogous to the human drive for musical exploration and variation of genres—jazz, rock, rap, blues, gospel—the variation in birdsong also has more practical purposes. The specific songs function as identifiers, with the recognizable tune discernable over long distances.

Interestingly, when the "song" of the humpback whale—nature's other famous singer—is increased in tempo and raised in pitch, it sounds remarkably similar to the songs of the nightingale. Such similarities are arguably better accounted for by their similar communicative functions, rather than the development of the same arbitrary aesthetic preferences. In both cases, the songs operate more as a melodic communication tool than a strictly aesthetic one. The primarily reason birds and whales are celebrated as singers, and croaking toads or bleating goats are not, is likely that the sound of their communication is aesthetically pleasing to the human ear. Thus, contrary to Prum's confident declaration, if we really think about what we know about birdsong, we would eliminate any definition of art as an animal enterprise.

The second example of bird artistry is dance. Prum compared the mating dance of the Great Argus to a Broadway dance. A more accurate analogy, however, is to a Miss Universe beauty pageant or a body-building competition. The dance and demonstration of the Great Argus serves to give female suitors a full look at the size of its plumes and the intricacy of the designs ornamenting them. Beauty and female sexual preference are likely the driving force, but Prum's subsequent claims of costuming, lighting, and stage performance—the elements that would make the display art—are examples of anthropomorphizing. The first long-run Broadway performance was a play called *The Elves*, which ran for fifty shows in 1857. Since then, an almost endless variety of plays,

from dramas to musicals, have graced the Broadway stages. In that same time, the Great Argus is still trotting out the same tired performance, seemingly untouched by any creative muse.

Finally, the third example of bird artistry is the famous aforementioned bowerbird nests. The constructions are aesthetically pleasing, but the presence of bright color and carefully crafted structure does not, on its own, make them art. As with the birdsong, the structures, beyond being solely aesthetic works, have more practical functionality. The nests are exclusively used in the mating ritual and abandoned once the mating process is complete. Outside of this limited setting, the bowerbirds demonstrate no desire or urge to release any internal creative impulse. The nests themselves, while making use of color and ornamentation, are informed more by utility than aesthetic sensibility; the limited variation is due more to available material than artistic individuality. The structural uniformity of the nests is deliberate. The hollow interior provides the female bowerbird with the security of an escape out the front should she have a change of heart toward the male entering through the back entrance. The process has more in common with a human male tidying his bachelor pad before inviting a female interest inside than it does Michelangelo's *David.* Overall, the song, dance, and elaborate nests of birds are marvelous displays of beauty and desire, but such aesthetic examples fall short of establishing themselves as art.

In the end, Prum has challenged his fellow Darwinist bannermen to answer the call, put down the adaptionist revolt, and return to the heart of Darwin's original theory of sexual selection. Yet, in doing so, Prum comes face-to-face with the same dragons that caused those Darwinists to flee in the first place. The arbitrariness of sexual selection is as conflicting with Darwin's theory today as it was when Darwin first introduced it, and the gap between human art and animal aesthetics remains just as wide.

Steven Pinker – "Aesthetic Cheesecake"

Jazz artist Louis Armstrong once mused, "Music is life itself. What would this world be without good music?"[102] According to Steven Pinker, however, the answer is, not much different than it is with good music. Pinker caused a stir and incurred backlash in response to his proposition that music is essentially "auditory cheesecake." By this, he was suggesting that music—and by extension, art in general—is a purely pleasurable experience which could be removed from the world with no real lifestyle change.

Seeking to avoid the adaptationism of Wallace/Dutton, as well as the arbitrariness of Darwin/Prum, Pinker instead argues that art is a byproduct of adaption, rather than evolved adaptions themselves.[103] Accordingly, art does not directly satisfy natural selection, but only does so indirectly. In *How the Mind Works*, Pinker writes,

> Now, if the intellectual faculties could identify the pleasure-giving patterns, purify them, and concentrate them, the brain could stimulate itself without the messiness of electrodes or drugs. It could give itself intense artificial doses of the sights and sounds and smells that ordinarily are given off by healthful environments. We enjoy strawberry cheesecake, but not because we evolved a taste for it. We evolved circuits that gave us trickles of enjoyment from the sweet taste of ripe fruit, the creamy mouth feel of fats and oils from nuts and meat, and the coolness of fresh water. Cheesecake packs a sensual wallop unlike anything in the natural world because it is a brew of megadoses of agreeable stimuli which we concocted for the express purpose of pressing our pleasure buttons. Pornography is another pleasure technology . . . . [T]he arts are a third.[104]

In Pinker's approach, art functions in a manner similar to the *soma* drug in Aldous Huxley's dystopian novel *Brave New World.* In the book, the drug is "euphoric, narcotic, pleasantly halluciant," providing a pleasurable high without the messy real-life consequences.[105] *Soma* offered "all the advantages of Christianity and alcohol; none of

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[102] Louis Armstrong, "Letter to L./Cpl. Villec, 1967," in *Louis Armstrong, in His Own Words: Selected Writings,* ed. Thomas Brothers (New York: Oxford University Press, 1999), 185.

[103] In suggesting that art is a byproduct of adaption, Pinker is adhering to the classic notion of evolved "spandrels," as introduced in S. J. Gould and R. C. Lewontin, "The Spandrels of San Marco and the Panglossian Paradigm: A Critique of the Adaptationist Programme," Proceedings of the Royal Society of London. Series B, Biological Sciences 205, no. 1161 (1979): 581–98.

[104] Pinker, *How the Mind Works*, 525.

[105] Aldous Huxley, *Brave New World* (1931; repr., New York: Harper Perennial,

their defects."[106] Or, as Mustapha Mond, one of the story's governmental overseers, famously says, "Christianity without tears."[107] Pinker would certainly reject the malevolent and repressive connotations of the analogy, but the fictional drug's ability is the logical development in his theory (a fact which Pinker alludes to himself).

Pinker uses three separate metaphors—recreational drugs, strawberry cheesecake, and pornography—to make his point. Each of the three represents an intense and manufactured experiential high, each ultimately unnecessary and potentially harmful. Pinker does not wish to minimize the value of art, but he recognizes the treacherous path of trying to find direct adaptive benefits for a human activity as seemingly useless and arbitrary as art. As a result, he takes on what he believes to be an easier task by instead finding adaptive explanations for man's pleasure faculties.

Literature As More Than Cheesecake

Artists may have selfish reasons for rejecting Pinker's reductive approach to art as a mere pleasure high or aesthetic sugar rush, but their concern is not without warrant. Can art be reduced to a pleasurable experience? To a certain degree, both music and visual art can be understood as pleasurable sensory encounters, although neither fits as smoothly into his approach as he suggests. For example, which pleasure faculty is being pressed in a person's enjoyment of abstract art? Pinker suggests the following:

> We seem to get pleasure out of looking at purified, concentrated versions of the geometric patterns that in dilute form give us pops of microsatisfaction as we orient ourselves toward informative environments and fine-tune our vision to give us a clear picture of them . . . . Bright, crisp, saturated, contrasty images . . . may exaggerate the click of pleasure we get when we have adjusted our eyes properly.[108]

2006), 53.

[106] Huxley, *Brave New World*, 54.

[107] Huxley, *Brave New World*, 238.

[108] Pinker, *How the Mind Works,* 529.

In other words, the pleasure received from a Jackson Pollock masterpiece is simply a heightened dose of the same pleasure received from bringing a camera lens in and out of focus. His speculation on music is no more gratifying. After offering five sensitive spots in our mental faculties that are "tickled" by music, he concludes with a sixth—"something else."[109] That is to say, something else which explains how "the whole is more than the sum of the parts."[110] Even Pinker seems to recognize that some unknown factor is still needed to close the gap between his proposal and the actual experience of music.

If both visual art and music resist being reduced to a vaguely conceived sensory pleasure, literature does so even more. This is not to say that literature is not enjoyable. Were it not, people would not take a stack of novels with them on their beach vacation or curl up in their easy chair with a cup of tea and a good book. As with the other art forms, the difficulty comes only in pinpointing how or why the experience gives us the pleasure that it does. As is discussed in greater detail in chapter 5, literature is not related to the senses as directly as visual art or music and thus lacks the same instant gratification. Which pleasure circuits, then, are pressed in the hours of reading a Sherlock Holmes or an Agatha Christie mystery?

Pinker appears aware that literature presents a unique challenge and, knowingly or not, holds literature to a slightly different standard than the other arts. In *How the Mind Works*, he offers similar explanations for the pleasure given by music, visual art, movies, and comedy. When he reaches literature, however, he shifts his metaphor from cheesecake to chess, ascribing a more directly adaptive explanation (this is discussed more thoroughly in the next chapter). In doing so, Pinker essentially

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[109] Pinker, *How the Mind Works,* 534-38. The first five mental faculties touched by music are: (1) language, (2) auditory scene analysis, (3) emotional calls, (4) habitat selection, (5) motor control.

[110] Pinker, *How the Mind Works,* 538.

sidesteps the issue. Echoing the dual literary functions earlier suggested by the first-century Roman poet, Horatius, Pinker writes, "Literature. . . not only delights but instructs."[111] He then proceeds to detail literature's instructional function, almost entirely ignoring the pleasure function. Preceding the discussion on literature Pinker provides a discussion on film, and seems to operate on the false assumption that what is true for cinematic storytelling is directly applicable to written storytelling. To the contrary, despite an obvious overlap in narrative structure, film and literature are as distinct of art forms as music and painting, or music and literature. A film functions in a sensory way that is impossible for literature, with visuals and music acting as equally integral parts of the experience to the narrative.

Literature instructs and gives pleasure, but does this dual purpose encapsulate the full power of the literary experience? Pinker seems to underestimate the immense affective range of literature. Some of the greatest artworks elicit pain over pleasure and cause doubt rather than instruction. A grotesque and disturbing aesthetic visual such as Picasso's *Guernica*—with drab coloring and unsettling depictions of human and animal suffering—offers neither pleasure nor any instructional lesson. In the same way, literature such as Remarque's novel *All Quiet on the Western Front* or Sartre's play *No Exit* are difficult to reconcile with either of Pinker's two proposed functions. Pinker attempts to account for art that produces unpleasant emotions by endorsing the theory of *benign masochism*—the claim that unpleasant emotional states offered by an adverse experience ultimately provide pleasure and happiness once the mind realizes the danger or tragedy is artificial (e.g., the sensation of fear before riding a roller coaster and the joy of arriving back at the loading dock safely).[112]

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[111] Pinker, *How the Mind Works,* 541. Quintus Horatius Flaccus wrote *Ars Poetica* (c. 19 BC) as a letter of advice for young poets. In the work, Horatius suggested that the purpose of art is to inform and delight. The double function of literature suggested in the work was influential for later literary criticism, and continues, in the work of Pinker and others, to inform the aesthetic debate.

[112] Paul Rozin et al., "Glad to Be Sad, and Other Examples of Benign Masochism,"

The explanation of *benign masochism* is perhaps appropriate for the cheap emotional jolt offered by a gory movie or sad romance film but hollow when measured against the experience of sublime literature. For example, consider the account of Paul's tragic death in the final lines of *All Quiet on the Western Front*:

> He fell in October, 1918, on a day that was so quiet and still on the whole front, that the army report confined itself to the single sentence: All quiet on the Western Front. He had fallen forward and lay on the earth as though sleeping. Turning him over one saw that he could not have suffered long; his face had an expression of calm, as though almost glad the end had come.[113]

Can the power of the novel's haunting end be explained by the emotional relief the reader experiences by closing the book and realizing that the tragedy was merely a fiction? For Pinker, the literary experience—even the harrowing and melancholy—must ultimately be positive or beneficial for the reader. The affective range of literature is far broader than Pinker's theory allows—from the comedic to the tragic, from the ridiculous to the sublime, from the iconoclastic to the conventional.

Great literature confronts the reader with the breadth of what it means to be human. In his *Poetics*, Aristotle proposed that the tragedy plays provide *catharsis*, whereby the audience was relieved of emotions in a controlled environment. In other words, the power of disturbing or distressing literature is not the pleasure that comes in recognizing that the tragedy is fiction but in the recognition that the emotions are real and worthy in their own right. As the biblical author of Ecclesiastes wrote, there is "a time to weep and a time to laugh, a time to mourn and a time to dance" (Eccl. 3:4). Not all literature provides the reader with pleasure, but the greatest literature will invite the reader to experience the vast affective range of what it means to be human.

Judgment and Decision Making 8, no. 4 (July 2013): 439–47. Other examples include eating spicy food, the burning sensation of alcohol, sad music or movies, or the exhaustion of a physically strenuous activity.

[113] Erich Maria Remarque, *All Quiet on the Western Front* (Boston: Little, Brown and Company, 1929), 291.

Conclusion

This chapter began with a poem by William Butler Yeats. Confronted with the reality of his own mortality and haunted by the unprecedented devastation being wrought by WWI, Yeats took solace in the realization that the fifty-nine swans at Coole Park have not grown old; their timeless beauty will bring delight to others long after his generation has passed on. In the century and a half since Darwin introduced his theory of natural selection, evolutionists have had the difficult task of naming those swans by giving account for the enduring beauty in the world and man's continual fixation with it. Neither side of the aesthetic versus adaptionist debate, which began with Darwin and Wallace and continues to inform modern Darwinian aesthetics, has yielded convincing explanations, nor have attempts to explain the phenomenon via alternative means. The two constants shared by the Darwinian theories for beauty and art appear to be the acceptance that beauty is prevalent in the world and the admission that its existence remains largely mysterious. Great literature resists Darwinian explanation, therefore, not just because of its linguistic foundation but because of its aesthetic characteristics. Every instance of clever wordplay, perfectly selected vocabulary, and crisp prose demands an aesthetic foundation that Darwinism has continually failed to provide. The cliché of an art critic praising a sublime work as "divine" is perhaps more accurate than they might realize.

CHAPTER 5

THE DARWINIAN PROBLEM OF LITERARY MEANING

It has no survival value, rather it is one of those things which give value to survival.[1]
—C.S. Lewis

In a stimulating conversation from Ray Bradbury's classic novel *Fahrenheit 451*, Faber, a retired English professor, tells book-burning fireman Guy Montag,

> Books were only one type of receptacle where we stored a lot of things we were afraid we might forget. There is nothing magical in them, at all. The magic is only in what books say, how they stitched the patches of the universe together into one garment for us.[2]

Faber's words convey an understanding that the sublimity of literature transcends both the technical and aesthetic aspects of language. Literature consists of both of these elements, but also something beyond them. At its core, literature says something. As earlier quoted, American poet Ezra Pound declared, "Literature is language charged with meaning. Great literature is simply charged with meaning to the utmost degree."[3] Literary meaning is the 'why' of literature—the reasons for writing and reading it—and the additional element that elevates mere language to loftier levels of literature. Put another

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[1] C. S. Lewis, *The Four Loves* (New York: Harvest Books, 1971), 71.

[2] Ray Bradbury, *Fahrenheit 451* (New York: Simon & Schuster, 2012), 79. The point is driven home further at the end of the novel, as Montag joins fellowship with the "Book People," a group of exiled intellectuals who have taken upon themselves the task of memorizing classic works of literature to preserve the knowledge and stories for a time when society must be rebuilt.

[3] Ezra Pound, *ABC of Reading* (1934; repr., New York: New Directions Publishing, 2010), 28. Pound has a more narrow understanding of literary meaning. He is specifically writing about the way language is charged with meaning in poetry. In the work, he writes that words can be charged with meaning in three primary ways, which he terms as *phanopeia* (throwing a visual image on the mind), *melopoeia* (a word charged by sound in a melodic way), and *logopoeia* (a combination of the two). Nevertheless, although Pound was focused on meaning in relation to words and language in a more narrow sense, a broader application of literary meaning is possible.

way, literary meaning takes a carefully fashioned architectural structure and purposes it as being a house, to be entered, explored, and lived in.

As the previous chapters have demonstrated, language and aesthetics—two of Darwin's oldest and most difficult problems—have continued to haunt Darwinists like the first two of Dickens' three Christmas ghosts. With the problem of literary meaning, Darwinists encounter the third specter. The larger problem includes at least three related questions: the question of intent; the question of content; and the question of consciousness. When taken together, the three supply a final warning to a Darwinian account for sublime literature that, like the cantankerous Ebenezer Scrooge, necessitates a new outlook.

