Robert Frost and Darwin’s Theory of Evolution

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[Part One]

Robert Frost probably first became aware of Charles Darwin’s theory of evolution at age fifteen, in the autumn of 1889, during his sophomore year in high school, when his older friend Carl Burell (1864-1938), showed him his volumes of Darwin, Herbert Spencer, Thomas Henry Huxley, Grant Allen, and other Victorian writers on evolution. In 1948 Frost remembered that he had “grinned inside at the time” over Allen’s book on the evolution of God, although later it had provoked his ire as an instance of how Darwin’s theory was abused, by stretching its metaphor beyond the breaking point. Burell was an avid botanist and disciple of Darwin, and he introduced Frost into a lasting love of botany as well as a lifelong interest in evolution and science in general.

Ironically, both the botanist and Frost’s mother, Belle Moodie Frost, possessed a copy of Richard Anthony Proctor’s Our Place Among Infinities (1876), but whereas this book had not prevented Burell from losing his religious faith and accepting Darwin’s theory as an instance of how Darwin’s account of the origin of life and the changes in species, Frost’s mother countered the supposed atheistic influence of Burell on her son by appealing to Proctor’s book. She noted that, through the study of astronomy, that thinker taught that “our faith must not be hampered by scientific doubts, our science must not be hampered by religious scruples.” She also quoted to her son a line from Edward Young’s “Night Thoughts”: “An undevout astronomer is mad.” Clearly, Burell’s interpretation of Darwin’s theory came into sharp conflict with Frost’s religious orientation as derived from her Swedenborgian faith, which he remembered fondly throughout his life for its “purity of spirit.” His mother’s guiding spirit, moreover, was an important early factor in shaping both his religious and his aesthetic beliefs. Throughout his life Frost was fascinated by Christian theology and the conception of creativity as “correspondence,” so that from the very beginning of his newly acquired interest in Darwinian evolution he was faced with the philosophical problem of how to reconcile the materialism in Darwin’s naturalism with the strongly opposed religious beliefs taught by his mother.

Belle Frost considered Darwin’s theory on the origins of life and on how changes occurred in species both shocking and blasphemous, and she warned her son against listening to such an avowed athe-
ist as Burell. Apparently, at first, Frost agreed with her view that the botanist’s belief in Darwin’s theory was a form of undevout madness. He even expressed his agreement in a limerick titled “The Rubaiyat of Carl Burell”:

There was a young fellow, begad,
Who hadn’t but wished that he had—
God only knows what,
But he blasphemed a lot
And showed he was generally mad.

But in talking with his mother, when he referred to himself as “a freethinker,” Belle feared that he shared Burell’s impiety, and she responded, “Oh don’t use that word. It has a dreadful history.” Frost reassured his mother that he had not become an atheist, but that he was merely rethinking the whole relationship between his conventional belief in God and the claims of the revolutionary theory propounded by Darwin.

In an editorial essay in his high school paper, the Bulletin (May 1892), Frost clarified what he meant by rethinking his beliefs:

A Custom has its unquestioning followers, its radical enemies, and a class who have generally gone through both these to return to the first in a limited sense,—to follow custom,—not without question, but where it does not conflict with the broader habits of life gained by wanderers among ideas. The second class makes one of the first and third. This is best exemplified in religious thought and controversy.

What is most remarkable about his schoolboy statement is that it is the first recorded instance of what became his lifelong habit of mind regarding how he responded to challenging new ideas. It became characteristic of the poet to listen open-mindedly to whatever anyone had to say in expounding his scientific, religious, aesthetic, political, or educational beliefs, and then to judge its truth and personal meaning to him: “I’ll accept anybody’s...premises. I’ll let them have their say, and then I take it my way.” Thus, in a highly eclectic manner, as a “freethinker” or “wanderer among ideas