Literary Darwinism

The transition away from the building blocks of language—the linguistic and aesthetic elements—and toward the meaning of the literature is a path already enthusiastically marched by Darwinists. Fueled by the expansion of evolutionary psychology and sociobiology, they have eagerly spread their gospel into fields of study far beyond the original context of Darwin's theory. Literary criticism is one such domain that has been colonized during this ongoing Darwinian conquest. Dissatisfied with the current state of the discipline of literary criticism, which they scorn as being "floundering, aimless, and increasingly irrelevant," they have planted their flag and declared the dominion of Literary Darwinism.[4]

Joseph Carroll, Curators' Professor at the University of Missouri-St. Louis, is one of the founding fathers of the self-described "robust guerilla band" known as the

[4] Jonathan Gottschall, *Literature, Science, and a New Humanities* (New York: Palgrave Macmillan, 2008), 2. Gottschall, like many of the literary Darwinists, frames his literary approach not as a conquest or takeover, but as a rescue mission to save literary criticism before the floundering field becomes extinct. He asserts, "Literary studies should move closer to the sciences in theory, method, and governing ethos. In the long view, this scientific turn represents the only responsible and attractive correction of course—the only correction with the potential to lift the field from its morass" (3).

literary Darwinists. In 2004, he published a cornerstone work, aptly titled *Literary Darwinism*. He defines his theory as follows:

> Literary Darwinists integrate literary concepts with a modern evolutionary understanding of the evolved and adapted characteristics of human nature. They aim not just at being one more "school" or movement in literary theory. They aim at fundamentally transforming the framework for all literary study. They think that all knowledge about human behavior, including the products of the human imagination, can and should be subsumed within the evolutionary perspective.[5]

With ambition similar to Denis Dutton's declaration of the near-salvific role of Darwinian aesthetics, literary Darwinism presents itself not just as a sufficient foundation by which to approach and understand literature but as the only foundation.

Literary Darwinists seek to accomplish two primary tasks through their theory—one pertains to the distant past and one to the present. First, they seek to explain how and why man developed his original proclivity for storytelling and imaginative fiction. Second, they attempt to provide an account for why people write what they write, analyzing narrative plots and themes through a Darwinian lens. The two concerns may be framed as the *intent* and *content* of literature. According to the literary Darwinists, these questions are intertwined, as man's present narratives continue to echo the original motivations for telling stories. Carroll summarizes this belief as follows:

> Adaptionist literary scholars are convinced that through adaptationist thinking they can more adequately understand what literature is, what its functions are, and how it works—what it represents, what causes people to produce it and consume it, and why it takes the form that it does.[6]

The conviction of the literary Darwinists is built on a wholesale confidence that Darwinism can and does provide the key to unlock every ancient mystery of the literature phenomenon. Yet, as hubris drove Icarus to fly too close to the scorching sun, so too are the literary Darwinists threatened by their impetuous ambition. As will be explored in the

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[5] Joseph Carroll, "What Is Literary Darwinism? An Interview with Joseph Carroll," *Neuronarrative*, February 27, 2009, accessed August 24, 2018, https://neuronarrative.wordpress.com/2009/02/27/what-is-literary-darwinism-an-interview-with-joseph-carroll/.

[6] Joseph Carroll, *Literary Darwinism: Evolution, Human Nature, and Literature* (New York: Routledge, 2004), vii.

remainder of this chapter, the confidence of the literary Darwinists is largely built upon philosophical commitments and speculation rather than on an open-minded appraisal of the actual literary experience. In the end, the explanation offered by Literary Darwinism is revealed to be as much a well-spun work of fiction as *The Scarlet Letter*, *Tess of the d'Ubervilles,* or any of the other great novels they boldly proclaim to elucidate.

The Question of Intent

Thus far, this project has explored humankind's ability to write literature—the acquisition of base linguistic tools and the aesthetic impulses to expand those tools. To fully explain the creation of literature, however, an answer must also be given to the question of *why*. To use an analogy to visual art, an explanation can be given for how paintbrushes are made, how paint dyes are mixed, and why an array of colors—reds, blues, greens, yellows—are more desirable than a monochromatic palette of gray. Yet, there remains the pivotal question of why any person would surrender the time and effort to pick up that paintbrush and stroke the paint on a canvas at all. In the same way, language has given man the basic tools to create literature, and an aesthetic sensibility has expanded the potential range of expression for literature, but there also must be a reason why man exerts the energy to do so and why such efforts are celebrated and highly valued. In short: why do we write literature?

The question is vast, with no shortage of possible starting points. Finding unanimity on a reason for writing literature is as probable as establishing a consensus on the greatest single work of literature. The multiplicity of motivations is evident from surveying authors themselves, with seemingly as many reasons to write as there are writers. George Orwell elevated literature as a necessary platform for intellectual discourse and examination: "I write it because there is some lie that I want to expose,

some fact to which I want to draw attention, and my initial concern is to get a hearing."[7] Flannery O'Connor considered writing to be an introspective journey of self-awareness: "I have to write to discover what I am doing . . . . I don't know so well what I think until I see what I say."[8] Harper Lee also regarded writing as fundamentally internal and personal, but in an experiential rather than intellectual manner:

> Any writer worth his salt writes to please himself. He writes not to communicate with other people, but to communicate more assuredly with himself. It's a self-exploratory operation that is endless. An exorcism of not necessarily his demon, but of his divine discontent.[9]

Robert Frost expressed that literature offers both experience and knowledge: "A poem begins in delight and ends in wisdom."[10] American novelist Cormac McCarthy is often quoted as offering a more mundane and unsentimental justification: "I don't know why I started writing. I don't know why anyone does it. Maybe they're bored, or failures at something else."[11]

Ask ten different writers why they write, and you will likely receive ten different answers. In fact, ask the same writer on ten different occasions and you will probably still hear ten varying responses. The act of writing literature is undertaken for a seemingly endless array of reasons and purposes—some grand and romantic, others mundane and trivial. To proclaim the capacity to explain man's literary urge under the banner of a single theory would seem imprudent, and yet, to a certain degree, this is

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[7] George Orwell, *Why I Write* (1946; repr., New York: Penguin Books, 2005), 8.

[8] Flannery O'Connor, *The Habit of Being: Letters of Flannery O'Connor*, ed. Sally Fitzgerald (New York: Farrar, Straus and Giroux, 1988), 5. These lines, taken from O'Connor's letters, appear to be the source of the more well known, but seemingly misquoted, "I write because I don't know what I think until I read what I say."

[9] Harper Lee, interview by Roy Newquist, *Counterpoint,* WQXR (New York), 1964, accessed August 28, 2018, http://digital2.library.ucla.edu/hl/.

[10] Robert Frost, "The Figure a Poem Makes," in *Complete Poems of Robert Frost* (New York: Holt, Rinehart and Winston, 1949), vi.

[11] Cormac McCarthy, quoted in Mike Gibson, "He Felt at Home Here," *Metro Pulse* (Knoxville, TN), March 1, 2001.

precisely the manifesto of the Literary Darwinists.

The Literary Darwinist Answer

The literary Darwinists seek to demonstrate that the various literary motivations all stem from a common source. In a sense, the differing motivations to write literature are akin to the diversity in species, which, according to Darwinism, ultimately all trace their lineage back to a common ancestor. Therefore, the task of the literary Darwinists is to first pinpoint that original source and then to demonstrate how modern manifestations echo that original intent. Denis Dutton, an ally to the literary Darwinist agenda, makes the following claim:

> A thoroughgoing Darwinism makes a specific demand: nothing can be proposed as an adaptive function of fiction unless it explains how the human appetite for fictional narratives acted to increase, however marginally, the chances of our Pleistocene forebears surviving and procreating.[12]

In a similar manner, Brain Boyd, in his book *On The Origin of Stories,* argues, "Art is human adaption . . . established throughout the species because it has been selected as a behavior for the advantages it offers in terms of survival and reproduction."[13] In other words, man began creating literature—or, at least, its oral precursor—because it provided a measurable advantage and benefit. The question, however, is, what survival and reproductive advantages could literature have provided?

To draw a straight line from contemporary Harlequin Romance novels with salacious titles like *Shipwrecked with Mr. Wrong* and *The Nanny Who Kissed Her Boss* back to important adaptive benefits during the Pleistocene Epoch seems patently absurd. Literary Darwinists do not, however, suggest that modern man's storytelling ancestors were telling the same narratives as are told today. Rather, the question is approached

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[12] Denis Dutton, *The Art Instinct: Beauty, Pleasure, and Human Evolution* (New York: Bloomsbury Press, 2010), 109-10.

[13] Brian Boyd, *On the Origin of Stories: Evolution, Cognition, and Fiction* (Cambridge, MA: Belknap Press, 2010), 81.

from two different perspectives. The first emphasizes the adaptive benefits of the storytelling *ability*. Dutton proposes: "Fictional storytelling is not . . . a capacity uniquely cut off from nonfictional ways of describing and communicating facts but is an extension that was adaptively present in the human mind early on."[14] Accordingly, the capacity for "imaginative practical reasoning" would theoretically have given whichever of man's ancestors had the most developed skill the ability to better plan, process, and outmaneuver their opponents. Fictional narrative, unrelated to immediate practical scenarios, can then be seen as a clear and logical extension of this ability.

A second approach to the question of literary intent is offered by Stephen Pinker, who is both an ally and an adversary to the literary Darwinists' cause. [15] He argues that literature serves two purposes: instruction and entertainment (the latter was discussed in the previous chapter of this work). Regarding the instructional function of literature, Pinker takes a path similar to Dutton, suggesting that literature provides a form of imaginative role-playing. However, whereas Dutton emphasizes the cognitive benefit in a broad sense, Pinker suggests a more direct benefit provided by the stories themselves. Through stories, according to Pinker, man rehearses potential life scenarios to prepare himself to navigate such circumstances should he encounter them in reality. He writes, "Life is like chess, and plots are like those books of famous chess games that serious players study so they will be prepared if they ever find themselves in similar straits."[16]

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[14] Dutton, *Art Instinct*, 113.

[15] Consistent with the movement of Literary Darwinism, Pinker accepts an adaptive explanation for literature. He diverges from Carroll, Gottschall, and the other Literary Darwinists, however, insisting that an adaptive explanation alone is inadequate. By opening the door for pleasure and entertainment as literary functions, Pinker attempts to avoid the problem of prescribing adaptive benefits to literature which resists such rigid explanation, such as pulp romance novels. His metaphor of aesthetic cheesecake (detailed in the previous chapter) has, according to the Literary Darwinists, devalued the practical importance of literature. According to Carroll, literature does not just provide information or entertainment, it shapes readers and is essential to their development. Whereas Pinker suggests that man can live without art with no real change to their lifestyle, Carroll argues, "It seems very likely that people raised with no exposure to music, art, or literature would be psychologically and emotionally stunted—that they would be only marginally capable of developing in normal ways." Carroll, *Literary Darwinism*, 65.

[16] Steven Pinker, *How the Mind Works* (New York: W. W. Norton & Company,

While there is considerable overlap in the two approaches, the basic argument by the Literary Darwinists is that humans began telling stories because doing so shaped them into a "fitter" species, while stories also served as a didactic tool that better prepared them to survive and reproduce in a Darwinian world.

Against the Literary Darwinist Answer

The colonizing spirit of the literary Darwinists has not endeared them to the other literary scholars whose theories they have sought to swallow into their own. Whether vindictive or not, push-back has come on all fronts. In a pointed article, "Against Literary Darwinism," Jonathan Kramnick ponders, "The question is what task did the telling of stories perform for stone-age minds? . . . Literary criticism as a rule is not rife with talk about cavemen."[17] As discussed in chapter 3, if a feasible Darwinian explanation for the origin of language could be found, then it is not difficult to imagine several possible survival benefits that the linguistic ability could provide—increased organization, coordination, and the development of culture. The difficulty for a Darwinian account for literature, however, involves the addition of the seemingly unnecessary step of storytelling. What benefits to survival and reproduction did literature provide that were not already obtained through language itself?

Despite the literary Darwinists' confidence that literature offered important benefits in the distant past, there is a lack of agreement on what such benefits might have been. Kramnick rightly notes, "The literary Darwinists are united in their sense that literature helped to make us the species we are, but the consensus stops there."[18] For example, Dutton suggests that ancient storytelling might have been a fitness indicator,

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2009), 542.

[17] Jonathan Kramnick, "Against Literary Darwinism," *Critical Inquiry* 37, no. 2 (January 1, 2011): 325.

[18] Kramnick, "Against Literary Darwinism," 311.

used for the purpose of "attracting and seducing members of the opposite sex."[19] Carroll suggests that literature "provides an emotionally and subjectively intelligible model of reality" which allows human beings to "organize their complex behaviors in flexible response to contingent circumstances."[20] Perhaps the most representative suggestion is given by Brian Boyd, who concludes that literature "fundamentally alters our relation to the world. The survival consequences may be difficult to tabulate, but they are profound."[21] In other words, while the benefits are difficult (if not impossible) to truly identify, they must have been profound, because there is no other explanation that can explain how humans in a Darwinian world evolved into a people of stories.

Jonathan Gottschall illustrates the point by imagining a scenario between two tribes—the Story People and the Practical People—who are similar in every way other than the activities that give them their names. Of the Story People, he writes:

> Like most hunter-gatherers, they have a surprising amount of leisure time, which they fill with rest, gossip, and stories—stories that whisk them away and fill them with delight. Like the Story People, the Practical People work to fill their bellies, win mates, and raise children. But when the Story People go back to the village to concoct crazy lies about fake people and fake events, the Practical People just keep working. They hunt more. They gather more. They woo more. And when they just can't work anymore, the Practical People don't waste time on stories: they lie down and rest, restoring their energy for useful activity. Of course, we know how this story ends. The Story People prevail. The Story people are us. If those strictly practical people ever existed, they don't anymore. But if we hadn't known this from the start, wouldn't most of us have bet on the Practical People outlasting those frivolous Story People? The fact that they didn't is the riddle of all fiction.[22]

If the riddle is to be solved, then literature must be found to have provided some advantage. Far from being trivial or frivolous, stories must be revealed as a powerful secret weapon. Like the courageous heart that fueled Rocky Balboa to trade blow-for-

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[19] Dutton, *Art Instinct*, 140.

[20] Carroll, *Literary Darwinism*, xxii.

[21] Boyd, *On the Origin of Stories*, 135.

[22] Jonathan Gottschall, *The Storytelling Animal: How Stories Make Us Human* (New York: Houghton Mifflin Harcourt, 2012), 19-20.

blow against Apollo Creed, literature must have provided some intangible advantages to turn the tides of the alleged mismatch and allow the Story People to prevail in a true underdog story. Unfortunately for the literary Darwinists, their narrative lacks the necessary Hollywood magic.

Literature shapes us . . . into what? Discovery Channel's popular program "Shark Week" garnered some notoriety for its controversial episodes focused on the long-extinct Megalodon (meaning "big tooth"). In the episodes, a narrator details Megalodon's hunting methods, preferred prey, and behavioral habits, punctuated by interviews with various marine biologists and shark specialists. The gripping and pristine production quality of the program obscures the fact that all that remains of the once-great predator are some individual teeth. What is known about these great ocean creatures is that they possessed remarkably large teeth. Anything else said of them is speculative, probable or otherwise. The same might be said of the creation of literature by man's ancestors. There are no recordings of the first oral stories told around ancient campfires. Knowledge of the stories is limited to *written* literature. The ancient Mesopotamian poem *Epic of Gilgamesh*, considered by many scholars to be the oldest known work of literature, is generally dated circa 2100BC. In other words, the oldest evidence of ancient literature dates to a period in which man has already achieved civilization, advanced culture, and witnessed the rise and fall of many great dynasties.

There is a paradox in the declaration that literature shaped man into who he is today. In order to discern how literature changed us, there must be some understanding of what man was like before the emergence of literature; however, as the most revealing insights into the ancient human mindset come *from* literature, this knowledge seems out of reach. Thus, the literary Darwinists are largely limited to observing the shaping influence of literature today and reading their findings into the past, with often confusing results. Furthermore, the power of literature to influence a person has been recognized

and affirmed as far back as Plato and Aristotle. For the literary Darwinists, however, it is not enough to reaffirm this widely accepted fact. For their approach to be viable, literature must not only shape people, it must necessarily shape them for the better. If literature changed humans in a negative sense, then the already inexplicable triumph of the Story People over the Practical People becomes all the more unimaginable. Literature must have made man better, but how it did so is not immediately obvious.

Carroll suggests that literature made humans better emotionally: "It seems very likely that people raised with no exposure to . . . literature would be psychologically and emotionally stunted—that they would be only marginally capable of developing in normal ways."[23] One oddity in offering emotional health and development as a cause for the storytelling instinct is that such stories can conceivably only offer proper emotional guidance if told by emotionally healthy and developed storytellers. Carroll may be right about this function of literature today, as the storytellers are themselves developmentally shaped by stories, but the circle had to begin somewhere.[24]

For the literary Darwinists, the influence of literature must be overwhelmingly positive. As literary scholars, it is perhaps unsurprising that they have a tendency to place literature on a pedestal of virtue and positivity. Gottschall asserts, "Fiction enhances our ability to understand other people; it promotes a deep morality that cuts across religious

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[23] Carroll, *Literary Darwinism*, 65.

[24] Jonathan Gottschall, "Why Fiction Is Good for You," *Dallas News*, May 25, 2012, accessed August 24, 2018, https://www.dallasnews.com/opinion/ commentary/2012/05/25/jonathan-gottschall-why-fiction-is-good-for-you. Even the healthy emotional development enabled through literature today is not as straightforward as some Literary Darwinists suggest. For example, Gottschall bases his conclusions largely upon several studies which contend that young children who were exposed to large numbers of children's books "had a significantly stronger ability to read the mental and emotional states of other people." Gottschall seems to accept these findings in a vacuum, claiming a direct causation between the two. Whether or not such a correlation is correct, there remain other social and cultural influences to consider. For example, a reasonable assumption can be made that children with the privilege of a high exposure to literature are likely to belong in families with a higher level of wealth and resources. Likewise, young children with high exposure to literature often require a parent or guardian with the care or time to foster and facilitate that activity. Both of these factors would conceivably assist in the emotional health and awareness of a child.

and political creeds."[25] Morality is a central theme in literature, as is discussed later, but does literature *make* people more moral? If so, which morality does Gottschall have in mind? Certainly not the morality of the writers. Many of the great authors have notoriously lived lives of debauchery, sexual promiscuity, drunkenness, and marked by other vices. As Oscar Wilde wrote, "The fact of a man being a poisoner is nothing against his prose."[26] Neither virtue nor morality are prerequisites to the ability to weave a captivating story. Another possibility is the morality of the culture. Literature is arguably best understood, however, as reflecting the ethics and virtues of the culture, rather than dictating them. The propaganda literature of Nazi Germany cannot be said to lean naturally toward a higher virtue and morality.

Gottschall is correct that fictional narratives have the power to influence ideologies and alter worldviews. Yet, his conclusion that this power naturally flows toward improvement is far from certain. As even Gottschall acknowledges, the same power which enabled Harriet Beecher Stowe's *Uncle Tom's Cabin* to humanize African Americans also allowed the 1915 film *The Birth of a Nation* to inflame racist sentiments. Stories have the power to increase empathy for humanity and to desensitize readers to the pain and suffering of others. Stories can inspire selfless love and also the selfish desire for adventure and glory. War is either a hellish nightmare or a glorious exploit, depending on whether one reads *All Quiet on the Western Front* or *Le Morte d'Arthur.* Samuel McNerney concludes:

> The implication . . . is that it's how good the story is, not necessarily its accuracy, that's important. But narratives are also irrational because they sacrifice the whole story for one side of a story that conforms to one's worldview. Relying on them often leads to inaccuracies and stereotypes . . . . People who take in narratives are often blinded to the whole story – rarely do they ask: "What more would I need to

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[25] Gottschall, "Why Fiction Is Good For You."

[26] Oscar Wilde, *Pen, Pencil and Poison: A Study in Green* (Whitefish, MT: Kessinger Publishing, 2010), 23. Wilde made the remark in reference to English author Thomas Griffiths Wainewright, who was suspected to have been a serial killer.

know before I can have a more informed and complete opinion?"[27]

Literature may have made us different people, but it has not necessarily made us better people. An empathetic and moral culture is seemingly needed to keep the power of literature in check, at which point Gottschall's approach begins to crumble.

Dutton takes a less direct approach by instead presenting the origin of storytelling as an extension of man's capacity for imaginative reasoning. Therefore, the adaptive value is not derived directly from the stories, but from the larger implications of the storytelling ability. However, Dutton is left to ascribe quantifiable advantages to imaginative storytelling that were not already offered through similar linguistic explanations, as Kramnick rightly notes:

> Stories are not necessary for modality. Syntax would do the work just fine. The same is the case with other candidates for function: acquiring information from the environment, sharing attention, forming mental images of nonexistent entities, experiencing emotions, sending out fitness signals to potential mates. We would be hard pressed to make the case that any one of these functions couldn't be achieved by simpler means: memory, reasoning, perception, recursive syntax, the modal tense, and so on . . . . Seen in this way, literary competence (should such a thing exist) could very well serve no reproductive advantage at all.[28]

In the end, stories have the power to shape individuals and societies in significant ways, but the answer to the question of why humans started telling stories at all remains elusive.

Literature is not a chess manual. If the adaptive manner in which literature shaped humans is, by the literary Darwinists' own admission, "difficult to tabulate,"[29] then Pinker's more direct approach would appear to be a more promising explanation. His chess manual metaphor certainly fits seamlessly into a Darwinian worldview.

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[27] Samuel McNerney, "The Irrationality of Irrationality: The Paradox of Popular Psychology," *Scientific American*, April 27, 2012, accessed October 24, 2018, https://blogs.scientificamerican.com/guest-blog/the-irrationality-of-irrationality-the-paradox-of-popular-psychology/.

[28] Kramnick, "Against Literary Darwinism," 332.

[29] Boyd, *On the Origin of Stories*, 135.

However, there are at least three significant problems with the viability of Pinker's chess analogy and his proposed instructional function of literature.

The first issue is the difference between probability and possibility. A chess manual offers clear and easy application for a chess player preparing to play chess. The studious player reads written accounts in the same way a war general studies the logistics and maneuvers of ancient battles to prepare for every future eventuality. The same synergy cannot always be found between literature and life. A reader of J. R. R. Tolkien's *The Hobbit* is better informed on how to navigate a scenario in which thirteen dwarves and a wizard show up at his front door or should he suddenly find himself in a battle of wits with a cunning, fire-breathing dragon, but such wisdom is of little practical use.

This is perhaps too literal an application, as even the most fantastical stories contain wisdom about base-level human themes of friendship, perseverance, and so forth. As Tolkien noted:

> Fantasy is a natural human activity. It certainty does not destroy or even insult Reason; and it does not either blunt the appetite for, nor obscure the perception of , scientific verity. On the contrary. The keener and the clearer the reason, the better fantasy it will make.[30]

If this belief is accepted—that even the most implausible fantasy literature supplies useful instruction for living in the real world—then Pinker's chess analogy cannot be as quickly dismissed. However, this understanding limits the approach to a far weaker conclusion. A more accurate analogy for Pinker's argument would be a chess player reading a football playbook, or, even more fitting, the Quidditch matches—a wizard's sport played on mounted brooms— in J. K. Rowling's *Harry Potter* novels. Whatever general lessons on sportsmanship, perseverance, and teamwork gleaned from the fictional stories seem hardly worth the time and effort. If the ancient purpose responsible for the creation of

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[30] J. R. R. Tolkien, "On Fairy-Stories," in *Tree and Leaf* (London: HarperCollins Publishers, 2001), 55.

literature was practical instruction and future imagining, then the context of make-believe and impossibility would be a complication rather than a clarifier of those instructions.

A second issue for the instructional function of literature is that literature is often an exceedingly poor guide for real life. For literature's instructional purpose to feasibly fit into a Darwinian paradigm, the instruction must ultimately be beneficial and advantageous. To the contrary, however, a person who lived in accordance to literature would arguably be hindered rather than helped. Such a person would be like the titular character in Miguel de Cervantes' classic *Don Quixote*:

> He gave himself up so wholly to the reading of romances, that a-nights he would pore on until it was day, and a-days he would read on until it was night; and thus, by sleeping little and reading much, the moisture of his brain was exhausted to that degree, that he lost the use of his reason. A world of disorderly notions, picked out of his books, crowded into his imagination; and now his head was full of nothing but enchantments, quarrels, battles, challenges, wounds, complaints, amours, torments, and abundance of stuff and impossibilities; insomuch, that all the fables and fantastical tales which he read seemed to him now as true as the most authentic histories . . . . Having thus lost his understanding, he unluckily stumbled upon the oddest fancy that ever entered into a madman's brain; for now he thought it convenient and necessary, as well for the increase of his own honour, as the service of the public, to turn knight-errant, and roam through the whole world . . . . Transported with these agreeable delusions, the poor gentleman already grasped in imagination the imperial scepter of Trapizonda; and hurried away by his mighty expectations, he prepares with all expedition to take the field.[31]

Fiction blurs the line between reality and fantasy. This fact is evidenced by movie audiences' frequent difficulty separating an actor from his on-screen character. Actors often speak of a fear of "type-casting," in which the audience association becomes so iron cast that they are forced in play the same roles for their entire career (e.g., John Wayne acted in more than one hundred films and never played a villain). In 1975, legendary *Star Trek* actor Leonard Nimoy published an autobiography titled *I Am Not Spock.* Twenty years later, resigned to his fate, he released a second autobiography titled *I Am Spock.* A heavy reliance on make-believe stories for real-life instruction, far from providing a

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[31] Miguel de Cervantes Saavedra, *The History of Don Quixote de La Mancha*, trans. J. G. Lockhart (London: J. M. Dent & Sons, 1913), 8-9.

keener perception of reality, arguably results in a make-believe understanding of real-world circumstances. A modern example is young girls with minds full of Disney princess fairytales who are likely stunted in their future relationships rather than assisted.[32]

The chess manual metaphor falls apart even further in that accounts of prior games are historical and factual and thus an objective and trustworthy guide. An aggressive move with the queen or a rook which, under a particular board layout, resulted in the player being out-maneuvered and defeated provides a solid reason to conclude that a similar move, under similar circumstances, might also result in a defeat. The instruction offered through literature, on the other hand, is not reliable in the same sense. In literature, the consequences and outcomes of various events or character decisions are produced by the author's imagination, which is inescapably informed by personal bias, ignorance, and subjectivity. In a simplified sense, this belief was what led Plato to scorn the Greek theater as "an imitation of an imitation," which led people further away from the truth, rather than closer to it. Pinker writes,

> Fictional narratives supply us with a mental catalogue of the fatal conundrums we might face someday and the outcomes of strategies we could deploy in them . . . . What's the worst that could happen if I were seduced by a client while my wife and daughter were away for the weekend? What's the worst that could happen if I had

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[32] Sarah M. Coyne et al., "Pretty as a Princess: Longitudinal Effects of Engagement with Disney Princesses on Gender Stereotypes, Body Esteem, and Prosocial Behavior in Children," *Child Development* 87, no. 6 (December 11, 2016): 1909–25. Coyne et al. provide perhaps the most thorough research on the long term effects of heavy exposure to Disney's princess movies. They conclude that there are potentially damaging and limiting consequences for young girls, who can develop low self-esteems and an unwillingness to engage in certain activities that might otherwise promote a healthier development. Author Peggy Orenstein shares a similar conviction. In her best-selling book, she writes, "I fretted over what playing Little Mermaid, a character who actually gives up her *voice* to get a man, was teaching her." Peggy Orenstein, *Cinderella Ate My Daughter: Dispatches from the Front Lines of the New Girlie-Girl Culture* (New York: Harper Paperbacks, 2012), 4. In another study on the emotional and developmental impact of princess narratives, American folklorist Kay Stone quotes a twenty-four-year-old woman who expresses that she had expected to bloom as Cinderella had but "was still waiting." Kay Stone, "Things Walt Disney Never Told Us," *The Journal of American Folklore* 88, no. 347 (1975): 49. See also Bridget Whelan, "Power to the Princess: Disney and the Creation of the 20th Century Princess Narrative," *Interdisciplinary Humanities* 29, no. 1 (Spring 2012): 21–34.

an affair to spice up my boring life as the wife of a country doctor?[33]

According to the 2015 romance novel *My Time in the Affair*, "the worst" is a fleeting moment of guilt before moving on to a "happily ever after" of passionate sex with a rich and handsome lover. Similarly, the roguish secret agent James Bond has been seducing women since 1962, and of all the perilous trials he has faced, a paternity suit has never been one of them. Also, the more than one hundred million readers of the BDSM romance book *Fifty Shades of Grey* are equipped with the knowledge that the outcome of submitting to the sexual fantasies of a megalomaniac, billionaire playboy is to tame him and enjoy a happy and luxurious marriage. The appeal of the escapism offered by literature is that the fiction is not bound to real-life consequences. If the role of literature were to equip readers with reliable strategies and awareness of real-life consequences, then the novel would have long ago given way to the biography.

The third shortcoming of Pinker's approach is that literature is presented in an overly clinical and virtually unobtainable manner. In order for the proposition to be viable, literature must be treated akin to data files stored on a computer hard drive. Accordingly, when faced with a particular decision or situation, a person would quickly retrieve the stored files that pertain to characters who faced similar scenarios and then compare and contrast the various outcomes and consequences before deciding on a course of action. Recall ability of this sort, however, is limited to a minuscule number of the human population.

Jonathan Gottschall, in his book *The Storytelling Animal,* asks readers to think back over the last several years to the stories that affected them most deeply. For most people, he expressed that their remembrance will be limited to the central characters and the basic gist of the plot, with most of the finer details lost in an "amnesiac fog."[34] How

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[33] Pinker, *How the Mind Works*, 543.

[34] Gottschall, *The Storytelling Animal*, 64.

much less can be recalled from the thousands of stories that left a more pedestrian impression? If the present offers any insight into the past in regards to experiencing literature, then most of what is read does not stick. [35] The concept of literature as a form of direct reference guide is an unrealistic and unobtainable notion.

Atheist philosopher Christopher Hitchens suggested that religion was man's first attempt at literature.[36] What he did not realize, however, was that religion also remains the best, and perhaps only, explanation for why humans started writing it at all. Perhaps novelist C.S. Lewis said it best when he suggested that art is ultimately unnecessary, yet vital for the human experience: "It has no survival value, rather it is one of those things which give value to survival."[37]

The Question of Content

Storytelling is part of being human. No people group has been found for whom stories did not play a role in their life and culture. Denis Dutton asserts, "The love of fiction—a fiction instinct—is as universal as hierarchies, marriage, jokes, religion, sweet fat, and incest taboo."[38] The exceptional power of literature is demonstrated by the prominence and influence of non-existent people. From Luke Skywalker to Sherlock Holmes to Jim Hawkins to Winnie the Pooh to Batman, fictional characters permeate the public consciousness. This phenomenon was explored in *TIME Magazine's* "The 100 Most Influential People Who Never Lived":

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[35] Gottschall argues for an alternative understanding, which he calls the *simulator model*, that depends on implicit rather than explicit memory. In his view, literature shapes us rather than informs us, by wiring our neural pathways and functioning on an unconscious level. Gottschall might be correct about the cognitive influence of literature, but his theory does not help to situate the origin of storytelling within Darwinism. How and in what ways literature shapes people begins with the existence of literature, but offers little help in explaining how it came to be.

[36] Christopher Hitchens, ed., *The Portable Atheist: Essential Readings for the Nonbeliever* (Philadelphia: Da Capo Press, 2007), xvii.

[37] Lewis, *The Four Loves*, 71.

[38] Dutton, *Art Instinct*, 109.

> Fictional characters are all around us, the secret sharers of our hopes and fears, the companions of our childhood, the signposts that mark the waystations in our lives . . . these characters are the unacknowledged legislators of the world… fiction offers a wonderful way for the creators among us to distill the essence of basic human traits into pure form, then bring them to memorable life in the guise of an outsized exemplar.[39]

The timeless characters of literature pervade culture and influence us because, in a way, they *are* us.

The beauty of literature, according to novelist F. Scott Fitzgerald, is that "you discover that your longings are universal longings, that you're not lonely and isolated from anyone. You belong."[40] Mythologist Joseph Campbell offered a similar sentiment:

> We have not . . . to risk the adventure alone; for the heroes of all time have gone before us; the labyrinth is thoroughly known; we have only to follow the thread of the hero-path. And where we have thought to find abomination, we shall find a god; where we had thought to slay another, we shall slay ourselves; where we had thought to travel outward, we shall come to the center of our own existence; where we had thought to be alone, we shall be with all the world.[41]

Literature is the playground on which man explores what it means, both individually and collectively, to be human.

The biblical author of Ecclesiastes may as well have been speaking directly about literature when he wrote, "What has been will be again, what has been done will be done again; there is nothing new under the sun" (Eccl 1:9). Heavily influenced by Jungian archetypes, Joseph Campbell popularized the theory of the monomyth—a sweeping, universal narrative structure that underlies many, if not all, myths and stories:

> A hero ventures forth from the world of common day into a region of supernatural wonder . . . fabulous forces are there encountered and a decisive victory is won . . . the hero comes back from this mysterious adventure with the power to bestow boons on his fellow man.[42]

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[39] Kelly Knauer and Ellen Shapiro, *TIME: The 100 Most Influential People Who Never Lived* (New York: Time Books, 2013), vi.

[40] F. Scott Fitzgerald, *F Scott Fitzgerald on Writing*, ed. Larry W. Phillips (New York: Scribner, 1986), 10.

[41] Joseph Campbell, *The Hero with a Thousand Faces*, 3rd ed. (Novato, CA: New World Library, 2008), 18.

[42] Campbell, *Hero with a Thousand Faces,* 23. Campbell divides the monomyth into three "acts" (Departure, Initiation, and Return). He then subdivides the three acts into a total of

Christopher Booker, in his 2004 book *The Seven Basic Plots,* similarly suggests that all stories can be catalogued into one of seven basic narratives.[43] Christopher Vogler—a former creative developer in Hollywood for Disney, Fox, and Warner Bros.—reworked Campbell's hero's journey for screenwriters in his influential book *The Writer's Journey: Mythic Structure for Writers*:

> The Hero's Journey is not an invention, but an observation . . . It is difficult to avoid the sensation that the Hero's journey exists somewhere, as an eternal reality, a Platonic ideal form, a divine model. For this model, infinite and highly varied copies can be produced, each resonating with the essential spirit of the form.[44]

If literature is a vehicle to explore man's shared humanity, then recurrent motifs or plots are not surprising.

The notion of a universal monomyth has been criticized, however, for a variety of reasons. For some, the monomyth is both too narrow and too wide to be of much use. On the one hand, the narrative template is too narrow in that many stories do not fit neatly into the paradigm (e.g., which stage of the hero's journey is conveyed through Sylvia Plath's *The Bell Jar*?). On the other hand, monomyth is too broad in that some of the stages or archetypal plots are too sweeping to give any true insight into human nature (e.g., Booker's basic plots of "tragedy" and "comedy"). Another criticism is that not every case of universality is a sign of innateness. Both clothing and cooking are universal, but they are best understood as logical responses to universal pressures such as weather and hunger.[45] Thus, many seemingly universal plot elements are conceivably

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seventeen steps: (1) the call to adventure, (2) refusal of the call, (3) supernatural aid, (4) crossing the threshold, (5) belly of the whale, (6) the road of trials, (7) the meeting with the goddess, (8) woman as temptress, (9) atonement with the father, (10) apotheosis, (11) the ultimate boon, (12) refusal of the return, (13) the magic flight, (14) rescue from without, (15) the crossing of the return threshold, (16) master of two worlds, (17) freedom to live.

[43] Christopher Booker, *The Seven Basic Plots: Why We Tell Stories* (London: Continuum, 2006). The seven plots are (1) overcoming the monster, (2) rags to riches, (3) the quest, (4) voyage and return, (5) comedy, (6) tragedy, (7) rebirth.

[44] Christopher Vogler, *The Writer's Journey: Mythic Structure for Writers*, 3rd ed. (Studio City, CA: Michael Wiese Productions, 2007), xiii.

[45] Kramnick, "Against Literary Darwinism," 337.

reflections of shared human experience rather than any mystical or Platonic narrative form. Thirdly, certain narrative patterns might "just work." With music, several chord progressions have been recycled countless times, such as 1st, 5th, minor 6th, 4th (i.e., C-G - Am-F).[46] Does the frequency of this chord progression in countless songs indicate anything universal or innate within the human species? Or is it merely a progression that many songwriters have discovered allows for catchy melodies? The same might be said of the frequency of the Hero's Journey in countless stories across different cultures and times. The narrative structure works, as evidenced by the numerous works of literature and cinema which have followed its pattern. Dutton has suggested that, given enough time, eventually every culture would have invented all the same basic art forms.[47] Perhaps, as Daniel Everett succinctly says, "Utility explains ubiquity."[48]

What matters for the present discussion, however, is not whether the shared narrative motifs are universal in a rigid sense. While Campbell's scholarship leaves much to be desired, his wider point on the frequency of many motifs and narrative is indisputable. Whatever the reason—whether mystical or merely a shared cultural history—a select number of themes and motifs have pervaded literature from the earliest preserved manuscripts until today. The question, then, is what insight do these recurring literary themes offer into human nature?

Literary Darwinist Answer

Darwinian literary criticism is predicated, in part, on a general acceptance of

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[46] The chord progression has been used in hit songs such as "Let it Be" by the Beatles, "With or Without You" by U2, "Don't Want to Miss a Thing" by Aerosmith, "Can You Feel the Love Tonight" by Elton John, "Don't Stop Believing" by Journey, "No Woman No Cry" by Bob Marley, and many others. In the minor key, the progression was used three different times by Madonna on her album *Ray of Light* alone.

[47] Dutton, *Art Instinct*, 34.

[48] Daniel Everett, *How Language Began: The Story of Humanity's Greatest Invention* (New York: Liveright, 2017), 248.

Campbell's notion that literature provides insight into certain universal or innate patterns of human behavior. Indeed, one of Joseph Carroll's works is appropriately titled *Reading Human Nature.* To this end, Dutton suggested, "Far from being derived from sets of cultural conventions, the enjoyment of fiction shows clear evidence of Darwinian adaptation."[49] In other words, the presence of universal narrative elements that defy a simple cultural explanation strengthens rather than weakens their theory. He argues further:

> The basic themes and situations of fiction are a product of fundamental, evolved interests human beings have in love, death, adventure, family, justice, and overcoming adversity. "Reproduction and survival" is the evolutionary slogan, which in fiction is translated straight into the eternal themes of love and death for tragedy, and love and marriage for comedy. . . . Story plots are not, therefore, unconscious archetypes but structures that inevitably follow, as Aristotle realized and Darwinian aesthetics explain, from an instinctual desire to tell stories about the basic features of the human predicament.[50]

Literary Darwinism, according to Jonathan Kramnick, is "relentlessly *thematic*. At the extreme, the theme is a kind of microversion of the story of natural selection itself. The Darwinian saga somehow becomes the very story of most fictions."[51] As a result, *Pride and Prejudice* becomes a Darwinian fable about mate selection; the *Iliad* is about the competition for resources; and *Hamlet* is about a young man's dilemma between self-interest and genetic self-interest.[52] Yet, the literary Darwinists are guilty of judging a

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[49] Dutton, *Art Instinct*, 5.

[50] Dutton, *Art Instinct,* 132.

[51] Kramnick, "Against Literary Darwinism," 334.

[52] Journalist T. D. Max, in describing Literary Darwinism, writes, "Literary Darwinists use . . . 'deep history' to explain the power of books and poems that might otherwise confuse us." He then offers the example of *Hamlet*: "Through the Literary Darwinist lens, Shakespeare's play becomes the story of a young man's dilemma choosing between his personal self-interest (taking over the kingdom by killing his uncle, his mother's new husband) and his genetic self-interest (if his mother has children with his uncle, he may get new siblings who carry three-eighths of his genes). No wonder the prince of Denmark cannot make up his mind." D. T. Max, "The Literary Darwinists," *The New York Times*, November 6, 2005. Is Shakespeare's classic story of revenge truly confusing to a reader until, with the assistance of the literary Darwinists, they understand that Hamlet's uncertainty is driven by a deep concern about three-eighths of his genes? To the contrary, the literary Darwinists often give answers to questions that no reader is likely to ask, and provide contrived Darwinian explanations for narratives that require no elucidation.

book by its cover; they draw conclusions on the thematic material that are consistent with their theory, while largely missing the actual story the book tells.

Anti-Darwinian Motifs and Yearnings

Darwinian literary criticism does not stumble in explaining the existence of universals but in accounting for the content of those universals. One of the most striking aspects of the monomyth, or any of the other archetypal paradigms, is how starkly anti-Darwinian it is. In a sense, the literary Darwinists are like a doting parent who looks upon his spoiled and impertinent child and perceives only a cherub. The literary Darwinists do not openly *receive* a work (to use C.S. Lewis's terminology) of literature and glean what the themes may suggest about human nature. Rather, they impose their pre-conceived Darwinian themes upon a work of literature. When the Darwinian restrictions on literary themes are removed, however, the more striking discovery is how incompatible many of them are with Darwin's theory.

In Greek mythology, Procrustes, a son of Poseidon, preyed upon the unsuspecting travelers who passed by his stronghold by inviting them to spend the night and sleep in his special bed. Once they were asleep, he used gruesome methods to fit the travelers perfectly to the bed—stretching them if they were too short and amputating limbs if they were too tall. The literary Darwinists place literature onto Procrustes' bed, disfiguring and stretching the narratives until they are completely fitted to their theory. However, just as Procrustes was eventually defeated by the mighty hero Theseus who mutilated him to fit his own bed, the literary Darwinists' approach is undone when forced to abide by their own practice. The literary Darwinists' fixation and reliance on the thematic aspect of literature to support and validate their theory only further illuminates the incompatibility of many of those themes and, as a result, the inadequacy of their theory.

An example of this internal tension is English novelist Philip Pullman and his

award-winning trilogy, *His Dark Materials*. The Catholic League for Religious and Civil Rights denounced the stories as "atheism for kids."[53] Pullman, himself, establishes his novels as the antithesis of C. S. Lewis' theologically rich Narnia stories: "I'm trying to undermine the basis of Christian belief . . . . Mr. Lewis would think I was doing the Devil's work." Despite this agenda, Pullman expresses that not all religious appraisals of his work have been disagreeable. Describing one positive letter received from a vicar, he explains:

> What he meant . . . is that the qualities and the actions which the story seems to be saying are good–such as courage, love, kindness, compassion and so on–are ones that we can all agree on . . . . It's saying things that we generally agree on, so what is there to disagree with?[54]

While those good qualities and actions may indeed be agreeable, there remains much to disagree with on the foundational basis of the values. Modern and postmodern literature has largely endeavored to purge itself of overt religious themes and symbolism, while at the same time continuing—consciously or not—to propagate Christian values. Christ may have been pushed to the fringe, but his teachings have remained entrenched at literature's center.

The Christ figure motif. Arguably no recurring theme in literature is more directly anti-Darwinian than the Christ figure motif. Generally conceived, the motif draws attention to literary figures who reflect Christ-like characteristics or self-sacrificial actions. The motif can be a highly symbolic stand-in for Christ (e.g., Superman; Aslan from Lewis' *Chronicles of Narnia*), less direct but still intentionally evocative (e.g., Santiago in Hemingway's *The Old Man and the Sea*; Myshkin in Dostoevsky's *The Idiot),* or only loosely reflective of Christ (e.g., Sydney Carton in Dickens' *A Tale of Two*

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[53] William Donohue, *The Golden Compass: Agenda Unmasked* (New York: The Catholic League for Religious and Civil Rights, 2007) 5.

[54] Phillip Pullman, interviewed by Alona Wartofsky, "The Last Word," *Washington Post*, February 19, 2001, accessed August 25, 2018, https://www.washingtonpost.com/archive/lifestyle/2001/02/19/the-last-word/4bad376f-4ab7-441c-9c50-afc7e63dd192/.

Cities). Regarding the Christ figure motif, Thomas Foster—in his influential book *How to Read Literature Like a Professor*—writes, "No literary Christ figure can ever be as pure, as perfect, as divine as Jesus Christ."[55] Historically, Jesus has represented the perfect embodiment of the values and ideal characteristics that define many of literature's greatest protagonists.

For some, that Christ has come to represent the ideal hero is merely the evidence of Christianity's influence on culture. Foster writes, "Culture is so influenced by its dominant religious systems that whether a writer adheres to the beliefs or no, the values and principles of those religions will inevitably inform the literary work."[56] Similarly, Joseph Campbell considered Jesus to be not the source of the motif but only the most famous expression of it—one of the mythical hero's thousand faces. Nevertheless, the Christ figure motif, even if reduced to cultural influence, touches on the problem of altruism. The existence of the behavior greatly troubled Darwin. In *The Descent of Man*, he observed, "He who was ready to sacrifice his life, as many a savage has been, rather than betray his comrades, would often leave no offspring to inherit his noble nature."[57] Sharon Street, Professor of Philosophy at New York University, raises the question, "Why do we think that altruism with no hope of personal reward is the highest form of virtue, rather than something to be loathed and eliminated?"[58] Altruism conflicts with the principles of natural selection, whereby animals are expected to selfishly seek their own survival and reproductive advantages.

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[55] Thomas C. Foster, *How to Read Literature Like a Professor: A Lively and Entertaining Guide to Reading between the Lines,* rev. ed. (St. Louis: Harper Perennial, 2014), 129.

[56] Foster, *How to Read Literature,* 125.

[57] Charles Darwin, *The Descent of Man and Selections in Relation to Sex* (London: John Murray, 1872), 163.

[58] Sharon Street, "A Darwinian Dilemma for Realist Theories of Value," *Philosophical Studies* 127, no. 1 (2006): 115.

In 2014, Khali—a female sloth bear at the Smithsonian's National Zoo—made news headlines by giving birth to three cubs and immediately eating the first. A week later, the second cub became the main course for his mother's dinner, forcing the third to be moved to a safer environment. While shocking to humans, infanticide among animals is not uncommon.[59] After the sloth bear incident, Tony Barthel, one of the mammal curators at the zoo, noted, "It can seem unnatural . . . but there are reasons. They might sound cold to us, but they're simple—and they have to do with resources."[60] According to natural selection, everything, in one way or another, boils down to resources. How then, in a world where a mother will eat her cubs for the nutrients needed to survive the rigors of natural selection, did altruism and self-sacrifice come to represent the highest values in man's ideal heroes?

In the final act of the hero's journey, the archetypal hero returns from his quest with the ultimate boon to bestow upon his fellow man (e.g., Prometheus and the gift of fire). When asked about the pervasiveness of hero myths, Campbell declares, "Because that's what's worth writing about . . . . A hero is someone who has given his or her life to something bigger than oneself."[61] In a Darwinian world, however, there is nothing bigger than oneself. There is only survival, self-preservation, and reproduction. The vigilantism of Batman and self-sacrifice of a spider named Charlotte to save a humble pig are sensible only when removed from Darwinism's shadow and viewed under a different light. In a Darwinian world, there is no, "One for all, all for one," and Robin Hood and

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[59] For example, similar incidents of infanticide have been observed in the wild with dolphins, lions, and in more than forty species of primates. One recent study estimates that as many as 25 percent of mammals practice infanticide. See Dieter Lukas and Elise Huchard, "The Evolution of Infanticide by Males in Mammalian Societies," *Science* 346, no. 6211 (November 14, 2014): 841–44.

[60] Virginia Morell, "Why Do Animals Sometimes Kill Their Babies?" *National Geographic,* March 28, 2014, accessed August 25, 2018, https://news.nationalgeographic.com/news/2014/03/140328-sloth-bear-zoo-infanticide-chimps-bonobos-animals/.

[61] Joseph Campbell and Bill Moyers, *The Power of Myth* (New York: Anchor, 1991), 151.

his band of merry men do not rob from the rich to give to the poor.[62] Jesus declared, "Greater love has no one than this, that someone lay down his life for his friends " (John 15:13). Jesus is not only the most famous embodiment of the characteristic and values of the Christ-figure motif; he remains the only convincing foundation for them.

Romance and friendship. Arguably no theme in literature is more recurrent than love or as awkward to justify through Darwinian literary criticism. Jane Austen's classic romance novel *Pride and Prejudice* is a favorite for the literary Darwinists. Joseph Carroll has called the book his "fruit fly," dissecting the story to experiment with the workability of his theory.[63] The famous opening line, "It is a truth universally acknowledged, that a single man in possession of a good fortune, must be in want of a wife," has provided ample fodder for the literary Darwinists.[64] The line seems to encapsulate the Darwinian principles of preservation and the struggle for mates. Yet, the

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[62] Darwinists have attempted to overcome the problem of altruism and selflessness in several ways. The first major solution was proposed in 1964 with W. D. Hamilton's notion of "inclusive fitness" or "kin selection theory." See W. D. Hamilton, "The Genetical Evolution of Social Behaviour," *Journal of Theoretical Biology* 7, no. 1 (July 1964): 1–16. Accordingly, rather than survival and reproduction of individual organisms, evolutionary success was conceived of as the continuation and spread of genes. Therefore, the genes have a better chance of success by promoting the survival and reproductive potential of other individuals who share those genes, such as with kin. Hamilton's ideas were expanded and popularized by Richard Dawkins in his influential book *The Selfish Gene* (1976). In the years following the publication of Dawkins' book, however, other scholars have demonstrated the narrow scope of the "gene-centric" approach. See Elliott Sober and Richard C. Lewontin, "Artifact, Cause and Genic Selection," *Philosophy of Science* 49, no. 2 (1982): 157–80; Yaneer Bar-Yam, "Formalizing the Gene Centered View of Evolution," *Advances in Complex Systems* 2 (2000): 277-81. In a recent article tracing the scientific discoveries that have been made since the publication of Dawkins' book, science journalist David Dobbs asks the pointed question, "Does it make sense to attach these proliferating findings and ideas on to the selfish-gene story as appendices? Or is it time to find another story?" David Dobbs, "The Selfish Gene Is a Great Meme: Too Bad It's So Wrong," *Aeon*, December 13, 2013, accessed August 21, 2018, https://aeon.co/essays/the-selfish-gene-is-a-great-meme-too-bad-it-s-so-wrong. The story of inclusive fitness and selfish genes (even if accepted on their own terms) does not seem to adequately account for the stories told through literature. The selfless and altruistic love, as exemplified in many of the great tales, does not find a foundation in selfish genes, but in the words of Jesus: "You have heard that it was said, 'Love your neighbor and hate your enemy.' But I tell you, love your enemies and pray for those who persecute you . . . . If you love those who love you, what reward will you get? . . . And if you greet only your own people, what are you doing more than others?" (Matt 5:43-47).

[63] Carroll, *Literary Darwinism*, 190.

[64] See Michael Suk-Young Chwe, *Jane Austen, Game Theorist* (Princeton, NJ: Princeton University Press, 2013).

story that unfolds from those lines serves to color them in an ironic, and non-Darwinian, light.

When Charlotte agrees to marry Mr. Collins—a pompous clergyman—she defends her decision by saying, "I am not romantic you know. I never was. I ask only a comfortable home; and considering Mr. Collins' character, connections, and situation in life, I am convinced that my chance of happiness with him is fair, as most people can boast on entering the marriage state." Of the starkly pragmatic decision (one which is consistent with a Darwinian reading) Elizabeth conveys disbelief that her friend "would have sacrificed every better feeling to worldly advantage. Charlotte the wife of Mr. Collins was a most humiliating picture!"[65] A single man in possession of a good fortune may be naturally in want of a wife, but the success or failure of his pursuit hinges on more than the size of that fortune.

Elizabeth's rejection of Mr. Darcy's first marriage proposal and later acceptance of his second is not conditioned on any increase in fortune or status by Darcy. The decision is made on the basis of love—a stark juxtaposition to Charlotte's rational decision. Charlotte's choice satisfies both of natural selection's requirements—financial security and the opportunity for childbearing before she grows too old. Yet, Charlotte's decision is contrasted with Elizabeth's, with the latter seemingly held up as the ideal over the former.

The importance of love in literature is not only of the romantic variety. Equally present is the love between friends—captured in the Greek *philia*. Even the mightiest heroes dare not embark on their quest alone. Most of the great heroes and protagonists are accompanied by sidekicks and secondary characters (e.g., Samwise Gamgee, Hermione Granger, or Dorothy's trifecta of quirky companions—Scarecrow, Tin Man, and Lion).

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[65] Jane Austen, *Pride and Prejudice* (1813; repr., Augusta, GA: Dover Publications, 1995), 87.

Campbell referred to the character's role as the ally archetype. Of the friendship love, C.S. Lewis writes, "The exquisite arbitrariness and irresponsibility of this love. I have no duty to be anyone's friend and no man in the world has a duty to be mine. No claims, no shadow of necessity. Friendship is unnecessary."[66] Unnecessary, yet elevated by literature as one of man's highest and most noble virtues.

Jonathan Gottschall acknowledges that there is a danger in reducing the central themes of literature—such as romantic passion or the loving bond of friendship—to a sterile and formulaic understanding wholly alien to the actual experience of sublime literature. He notes, "Fictions, fantasies, dreams . . . they are the last bastion of magic. They are the one place where science cannot—should not—penetrate, reducing ancient mysteries to electrochemical storms in the brain or a timeless warfare among selfish genes."[67] Such danger has not, however, stopped Gottschall and the other literary Darwinists from doing precisely that, reducing one of the greatest sweeping romances in the literary canon to Darwinian fable which appears as fitting to the heart of Austen's story as do the zombies in the 2009 parody *Pride and Prejudice and Zombies*—which is to say, not at all. A Darwinian interpretation of the text seems to pull the reader further away from the meaning of the text, not closer. William Deresiewicz, a critic of literary Darwinism, concludes, "Interpretive questions are not responsive to scientific methods. It isn't even like using a chainsaw instead of a scalpel; it is like using a chainsaw instead of a stethoscope. The instrument is not too crude; it is the wrong kind altogether."[68]

Good versus evil. In the classic Western trope, the good guys wear white hats and the bad guys wear black. In most great stories, there are heroes and villains,

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[66] Lewis, *The Four Loves*, 71.

[67] Gottschall, *The Storytelling Animal*, xv.

[68] William Deresiewicz, "No, Jane Austen Was Not a Game Theorist," *New Statesman*, January 20, 2014, accessed August 6, 2018, https://www.newstatesman.com /culture/2014/01/no-jane-austen-was-not-game-theorist.

protagonists and antagonists. The fantasy genre provides perhaps the starkest and most direct approach to the theme. Robert Jordan, one of the godfathers of the genre, said, "Fantasy is an area where it is possible to talk about right and wrong, good and evil, with a straight face."[69] Throughout the last century, the depiction of the conflict has often changed, but the theme has persisted. In the 1950s, Tolkien drew a geographical line between good and evil (e.g., the noble men of the west standing against the dark shadow growing in the south). Modern fantasy, on the other hand, has largely internalized the cosmic conflict. George R. R. Martin—arguably the most influential living fantasy author—has stated,

> The battle of good and evil is a great subject for any book and certainly for a fantasy book, but I think ultimately the battle between good and evil is weighed within the individual human heart and not necessarily between an army of people dressed in white and an army of people dressed in black.[70]

The theme of good versus evil has not been diminished or rejected, only reframed. In fact, the move arguably brings it closer to the teachings of Jesus, who declared, "For from within, out of the heart of man, come evil thoughts" (Mark 7:21). Even the prevalence of "anti-heroes" or morally gray protagonists does not abandon the theme of good versus evil, just as the ambiguity of twilight does not challenge a solid conception of either day or night.

Absolute morality has always been a tricky concept to pin down in a naturalistic worldview. Some, such as atheistic philosopher Sam Harris, have attempted to ground morality in science.[71] The success or failure of such attempts is beyond the

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[69] Robert Jordan, interview by *SSFWorld*, December 1, 2000, accessed August 25, 2018, https://www.sffworld.com/2000/12/interview-robert-jordan/.

[70] George R. R. Martin, quoted in Anne Hobson, "Is George R. R. Martin the 'American Tolkien?'" *The American Spectator*, May 31, 2013, accessed August 25, 2018, https://spectator.org/53929_george-rr-martin-american-tolkien/.

[71] Sam Harris, *The Moral Landscape: How Science Can Determine Human Values* (New York: Free Press, 2011). For more on the Darwinian problem of grounding virtue and morality, see Street, "A Darwinian Dilemma for Realist Theories of Value"; Michael James Blackaby, "A Worldview Analysis of Sam Harris' Philosophical Naturalism in the Moral Landscape: How Science Can Determine Human Values" (PhD diss., The Southern Baptist

scope of the present discussion, but the fact remains that humans alone among the animal kingdom possess a moral standard. The first act of a lion after he claims a pride is to commit infanticide on the existing cubs, an instinctual act that is neither good nor evil. In contrast, at the end of the 1972 Academy Award winning film *The Godfather*, when Michael Corleone (played by Al Pacino) systematically assassinates the other New York dons, the weight of the depraved action is highlighted by the look on his wife's face in the film's final scene. While a naturalistic philosophy can argue a viable case for a socially constructed morality on the basis of the flourishing of the species, this conception is not the sort of morality found in the great epics or other classic novels.

Sehnsucht

If Darwinism is responsible for man's desire for storytelling and the primary muse for the content in those stories, then man has been a most ungrateful benefactor. Man has taken the storytelling gift and used it as a ladder to climb higher and grasp for a reality far removed from Darwinism. A narrative birthed out of a Darwinian world presumably consists of rising tension but no denouement—a continuous narrative of struggle and conflict with no "happily ever after." This is not the story man has told.

Tolkien coined the phrase *eucatastrophe* to describe the sudden and drastic turn of events whereby the hero of the story is rescued from a near certain death or defeat. Similarly, Joseph Campbell, in his popular interview with Bill Moyers, said, "One thing that comes out in myths . . . is that at the bottom of the abyss comes the voice of salvation . . . . At the darkest moment comes the light."[72] Literature has given voice to a hope for a world beyond the Darwinian world, which Dawkins describes as having "no design, no purpose, no evil, no good, nothing but pitiless indifference."[73]

Theological Seminary, 2016).

[72] Campbell and Moyers, *The Power of Myth*, 45-46.

[73] Richard Dawkins, *River Out of Eden: A Darwinian View of Life* (London: Basic

An argument might be given that while an unhappy wife may long for a life outside of the abusive marriage she feels trapped inside, these desires do not change the reality of her situation. At the same time, however, such longings exist only because of a knowledge that happy marriages exist. As Tolkien notes, "If men could not distinguish between frogs and men, fairy-tales about frog-kings would not arise."[74] Therefore, what should be made of man's longings for a world incompatible with the Darwinian world from which he allegedly arose? Lewis argues, "If I find in myself a desire which no experience in this world can satisfy, the most probable explanation is that I was made for another world."[75] Lewis uses the word *Sehnsucht* to encapsulate these deep yearnings or wistful longings. In more poetic terms, he describes the sensation this way:

> That unnameable something, desire for which pierces us like a rapier at the smell of a bonfire, the sound of wild ducks flying overhead, the title of *The Well at the World's End*, the opening lines of *Kubla Khan*, the morning cobwebs in late summer, or the noise of falling waves.[76]

Christian philosopher, James Sire, spoke of these feelings as *signals of transcendence*.[77] The idea is similar to what Alvin Plantinga, building on the theology of John Calvin, calls *sensus divinitatis*—an innate sense for the divine instilled into all men by God.[78] The literary Darwinists assert that the themes of great literature echo the feelings and desires of the origin of the human race. They might be correct in this belief, but such themes—self-sacrifice, altruism, love, friendship, the eternal battle of good versus evil—paint a

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Books, 1996), 133.

[74] Tolkien, "On Fairy-Stories," 55.

[75] C. S. Lewis, *Mere Christianity* (San Francisco: HarperOne, 2015), 136-37.

[76] C. S. Lewis, *The Pilgrim's Regress* (Grand Rapids: William B. Eerdmans Publishing, 2014), 237.

[77] James Sire, *Apologetics Beyond Reason: Why Seeing Really Is Believing* (Downers Grove, IL: IVP Academic, 2014), 21.

[78] See Alvin Plantinga, "Reason and Belief in God," in *Faith and Rationality: Reason and Belief in God,* ed. Alvin Plantinga and Nicholas Wolterstorff (Notre Dame, IN: University of Notre Dame Press, 1983).

much different picture of that origin than their Darwinism would suggest.

Pulitzer Prize winning author Annie Dillard eventually rejected the Christian faith she had once entertained in her youth.[79] Her abandonment of religion was motivated by what she considered to be absurd and inadequate theological doctrines. Despite leaving her youthful faith behind, Dillard maintained a sense of wonder and longing that literature evokes:

> Why are we reading, if not in hope of beauty laid bare, life heightened and its deepest mystery probed? . . . Why are we reading if not in hope that the writer will magnify and dramatize our days, will illuminate and inspire us with wisdom, courage, and the possibility of meaningfulness, and will press upon our minds the deepest mysteries, so we may feel again their majesty and power? What do we even know that is higher than that power which, from time to time, seizes our lives, and reveals us startlingly to ourselves as creatures set down here bewildered?[80]

Many in today's modern or postmodern culture, like Dillard, have abandoned religion while continuing to experience *Sehnsucht* for a meaningful and beautiful world that naturalism cannot hope to provide. Due to the secularization of society in the aftermath of the Enlightenment, Nietzsche declared, "God is dead." Yet, if literature is indeed the vehicle for the deepest desires of the human race, then God might respond by echoing the words of Mark Twain, "Reports of my death were an exaggeration."[81]

The Question of Consciousness

In the book *The Daemon Knows: Literary Greatness and the American Sublime*, literary critic Harold Bloom takes a captivating voyage into the "creative spirit" of twelve of America's greatest writers.[82] To Bloom, these literary giants represent "our

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[79] Her spiritual journey is detailed in Annie Dillard, *For the Time Being* (New York: Vintage Books, 2000).

[80] Annie Dillard, *The Writing Life* (New York: Harper Perennial, 2013), 73.

[81] Mark Twain, *Mark Twain: The Complete Interviews*, ed. Gary Scharnhorst (Tuscaloosa: University Alabama Press, 2006), 317.

[82] The twelve authors discussed by Bloom are Ralph Waldo Emerson, Emily Dickinson, Nathaniel Hawthorne, Herman Melville, Walt Whitman, Henry James, Mark Twain, Robert Frost, Wallace Stevens, T. S. Eliot, William Faulkner, and Hart Crane.

incessant effort to transcend the human without forsaking humanism."[83] In the same work, Bloom concludes that the authors represent "the proliferation of consciousness by which we go on living and finding our own sense of being."[84] Many writers, both past and present, would doubtless concur with Bloom. Poetry has, perhaps more than any other medium, been a vehicle to discover the truth hidden deep in the subconscious mind. As earlier argued, the power of sublime literature is not located only in the language or aesthetic dimension. A wider appreciation of literature demands an additional step beyond the outward or sensory, which allows the seeds of narrative to bloom within the human consciousness.

Literature is unique among the arts in that it can be experienced through different senses without significantly altering the experience. Visual art can be experienced by sight but not hearing. Music can be experienced by hearing but not sight. Theoretically, a film can be experienced by either sight or hearing but only in drastically and near-incomparable ways. Literature, on the other hand, can be experienced by sight and hearing in essentially the same manner. Arthur Conan Doyle's *The Hound of the Baskervilles* changes little whether a person is reading a paperback or listening to an audiobook during a lengthy commute. This unique quality suggests that the human experience of literature is not bound to the senses in the same manner as other art forms. Rather, the human consciousness becomes the stage where the theater of literature is enacted.

One link between consciousness and literature is the ability for an author to transport the reader into the body of another. This ability is the basis of author George R. R. Martin's observation, "A reader lives a thousand lives before he dies. The man who

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[83] Harold Bloom, *The Daemon Knows: Literary Greatness and the American Sublime* (New York: Spiegel & Grau, 2016), 3.

[84] Bloom, *The Daemon Knows,* 19.

does not read lives only one."[85] Literature provides readers with a point of view other than their own. Through literature, readers can experience life in a way otherwise impossible to them, crossing the thresholds of class, sex, geography, history, and reality.

The human consciousness is perhaps most directly explored in the "stream of consciousness" genre. The term was coined by psychologist William James in his 1890 work, *The Principles of Psychology.* In a 1918 review of Dorothy Richardson's *Pilgrimage* series, British writer May Sinclair was the first person to use the term in a literary context:

> In this series there is no drama, no situation, no set scene. Nothing happens. It is just life going on and on. It is Miriam Henderson's stream of consciousness going on and on . . . . In identifying herself with this life, which is Miriam's stream of consciousness, Miss Richardson produces her effect of being the first, of getting closer to reality than any of our novelists who are trying so desperately to get close.[86]

Although Richardson rejected the stream of consciousness label as "perfect imbecility," she concurred on the intentional dearth of drama in her writing:

> This, I feel, was a natural development from the move away from 'Romance' to 'Realism' . . . It dealt directly with reality. Hence the absence of either 'plot', 'climax' or 'conclusion'. All the writers concerned would agree with Goethe that drama is for the stage.[87]

Sinclair correctly perceived in Richardson's work the first in a new style of writing. Perhaps the most accomplished of the later compositions is James Joyce's masterwork *Ulysses*, highlighted in the following passage:

> A quarter after what an unearthly hour I suppose theyre [sic] just getting up in China now combing out their pigtails for the day we'll soon have the nuns ringing the angelus they've nobody coming in to spoil their sleep except an odd priest or two for his night office or the alarmclock [sic] next door at cockshout [sic] clattering the brain out of itself let me see if I can doze off 1 2 3 4 5 what kind of flowers are those they invented like the stars the wallpaper in Lombard street was much nicer

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[85] George R. R. Martin, *A Dance with Dragons:* (New York: Bantam, 2013), 452.

[86] May Sinclair, "The Novels of Dorothy Richardson," *The Egoist* 5, no. 4 (1918): 58.

[87] Dorothy Richardson, quoted in Rebecca Bowler, "'Stream of Consciousness', Drama, and Reality," *May Sinclair Society*, July 11, 2013, accessed August 25, 2018, https://maysinclairsociety.com/may-sinclair-and-stream-of-consciousness/.

> the apron he gave me was like that something only I only wore it twice better lower this lamp and try again so that I can get up early.[88]

The passage, sure to give many freshmen English students a headache, flows in a single continual stream, following the narrator's thoughts as he struggles to fall asleep.

Consciousness, whether the reader's subjective experience, the ability to embody a third-person point of view, or the narrative genre of stream-of-consciousness, is a pillar in the human engagement with literature. Literature demands conscious beings to create and read it, but what is consciousness? More pointedly, can the subjective thought and awareness upon which literature relies be adequately explained in a purely naturalistic or materialist framework?

The mind-body problem—the dualism between immaterial and material—has stumped philosophers for centuries, tracing back to the seventeenth century French philosopher René Descartes. The problem of consciousness was thrust back into the modern debate by Thomas Nagel in his inflammatorily titled book *Mind & Cosmos: Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False.* As noted by biologist Kenneth R. Miller, "Put 'Darwinian' and 'false' on the cover of a book, and you're bound to attract plenty of attention."[89] *The Guardian* named the book the Most Despised Science Book of the Year for 2012. In *The New Republic,* Leon Wieseltier observed, "He is being denounced not merely for being wrong. He is being denounced also for being heretical."[90] Branded by some as a turncoat, Nagel dares to admit that the math simply does not line up for a naturalistic conception of consciousness and concludes that, for far too long, naturalists have been willing to accept that 2+2=5 for the sake of

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[88] James Joyce, *Ulysses* (1918; repr., New York: Vintage, 1990), 766.

[89] Gary Gutting, Kenneth R. Miller, and Stephen M. Barr, "Nagel's Untimely Idea," *Commonwealth Magazine,* May 23, 2013, accessed August 8, 2018, https://www.commonwealmagazine.org/nagel's-untimely-idea.

[90] Leon Wieseltier, "A Darwinist Mob Goes After a Serious Philosopher," *The New Republic*, March 8, 2013, accessed August 25, 2018, https://newrepublic.com/article/112481/darwinist-mob-goes-after-serious-philosopher.

preserving the integrity of their philosophical commitments. He asserts,

> Consciousness is the most conspicuous obstacle to a comprehensive naturalism that relies only on the resources of physical science . . . . If we take the problem seriously, and follow out its implications, it threatens to unravel the entire naturalistic world picture. Yet it is very difficult to imagine viable alternatives.[91]

As an atheist, Nagel does not accept any theistic explanation—such as an immaterial soul—to be viable but rejects a reductionist approach whereby conscious experience is reduced to the solely physical.

According to Nagel, consciousness, due to its "irreducibly subjective character," cannot be explained only by objective or chemical acts of the brain.[92] He writes,

> If we continue to assume that we are parts of the physical world and that the evolutionary process that brought us into existence is part of our history, then something must be added to the physical conception of the natural order that allows us to explain how it can give rise to organisms that are more than physical. The resources of physical science are not adequate for this purpose, because those resources were developed to account for data of a completely different kind.[93]

To fully give an account for human experience of literature, there must be an account to explain consciousness.[94]

Imagine for a moment, a middle-aged Tolkien plucking away on his typewriter in a dusty attic (his office desk was usually too messy to use), attempting to transcribe the imaginative world of Middle-Earth from his creative mind onto the page. Years later, a reader opens the book and is instantly transported into Tolkien's fantastical secondary world where he adopts the point of view of Frodo, Legolas, Gandalf, and the other

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[91] Thomas Nagel, *Mind & Cosmos: Why the Materialist Neo-Darwinian Conception of Nature Is Almost Certainly False* (New York: Oxford University Press, 2012), 35.

[92] Nagel, *Mind & Cosmos,* 71.

[93] Nagel, *Mind & Cosmos,* 46.

[94] John Baumgardner and Jeremy D. Lyon, "A Linguistic Argument for God's Existence," *Journal of Evangelical Theological Society* 58, no. 4 (2015): 771–86. Baumgardner and Lyon take the argument further, contending that not only is the conscious experience of literature opposed to a purely naturalistic philosophy, but language itself is immaterial and thus refutes the central claim of a material worldview.

heroes, standing with them against the orc hordes of Mordor. At the conclusion of the story, the reader returns the book to the bookshelf and contemplates the adventure they have just shared. The next day, he attends his book club where he discusses the story with other individuals and finds that no two readers have had the same subjective experience. Can such a literary experience (including the additional layer of imagining such a case study) be accounted for in a convincing way as the product of jolts and chemical activity in the brain?

Such reductionism seems absurd, yet there does not seem to be any alternative explanation (unless a theistic perspective is entertained). On the mind-body problem, Nagel writes, "I find the confidence among the scientific establishment that the whole scenario will yield to a purely chemical explanation hard to understand, except as a manifestation of an axiomatic commitment to reductive materialism."[95] The same might be said about the experience of literature. To offer a purely materialist explanation for the imagined scenario above is merely to stare down into a dark abyss and cling to a naturalistic worldview rather than take the plunge to wherever the chasm may lead. The encounter with a sublime work of literature is often described as a transcendent experience. Yet, the ability to experience literature, and the capability to contemplate its sublimity at all, seems to already represent a transcendence beyond what a purely naturalistic worldview can hope to explain.

Conclusion

The desire to tell stories, the thematic content of those stories, and the ability to experience those stories all resist a straightforward naturalistic explanation. There is arguably no more distinguishing fingerprint for the human race than our stories. If an extraterrestrial from another galaxy desired to learn what the human race is truly about, it

[95] Nagel, *Mind & Cosmos*, 49.

would be hard-pressed to find a more revealing source than a survey of our literature. The greatest stories do not just take the reader on a fictional adventure but on a quest to discover what it means to be human. As the adventurous hobbit Bilbo Baggins in Tolkien's *Lord of the Rings* said, "It's a dangerous business . . . going out your door . . . . You step onto the road, and if you don't keep your feet, there is no knowing where you might be swept off to."[96] The reader who allows himself to be swept up in the stories may be led to places that a Darwinist is uncomfortable or unwilling to follow.

[96] J. R. R. Tolkien, *The Fellowship of the Ring* (1954; repr., Boston: Houghton Mifflin Harcourt, 1988), 83.

CHAPTER 6

THE CASE FOR A DIVINE ORIGIN OF LANGUAGE, AESTHETICS, AND LITERATURE

Those ancients who in poetry presented
the golden age, who sang its happy state,
perhaps in their Parnassus dreamt this place.
Here, mankind's root was innocent, and here
were every fruit and never-ending spring;
these streams — the nectar of which poets sing.[1]

—Dante Alighieri, *Purgatorio*

"The play's the thing," Hamlet muses, "wherein I'll catch the conscience of the King." In Shakespeare's play *Hamlet*, the *play within a play* is the mechanism for the Denmark prince to discern the guilt of his murderous uncle Claudius. The actors and plot of the performance are stand-ins used to probe more pressing real life questions. This project has attempted to do likewise, examining the human phenomenon of literature as a means to investigate larger worldview questions. The chief aim has been to challenge the compatibility of Darwinism and sublime literature, a subject that has received little attention by Christian scholars. I do not presume to suggest that the problems raised by this project deliver a fatal wound to Darwinism, but that Darwinism's explanatory power is wanting with regards to literature, and that this deficiency may reflect poorly on the system as a whole.

As the previous chapters of this work have attempted to demonstrate, the Darwinian account for literature is undone by its failure to provide a convincing case for

[1] Dante Alighieri, *Purgatorio*, canto 34, ll. 139-44.

any of the three pillars of literature—language, aesthetics, and literary meaning. Darwinism's account for the literature phenomena is, at best, inconclusive, if not implausible. In this final chapter, an alternative explanation is offered; a divine theory account for literature that is not only consistent with biblical theology but also more compatible with current linguistic research and aesthetic philosophy.

A Divine Origin of Language

In *The Unfolding of Language,* Guy Deustcher writes, "This book began with a paradox. Language seems so skillfully crafted that it appears to be the work of a master architect—and yet its complex structure must somehow have arisen of its own accord."[2] If one is not bound by a white-knuckled commitment to philosophical naturalism, he may rightly wonder why language must have arisen on its own accord. What is clear from surveying the major naturalistic accounts for language is that a divine origin theory for language is rejected not on the basis of any internal inconsistency or flaw but merely in contempt for the folly of evoking the divine.

Secular linguists have gone to remarkable lengths to demonstrate that language is of natural origin despite the data often pointing toward a divine explanation. Beaken notes that the evolutionary gymnastics required by many naturalist linguists "look more like biblical creations."[3] Chomsky's theories have notoriously been so averse to a traditional Darwinian explanation, and reflective of a divine origin theory, that some evolutionary biologists have accused him of closet creationism. Daniel Dennett even asserts, "If Darwin-dreaders want a champion who is himself deeply and influentially

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[2] Guy Deutscher, *Unfolding of Language: An Evolutionary Tour of Mankind's Greatest Invention* (New York: Metropolitan Books, 2005), 260. Deutscher's book is appropriately titled, as he only attempts to provide a historical account of how language developed, not how language originated. He confesses that there is nothing firm to stand on in starting the discussion on language at a time before the first words were invented, or the "me Tarzan" stage (212).

[3] Mike Beaken, *The Making of Language* (Edinburgh: Edinburgh University Press, 2006), 9.

enmeshed within science itself, they could do no better than Chomsky."[4] Bickerton concedes that the known facts of language "pose no problem for those who believe, as many still do, that we result from a unique act of creation." Yet, for those who reject a supernatural worldview, the problems raised by language "must remain puzzling indeed."[5] For this reason, John Lyons suggests, "The attitude of most linguists to evolutionary theories of the origin of language tends to be one of agnosticism."[6] The agnostic attitude is perhaps best exemplified in the following statement from American linguist, Ray Jackendoff:

> I will not inquire as to the details of how increased expressive power came to spread through a population . . . nor how the genome and the morphogenesis of the brain accomplished these changes. Accepted practice in evolutionary psychology . . . generally finds it convenient to ignore these problems; I see no need at the moment to hold myself to a higher standard than the rest of the field.[7]

In the face of such dilemmas and uncertainty, the refusal to entertain any alternative approaches or theories is all the more conspicuous.

In one of Aesop's fables, a wolf approaches some shepherds, finds them jovially enjoying a dinner of roasted mutton, and remarks, "What a clamor you would raise if I were to do as you are doing!"[8] As with the wolf and the shepherds, there is a degree of hypocrisy in the language debate. On the one hand, some secular linguists dismiss a divine theory as merely a classic "God-of-the-gaps" excuse. Giorgio Fano writes, "Theological sophistry has nothing to do with faith, but, under the cover of faith,

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[4] Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meaning of Life* (New York: Simon and Schuster, 1996), 386.

[5] Derek Bickerton, *Language & Species* (Chicago: University of Chicago Press, 1990), 2.

[6] John Lyons, *Semantics* (Cambridge: Cambridge University Press, 1977), 1:85.

[7] Ray Jackendoff, *Foundations of Language: Brain, Meaning, Grammar, Evolution* (Oxford: Oxford University Press, 2003), 237.

[8] Aesop, "The Wolf and the Shepherds," in *Aesop's Fables*, trans. V. S. Vernon Jones (Hollywood, FL: Simon & Brown, 2016), 170.

it hides our lack of competence and our idleness."[9] Yet, on the other hand, many of the naturalist accounts of language's origin take a similar "Darwinism-of-the-gaps" approach, whereby Darwinian natural selection is "no more than a place holder for a true explanation, which has not yet been found, of the human language capacity."[10] In the same way many science textbooks continue to circulate the long-ago falsified peppered moth images, secular linguists maintain a naturalistic worldview that is incompatible with their linguistic theories, because to do otherwise would be to entertain an alternative approach which their philosophical commitments will not allow.

As with many modern curiosities, the question of language's origin is not a primary concern of the Bible. The sweeping theological narrative of scripture leaves little room to answer each and every scientific query of a twenty-first century reader. Nevertheless, despite rarely being a focal point, the topic of language is sprinkled throughout the Bible, and the words "language," "tongue," "speech," and "word" appear at least 1,401 times. By following the trail of breadcrumbs, a narrative for a divine origin and development of language unfolds which aligns with the story secular linguists have been telling, while filling in the gaps that have prevented them from completing their theory.

A God Who Speaks:
The Importance of Creation

Daniel Everett's book *How Language Began* begins with two epigraphs:

"In the beginning was the Word" – John 1:1

"No, it wasn't." – Dan Everett.[11]

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[9] Giorgio Fano, *The Origins and the Nature of Language*, trans. Susan Petrilli (Bloomington: Indiana University Press, 1992), 7.

[10] Philip E. Johnson, *Objections Sustained: Subversive Essays on Evolution, Law & Culture* (Downers Grove, IL: InterVarsity Press, 1998), 60.

[11] Daniel Everett, *How Language Began: The Story of Humanity's Greatest Invention* (New York: Liveright), 1. As a former theist and missionary, Everett likely understands that

The snarky juxtaposition aside, Everett aptly notes that "any discussion of a theistic account of life and language must acknowledge that the origin of both is an important line in the sand for theists."[12] For a theist, the origins of both are also intertwined. Biblical theology holds that the creation of life led to language, and also that language was the primary tool used in the creation of life. The first chapter of Genesis reveals that God created the universe through the spoken word.[13] The power of speech which has allowed humans to subjugate all of creation, was also—according to the Bible—the means to bring creation into existence.

The use of speech to create the universe obviously precludes language from being a wholly human invention. That God immediately gives Adam spoken commands suggests that Adam already possessed some fundamental linguistic understanding. Similarly, following the creation of Eve, Adam declares, "This is now bone of my bones and flesh of my flesh; she shall be called 'woman,' for she was taken out of man" (Gen. 2:23). This sentence is the first instance of human speech recorded in scripture, although Adam presumably conversed with God before that moment. [14] Adam's speech and his comprehension of God's commands indicate that, early on in creation, man already possessed a more or less fully formed language faculty (which is not to be confused with possessing a fully formed *language*).

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proper hermeneutics of John 1.1 does not equate "Word" with 'speech.'

[12] Everett, *How Language Began,* 19.

[13] As demonstrated in the second creation account—provided in Gen 2—God was free to create by whichever means he chose. He created Adam from the dust and Eve from Adam's rib. That God, with an infinite range of options, chose to create the universe primarily through the spoken word, further affirms the power and value of language.

[14] Important to note, is that Genesis is not a firsthand account. The eloquence of Adam's speech is not necessarily a representation of his speech development at that point in time. The biblical authors presumably use paraphrasing, with the wording less important than the theological point they are trying to make. Therefore, it is impossible to know what the first language may have sounded like or what grammatical rules it may have followed. Traditionally, some Christians have argued that Hebrew is the original language used in Eden. These assumptions, however, remain speculative.

Some early divine origin theories, such as that proposed by Johann Peter Süßmilch, have been discredited by opponents on the basis of the apparent imperfection of language. If language was the creation of God, then some skeptics have alleged that God is a most amateur inventor. Such criticism, however, mistakenly emphasizes language on a surface level rather than on a deeper, structural level. Many linguists today agree that language is neither improving nor devolving.[15] Changes in language, such as slang vocabulary, may be rightly judged as poor Standard English, but the standard dialect and rules of any language are generally culturally determined rubrics. As has often been said, "A language is a dialect with an army and a navy."[16] The meaning of the quote is that the proper "standard" of language is often determined by geographical or political factors, such as the particular dialect spoken in the region of military power or cultural influence.

In the same way that fashion trends are determined by what the influential Hollywood celebrities decide to wear, which language dialect is enforced as the proper standard and which dialect is frowned upon by the "language mavens"—to use Steven Pinker's terminology—is merely the product of subjective, cultural, or historical factors. The emergence of slang in a language, despite raising the blood temperature of many college professors, can even be argued as an improvement on the basis of enabling more concise communication. McWhorter notes, "No scholar has yet encountered a forlorn culture where the language simply 'wore down' to the point that the people can no longer communicate beyond desperate barks (not even English, contrary to the ever-popular

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[15] John McWhorter observes that language change "concurrently entails building up (new sounds, grammaticalization of concrete words into new helping verbs, prefixes and suffixes) and plain old reshuffling (*nickname*, *I have seen her*)." John McWhorter, *The Power of Babel: A Natural History of Language* (New York: Harper Perennial, 2003), 40.

[16] Deutscher, *Unfolding of Language*, 55. The quip is not original to Deutscher and has been expressed by many linguists.

belief)."[17]

Regardless of whether surface level language change is understood as improvement or decay, at the foundational level, the language faculty instilled in man by God has proven to be perfectly suited for the task of language. Thus, any of the alleged imperfections in a language must be held against man, not God. Even Deutscher, a vocal opponent of a divine origin theory, concludes, "Strangely enough, what linguists were discovering only seemed to confirm the gist of the biblical account: God gave Adam a perfect language some 6,000 years ago, and since then, we have just been messing it up."[18]

Divine Origin as the "Missing Link" in the Nativist Theory

As many critics of linguistic nativism have asserted, the theories are often more reflective of a divine origin than a Darwinian one. Indeed, by replacing Chomsky's loosely gripped Darwinism with a biblical explanation, the most problematic aspects of the nativist account for language become sensible. The flaw of the nativist approach is not that it fails to adequately account for the facts of language phenomena but only that such facts cannot be easily accounted for through a traditional conception of Darwinism.

Arguably the main discrepancy between the nativist theory and Darwinism pertains to Chomsky's rejection of the tenability of a gradual evolution of the language faculty. Darwin wrote, "If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down."[19] The irreducible complexity of language, as well as the necessary social dimension, has led many of the nativists to hold a theory of

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[17] McWhorter, *Power of Babel*, 40.

[18] Deutscher, *Unfolding of Language*, 7.

[19] Charles Darwin, *On the Origin of Species* (1859; repr., New York: D. Appleton and Company, 1861),189.

language's origin akin to a *big bang*, with language appearing near-instantaneously and more-or-less already intact. Elizabeth Bates et al. write,

> If the basic principles of language cannot be learned (bottom up) or derived (top down), there are only two possible explanations for their existence: either Universal Grammar was endowed to us directly by the Creator, or else our species has undergone a mutation of unprecedented magnitude, a cognitive equivalent of the Big Bang.[20]

As the idiom says, "If it looks like a duck and walks like a duck, it is probably a duck." Nativist linguists have continued to argue for a pig, a horse, a cow—seemingly *any* animal will do—just so long as that animal is not a duck. Thus, they present a theory with all the appearance and hallmarks of a divine origin account but label it Darwinian. If language emerged at once—as it appears it must have—then a divine explanation is better equipped to explain such a linguistic big bang than a naturalistic theory built on the mechanism of slow and gradual development.

Adam Names the Animals:
The Human Task

Language is never static. Consider the following passage:

Hwæt! Wé Gárdena in géardagum,
þéodcyninga, þrym gefrúnon·
hú ðá æþelingas ellen fremedon.

An unaware English reader would be excused for supposing that the words belonged to one of the fictional people groups in Tolkien's fantastical world of Middle-Earth rather than representing an earlier version of his own tongue. The words from the prologue of the great epic *Beowulf*, written in Old English, can be translated: "Lo! We have heard the glory of the kings of the Spear-Danes in days gone by, how the chieftains wrought mighty deeds."[21] Modern English is as far removed from Old English as it is from French or

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[20] Elizabeth Bates et al., "Symbols and Syntax: A Darwinian Approach to Language Development," in *Biological and Behavioral Determinants of Language Development,* ed. Norman A. Krasnegor et al. (Hillsdale, NJ: Psychology Press, 1991), 30.

[21] *Beowulf*, Enriched Classic ed. (New York: Simon & Schuster, 2005), 3.

German. McWhorter observes, “Shakespeare would have had to study the English spoken five hundred years before he lived as a separate language.”[22] Every year, hundreds of new words are added to the dictionary. In 2018, the Merriam-Webster dictionary added 850 new entries, such as *mansplain*, *wordie*, and *glamping*.

The fluidity of language does not conflict with a divine origin for language. The beginning of the process can be witnessed in Genesis 2:19-20:

> Now the Lord God has formed out of the ground all the wild animals and all the birds in the sky. He brought them to the man to see what he would name them; and whatever the man called each living creature, that was its name. So the man gave names to all the livestock, the birds in the sky and all the wild animals.

God named things during creation and let man name things in Eden. As such, language is partially a divine gift and partly a human creation. Language was not, therefore, bestowed upon Adam as a fully formed entity. God seems to have started the process and then handed over the reins to Adam and his descendants. In doing so, God established one of the defining qualities of human language: the need to “name” things. The naming mandate is a biblical precedent not found anywhere else in nature.[23]

Arguably no narrative is more closely associated with language than the Tower of Babel. The biblical text offers an accurate history of the dispersion of language. Initially, coming out of Eden, “The whole world had one language and a common speech” (Gen 11:1). The role of social pressures and labor demands, cherished by linguistic behaviorists, are validated in God’s assertion, “If as one people speaking the same language they have begun to do this, then nothing they plan to do will be impossible of them. Come, let us go down and confuse their language so they will not understand each other” (Gen 11:6-7). The existence of more than six thousand languages today rings true to the end of the biblical story: “That is why it was called Babel—

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[22] McWhorter, *Power of Babel*, 219.

[23] Jean Aitchison, *The Seeds of Speech: Language Origin and Evolution* (Cambridge: Cambridge University Press, 2000), 97.

because there the Lord confused the language of the whole world. From there the Lord scattered them over the face of the whole earth" (Gen 11:9).

Thus far, the biblical account has traced a history of language that is consistent with modern linguistic theories—a sudden emergence of the linguistic faculty, the further development of language through the human act of cataloging the world, communal labor, and the dispersion of language into multiple variations. The lone aspect of language that remains to be accounted for is the function of language today. Here, too, the Bible is not silent.

The Imago Dei: Explaining Human Universals

The existence of language universals—what Chomsky called Universal Grammar—is one of the most controversial and difficult aspects of the language phenomenon to explain through naturalistic means. The nativists seek to explain the phenomenon through biology, but, as the inability to locate such a biological device has stretched on, optimism of fulfilling the initial promise of the approach has faded. The existence of universals in language seems indisputable, suggesting some element of innateness and biological hardwiring; yet, no logical or feasible biological source has been discovered to account for these universals. The Broca's area or FOXP2 gene are no pots of gold at the end of the Darwinian rainbow.

Where science has remained tightlipped, the Bible offers answers within its first two chapters. Genesis 1:27, one of the most theologically rich verses in the Bible, contains this revelation: "So God created mankind in his own image, in the image of God he created them; male and female he created them." The theological doctrine of the *imago Dei*—"the image of God"—occupies a central position in Christian theology. The term has the connotation of "likeness" or "in the essence of." If humans are created in the likeness of God, then it matters a great deal what that God is like. There is a clear danger in linking the *imago Dei* to any one quality or aspect (e.g., reason, creativity, or morality).

If the *imago Dei* is purported to be human creativity, for example, then the child with a disposition toward mathematics, but no artistic ingenuity, is excluded from bearing God's image. Therefore, this interpretation of the *imago Dei*—often called the substantive view—is better understood in a more holistic and spiritual manner, encapsulating the many attributes and capabilities of God.[24]

Among many other characteristics, God is a being who *speaks.* In the first chapter of Genesis, the word "said" is used in relation God on eleven occasions, and the word "called" is used five times. Man, created in the likeness of a speaking God, has himself become a being of speech. The *imago Dei* cuts across all geographical and cultural lines, making sense of the complex language universals which otherwise, as Pinker writes, "fills linguists with awe."[25] Humans, made in the image of a God who speaks, share an element of human nature deeper than a shared cultural history or common ancestor some million years ago.

Some theologians, such as Karl Barth and Emil Brunner, have advocated instead for a relational view of the doctrine. In this approach, the *imago Dei* is not understood as a substantive property of man, but as the ability and desire for relationality. Just as the three persons of the Trinity—Father, Son, and Holy Spirit—exist in perfect relational harmony, so too was man created for relationship and community. If the *imago Dei* represents man's innate capacity and longing for relationship, then the human language faculty is a natural extension of this theology. Regardless of whether a

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[24] While a holistic understanding of the *imago Dei* avoids the problem raised by locating it in one individual characteristic of God, there remain some difficulties in comprehending the theological doctrine in this way. A holistic approach does not entail that each of the characteristics are imprinted upon man as a necessary checklist which adds up to a full image (so that the disruption of or absence of one characteristic diminishes the whole). Ultimately, any attempt to define the Image of God in concrete terms is likely to fall short in capturing the full intent of the doctrine.

[25] Steven Pinker, *The Language Instinct: How the Mind Creates Language* (New York: HarperCollins Publishers, 2007), 14.

substantive or relational view is adopted, both the origin of the language faculty and an explanation for language universals find a suitable foundation in the theological doctrine.

To account for language universals in conjuncture with the *imago Dei* does not preclude a biological foundation for the language faculty. There is merit to the nativists' case for a biological link, as the most severe problems arise only in the inability to account for such a biological linguistic faculty through Darwinism. In a divine origin account, however, God could have bestowed the language ability upon man through biological means just as conceivably as through a more mystical sense embedded in the soul. Ultimately, the precise details of the human language ability are as mysterious to theists as they are to naturalists. What is clear, however, is that a divine theory of language suffers from none of the dilemmas of incompatibility or inconsistency that the naturalist accounts do. While some of the finer details remain unknown to all sides of the debate, the divine approach represents the most promising pathway to explain the known facts of language. A divine origin of language was man's first assumption. As it seems, it also remains his best.

A Biblical Foundation for Beauty and Aesthetics

In *Till We Have Face*s—C. S. Lewis' retelling of the classic Cupid and Psyche myth—Psyche anticipates her impending journey as a sacrifice to the mysterious God of the Mountain. To the bewilderment of Orual, her older half-sister, Psyche is not troubled. In fact, she appears to relish her fate, even if a horrible death awaits her. In response to Orual's puzzlement, Psyche says,

> The sweetest thing in all my life has been the longing—to reach the mountain, to find the place where all the beauty came from . . . my country, the place where I ought to have been born. Do you think it all meant nothing, all the longing? The longing for home? For indeed it now feels not like going, but like going back.[26]

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[26] C. S. Lewis, *Till We Have Faces: A Myth Retold* (1956; repr., New York: HarperOne, 2017), 86-87.

The longing for the source of all beauty, the search from which Darwinists have continually returned empty-handed, finds its most fitting realization in the Christian Bible.

Aesthetics plays a prominent role in the lives of many animals, but such attraction is only "skin deep." Beauty, in the context of the animal kingdom, is species specific and limited to sexual attraction and mating rituals.[27] The experience of beauty in a broader sense is a boon for humans alone to enjoy. In *the Evidential Power of Beauty*, Thomas Dubay writes,

> Darwin himself noted that no mere animal can admire the night sky, a splendid rural scene, or elegant music. Only an intellect rooted in spirit can perceive and be thrilled by astronomy, microbiology, mathematics. Which, of course . . . conversely indicates that only intellectual design and purpose can make the beautiful. Art demands an artist. Random chance has never explained a waltz or a symphony, a physical equation or an epic poem. It cannot.[28]

Only humans possess the perception of beauty in this sense.

Natural theology holds that God's existence is made known through the beauty and sublimity of nature—Edmund Burke's famous two aesthetic modes of experience. For example, the biblical psalmist declares,

> The heavens declare the glory of God; the skies proclaim the work of his hands. Day after day they pour forth speech; night after night they display knowledge. There is no speech or language where their voice is not heard. Their voice goes out into all the earth, their words to the ends of the world (Ps 19:14).

Similarly, the Apostle Paul writes,

> For what can be known about God is plain to them, because God has shown it to them. For his invisible attributes, namely, his eternal power and divine nature, have been clearly perceived, ever since the creation of the world, in the things that have been made. So they are without excuse (Rom 1:19-20).

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[27] A female bowerbird is wooed by the male bowerbird's nest, and a peahen is attracted by the bright colors of a peacock's feathers. However, a female bowerbird is unlikely to demonstrate any interest in a peacock's feathers, nor is a peahen likely to be wooed by the nest of a bowerbird. The human perception of beauty does not share these species-specific limitations.

[28] Thomas Dubay, *The Evidential Power of Beauty: Science and Theology Meet* (San Francisco: Ignatius Press, 1999), 65.

God is not, himself, of the same essence as creation and beauty, as believed in a pantheistic religion. However, the Bible is clear that, in some way, the beauty and aesthetic quality of nature testify to the divine.[29]

The Bible also indicates that the beauty of human artistic creations act in a similar manner. With the tabernacle, the temple, and the ark of the covenant—the three physical Old Testament structures symbolic of God's physical dwelling amongst men—the biblical text reveals that the blueprints and design patterns are given to man directly from God himself. God said to Moses, "Make the tabernacle and all its furnishing exactly like the pattern I will show you" (Exod 25:8). Such divine designs, which the Bible allocates several chapters to detailing, also reveal a God seemingly concerned less with architectural utility than with aesthetic beauty. The designs are filled with gold sculptures, ornamental candlesticks, and pomegranates of purple, scarlet, and blue—the latter, which is not a natural color of pomegranates, indicates artistic embellishment. God even orders a gold sculpture of a cherubim to be placed within the Holy of Holies, a room that was only to be entered once a year by a single priest. The Bible specifies that much of the design, such as the placement of precious stones, was intended, "for beauty" (2 Chr 3:6).[30]

The narrative of Bezalel and Oholiab, the first artists mentioned by name in the Bible, provides more insight into man's aesthetic impulse. Of Bezalel, God says to Moses,

> I have filled him with the Spirit of God, with ability and intelligence, with knowledge and all craftsmanship, to devise artistic designs, to work in gold, silver,

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[29] An understanding of beauty in relation to God has been explored in different ways by the theologians. For the church fathers, such as Augustine and Aquinas, the theology of God's beauty was greatly influenced by Greek philosophy. God is conceived both as the source of beauty and as himself a beautiful being. Later theologians, such as Jonathan Edwards, Karl Barth, and Hans Urs von Balthasar, offered a theology of beauty which harmonizes these two elements, defining beauty in relation to an outflowing of God's character.

[30] For a concise summary of the aesthetic importance of the tabernacle and temple, see Francis A. Schaeffer, *Art and the Bible* (Downers Grove, IL: IVP Books, 2006).

> and bronze, in cutting stones for setting, and in carving wood, to work in every craft (Exod 31:3-5).

Interestingly, the first biblical record of a person being filled with the spirit of God is an artist and craftsman, not a king or prophet. God provided humans with the source of beauty, the perception for beauty, and now with the mandate to go into the world and create art and works of aesthetic pleasure.[31] Philip Ryken, president of Wheaton College, observes that the visual art created by Bezalel and Oholiab includes symbolic, representational, and abstract styles.[32] The Bible establishes the freedom for aesthetic exploration and experimentation.

There were, of course, many artists and aesthetic works that predated the tabernacle and temple. Such narratives do not represent the origin of man's aesthetic sensibility, but they reaffirm the validity of such desires which were established at creation. In *The Mind of the Maker*, Dorothy Sayers writes,

> Looking at man, [the author of Genesis] sees in him something essentially divine, but when we turn back to see what he says about the original upon which the "image" of God was modeled, we find only the single assertion, "God created." The characteristic common to God and man is apparently that: the desire and ability to make things.[33]

Both man's innate creativity and desire for beauty find their natural origin in the two profound Biblical propositions: "God created," and "God saw that it was good."

A Darwinian worldview can do little with the concepts of beauty and aesthetics other than to affirm their mystifying existence. The nineteenth-century French novelist

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[31] A biblical account for beauty and aesthetics does not, however, necessitate that all aesthetic works must be *beautiful.* Ugliness, shock art, and the anti-art of Dadaist movement, occupy an important place in man's aesthetic history. Aesthetic ugliness, however, is conceivable only when measured against a standard and understanding of beauty. A rebellion against the traditional beauty of art requires that such qualities exist in order to challenge them. Even validation for shock art can be found in the bronze serpent which God commands Moses to make and set upon a staff. Given the plight of the Israelites at that time, the "fiery serpent" would undoubtedly have been jarring and unsettling (Num 21:6-9).

[32] Philip Graham Ryken, *Art for God's Sake* (Phillipsburg, NJ: P & R Publishing, 2006), 33.

[33] Dorothy L. Sayers, *The Mind of the Maker* (1941; repr., San Francisco: HarperCollins, 1987), 22.

Gustave Flaubert, declared, "The time for beauty is over. Mankind may return to it, but it has no use for it at present. The more Art develops, the more scientific it will be."[34] Indeed, the further human art has drifted from its religious base, the more opposed to beauty it has become. Nancy Pearcy rightly concludes, "The public has a hard time understanding why many modern artists have rejected the ideal of beauty. But it is understandable when we realize that it was a consequence of a ruthless naturalistic worldview."[35] Like oil and water, aesthetic beauty and naturalism can coexist only by remaining largely untouched by and in constant retreat from the other.

History has proven Flaubert's proposition correct that mankind may return to beauty, if he ever left it behind at all. Despite the spread of Darwinism and the influence of modern art movements, man's desire for beauty has endured. Where naturalism has failed to account for these desires, the Bible succeeds in providing the source, value, and motivation of the concepts. Put more eloquently, Harriet Beecher Stowe writes, "In all ranks of life the human heart yearns for the beautiful; and the beautiful things that God makes are his gift to all alike."[36] Beauty is not just a concept explained by the Christian worldview, it is a reality that stems from the heart of its theology.

A Storytelling God: The Bible as Literature

The Bible does not directly address the topic of literature. Rather, from Genesis to Revelation, the Bible is literature. The consideration of the Bible as literature has historically been controversial, with some theologians troubled by the idea of including a sacred book of truth alongside works of fiction. To the contrary, however, to

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[34] Gustave Flaubert, *The Letters of Gustave Flaubert: 1830-1857*, trans. Francis Steegmuller (Cambridge, MA: Belknap Press, 1980), 158.

[35] Nancy Pearcy, *Saving Leonardo: A Call to Resist the Secular Assault on Mind, Morals, and Meaning* (Nashville: B & H Books, 2010), 156.

[36] Harriet Beetcher Stowe, quoted in Maturin M. Ballou, ed., *Treasury of Thought: Forming an Encyclopedia of Quotations from Ancient and Modern Authors* (Boston: Houghton, Mifflin and Company, 1881), 49.

emphasize the literary nature of scripture, far from devaluing the sacred text, is to celebrate one of its marvelous, unique characteristics. In fact, it is difficult to imagine a faithful understanding of the Bible in the absence of its essence as literature.

Equally difficult to conceive is a thorough and nuanced study of literature that does not acknowledge the debt it owes to the Christian Bible. In an article for *The New York Times*, Pulitzer Prize winning author Marilynne Robinson observes, "The Bible is the model for and subject of more art and thought than those of us who live within its influence, consciously or unconsciously, will ever know."[37] For this reason, there has been a movement within some secular college institutions and high schools to allocate time to teaching the Bible and its literary influence.

The Bible is not only literature, it is literature of a most sublime and exquisite nature. English writer Dorothy L. Sayers rightly declares, "The Christian faith is the most exciting drama that ever staggered the imagination of man."[38] Setting the validity of truth claims aside, the literary quality of the Bible is unmatched among the world's holy books. Consider, for example, Mark Twain's impression upon reading the Book of Mormon:

> The book is a curiosity to me, it is such a pretentious affair, and yet so 'slow,' so sleepy; such an insipid mess of inspiration. It is chloroform in print. If Joseph Smith composed this book, the act was a miracle—keeping awake while he did it was, at any rate . . . . The book seems to be merely a prosy detail of imaginary history, with the Old Testament for a model; followed by a tedious plagiarism of the New Testament.[39]

From a literary standpoint, the Muslim Quran also pales in comparison to the Bible. The Quran is a vehicle to relay the direct commands of Allah, with priority given to the instructional content rather than the literary presentation. Nabell Qureshi, a former Muslim, observes,

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[37] Marilynne Robinson, "The Book of Books: What Literature Owes the Bible," *The New York Times*, December 25, 2011.

[38] Dorothy L. Sayers, *The Greatest Drama Ever Staged* (London: Hodder and Stoughton, 1938), 1.

[39] Mark Twain, *Roughing It* (1872; repr., New York: Signet, 2008), 41.

> Since Muslims believe the Quran was revealed via dictation to one person, it makes sense that it contains essentially only one genre and one perspective: Allah speaking to Muhammad. Although there are significant exceptions . . . the Quran more or less reads in the same manner throughout its text.[40]

Another byproduct of the heightened instructional emphasis is a diminished role of narrative and story:

> Instead of sharing full stories, Allah usually says, 'Remember the time when…' and begins in the middle of a story. Otherwise he will start in the beginning and stop in the middle of a story. This is why devout Muslims are often able to refer to names of prophets but not to full life stories. Because of its oral modality, there are almost no full stories in the Quran.[41]

If sacred religious texts are a reflection of the God about whom they speak, then a poet and storyteller Allah is not.[42] While the scriptures of other religions are suitable as holy books, they fall short as literature.

The Christian Bible, on the other hand, is a remarkable work of literature unique in the literary canon. Rather than representing a single authorial perspective, the Bible was composed by at least forty authors. Likewise, in stark contrast to the largely uniform style of other religious books, the Christian Bible is a library of a vast array of genres—narrative, poetry, wisdom literature, epistle, gospel, song, apocalyptic literature, and more. Leland Ryken, emeritus professor of English at Wheaton College, notes,

> The Bible is in large part a work of imagination. Its customary way of expressing truth is not the sermon or the theological outline, but the story, the poem, and the vision—all of them literary forms and products of the imagination (though not necessarily the fictional imagination). Literary conventions are present in the Bible from start to finish, even in the most historically factual parts.[43]

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[40] Nabeel Qureshi, *No God but One: Allah or Jesus? A Former Muslim Investigates the Evidence for Islam and Christianity* (Grand Rapids: Zondervan, 2016), 108.

[41] Qureshi, *No God but One,* 109.

[42] Despite the relatively minimal importance in the Quran, narrative and story do play a role in Islam. The Hadith (the Arabic word for "speech, report, account, narrative") are important in the Muslim faith. The writings fill in many of the narrative gaps left by the Quran. Not all Muslims agree that all Hadith writings are divinely inspired, and few if any suggest that they are dictated by Allah. Therefore, rather than a reflection of the literary nature of God flowing out to man, the Hadith represent man's dependence on narrative and story to approach and better understand God. In other words, followers of the Islamic faith have turned to the efforts of wise men to provide the guiding narratives and story which the Christian God provides directly.

[43] Leland Ryken, *The Christian Imagination: The Practice of Faith in Literature and*

Whereas narrative and story occupy a sparse role in the Quran, approximately 60% of the Bible is comprised of narrative. Similarly, some scholars have estimated that as much as one-third of the Bible can be properly classified as poetry.[44] What other religious text can boast of including an entire book of passionate romance poetry, such as the Bible's Song of Songs?

Christian theology holds that the Bible is the revelation of God to man, and that revelation discloses that God is a literary being. Moreover, when God took on flesh in the incarnation of Christ, his primary teaching method was through story and metaphor. Indeed, Jesus' three-year teaching ministry arguably had more in common with a traveling medieval bard than with today's Sunday morning preachers. In this way, the human creation of literature is simply a continuation of a literary heritage established by God at the creation of the world and given further validity through the storytelling of Christ.

Whereas a Darwinian world cannot provide enough inherent utility to justify the emergence of man's otherwise trivial storytelling instinct, the Christian Bible—being itself a work of sublime literature—provides literature the highest possible endorsement and vindication. As detailed in chapter 5, Jonathan Gottschall pondered how, against all odds and logic, the frivolous Story People prevailed against the Practical People. The answer, according to the Bible, is that they did not. The Practical People in Gottschall's scenario never existed. The human race has always been a people of stories—pupils learning at the feet of a great storyteller.[45]

Writing (Colorado Springs: Shaw Books, 2002), 25.

[44] Leland Ryken, "I Have Used Similitudes": The Poetry of the Bible," *Bibliotheca Sacra* 147 (July 1990): 260.

[45] Theologian William Hendricks writes, "To state it theologically, God did not first create humans, then decide to give them special talents called arts. The arts, the ability to do them, and the ability to relate to the world through them are part of what it means to be human." William L. Hendricks, "Learning from Beauty," *Review and Expositor* 85 (Winter 1988): 108.

Tolkien popularized the notion of "sub-creation." In his classic essay "On Fairy-Stories," he defends the concept: "Fantasy remains a human right: we make in our measure and in our derivative mode, because we are made: and not only made, but made in the image and likeness of a Maker."[46] The philosophy is illustrated through his wonderful short story "Leaf by Niggle." In the story, Niggle, an artist, becomes fixated on creating a particular image of a majestic tree with intricately detailed leaves and many animals living within its branches. Eventually, he abandons all other paintings to focus on this one, which has grown so large that multiple canvases and a ladder are now required. All the while, there is the knowledge in the back of his mind that he has a lengthy journey soon approaching. After many distractions and delays, Niggle is finally forced to leave on his unavoidable journey to a distant, unknown land. When at last he arrives at his destination—a green land of rolling hills and lush forests—he is startled by what he finds:

> Before him stood the Tree, his Tree, finished. If you could say that of a Tree that was alive, its leaves opening, its branches growing and bending in the wind that Niggle had so often felt or guessed, and had so often failed to catch . . . . All the leaves he had ever labored at were there, as he had imagined them rather than as he had made them; and there were others that had only budded in his mind, and many that might have budded, if only he had had time.[47]

Literature, from the reasons for writing it, to the themes and motifs that pervade it, to the almost mystical experience of reading it, is as Niggle's painting, a reflection, echo, and anticipation of transcendence. The prevalence of motifs—the Christ figure, love, friendship, altruism, the cosmic battle of good versus evil—are all glimpses of a heavenly reality.

Conclusion

Richard Dawkins griped that a theistic argument from aesthetics was a

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[46] J. R. R. Tolkien, "On Fairy-Stories," in *Tree and Leaf* (London: HarperCollins Publishers, 2001), 56.

[47] Tolkien, "Leaf by Niggle," in *Tree and Leaf* (New York: HarperCollinsPublishers, 2001), 110.

"vacuous" proposition, and that the logic behind it is never spelled out. Had Dawkins taken the time to investigate that logic, he may have tempered his swift dismissal of the challenge. Although the argument from aesthetics is formidable with any of the major artforms, the existence of sublime literature is arguably the most perplexing from a Darwinian standpoint. Like a frightening horror story by Stephen King or H.P Lovecraft, with terror lurking on every page, literature confronts a Darwinist with a compilation of many of the theory's most difficult problems. Contained in the pages of man's great literature are the philosophical and theoretical monsters that most haunted Charles Darwin—language, art, beauty, virtue, consciousness—all gathered together in one tidy binding. Most striking about the Darwinian account for literature is not that it cannot provide a straightforward explanation for the phenomena as a whole but that it cannot readily account for any of its foundational pillars individually. In this way, the Darwinian explanation for literature is not just a house with a leaky roof, an annoyance easily remedied by a well-placed bucket if it rains. Rather, the Darwinian account is a crumpled heap of ruins, which Darwinists nevertheless christen as a castle.

Plato wrote, "Wonder is the only beginning of philosophy."[48] A theistic argument from literature can utilize linguistics, philosophy, biology, and psychology, but these disciplines will never be able to fully capture the experience of a young boy reading *Treasure Island* for the first time, the pages illuminated by a flashlight as he hides under his bedsheets late into the night. There is a magic to literature, bursting from the pages of great stories, that resists reduction to the cold microscopes of philosophical or scientific scrutiny. For a skeptic of a divine account for literature, there is ample rational or scientific evidence—as provided throughout this work—to satiate them. Nevertheless, the most potent evidence for a divine explanation of literature will always be to settle into a cozy chair with a good book and to surrender oneself wholly to the experience. In this,

[48] Plato, *Theaeteus,* 155d.

perhaps James Sire is correct when he argues, "There is literature. Therefore there is a God. Either you see this or you don't."[49]

There is no more fitting way to conclude a project on literature than by quoting some of the most sublime writing in English literature, the closing passage of F. Scott Fitzgerald's *The Great Gatsby*:

> Most of the big shore places were closed now and there were hardly any lights except the shadowy, moving glow of a ferryboat across the Sound. And as the moon rose higher the inessential houses began to melt away until gradually I became aware of the old island here that flowered once for Dutch sailors' eyes a fresh, green breast of the new world.
>
> Its vanished trees, the trees that had made way for Gatsby's house, had once pandered in whispers to the last and greatest of all human dreams; for a transitory enchanted moment man must have held his breath in the presence of this continent, compelled into an aesthetic contemplation he neither understood nor desired, face to face for the last time in history with something commensurate to his capacity for wonder. And as I sat there brooding on the old, unknown world, I thought of Gatsby's wonder when he first picked out the green light at the end of Daisy's dock.
>
> He had come a long way to this blue lawn, and his dream must have seemed so close that he could hardly fail to grasp it. He did not know that it was already behind him, somewhere back in that vast obscurity beyond the city, where the dark fields of the republic rolled on under the night.
>
> Gatsby believed in the green light, the orgastic future that year by year recedes before us. It eluded us then, but no matter—tomorrow we will run faster, stretch out our arms farther . . . . And one fine morning——
>
> So we beat on, boats against the current, borne back ceaselessly into the past.[50]

Like Gatsby's once promising dream, the naturalist's ambitious dream of a world devoid of primitive religious belief has dimmed, failing to deliver on its initial promise. The further upstream the Darwinian river man toils to paddle, the more he is caught in the current and brought back to the place where he first began. Literature is a vestige of that old wonder and mystery, a staggering reminder that there is more to the universe than

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[49] James Sire, *Apologetics beyond Reason: Why Seeing Really Is Believing* (Downers Grove, IL: IVP Academic, 2014), 10.

[50] F. Scott Fitzgerald, *The Great Gatsby* (1925; repr., New York: Amereon, 1995), 132.

seen by the naked eye or through a microscope lens. Poetically, it is through the existence of one of man's greatest creations that he is pointed back to the reality of his own creation, and, ultimately, to the God who created him.

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ABSTRACT

AN ARGUMENT FROM SUBLIME LITERATURE: HOW LANGUAGE, BEAUTY, AND LITERATURE POINT TOWARD THE EXISTENCE OF GOD

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The thesis of this dissertation is that there is no feasible pathway from Darwinian evolution to the creation of mankind's great literature. Conversely, the Christian worldview and biblical theology offer a far more satisfying and coherent answer by providing a foundation for the creation of sublime literature precisely where Darwinism falls apart. The argument unfolds in two stages. The first provides a critique of the Darwinian explanation for literature. The goal is to level the playing field, push back against the stranglehold evolutionists have held on the subject, and expose the need to reconsider alternative solutions. The argument—that there is no clear path from Darwinian evolution to man's great achievement of sublime literature—is approached as a cumulative case argument. Darwinism cannot account for the existence of sublime literature because it cannot sufficiently account for any of the three major aspects of great literature—aesthetics, language, and literary meaning. The second stage makes a case that the Christian worldview and biblical theology provide a better, more consistent, and accurate explanation for the phenomenon. The argument in the second stage presents the Christian worldview's explanation for each of the three major aspects of great literature, and then demonstrate how the explanations are supported by the current research in aesthetic philosophy, linguistics, and literary criticism.

Chapter 2 provides a brief discussion on and definition of literature. Chapter 3 examines the question of the origin of language by providing a brief survey and critique of the major historical and modern theories given out of a naturalistic worldview. Chapter 4 examines the aesthetic problem by demonstrating the shortcomings of the major Darwinian theories regarding beauty and aesthetics. Chapter 5 deals with the topic of literary meaning by examining a collection of issues are discussed, including a critique of Literary Darwinism, as well as the materialist problem of consciousness. Chapter 6 provides an argument for the Christian worldview as a more viable account for literature, by demonstrating its superior explanatory power in each of the areas where the Darwinian account falls short.

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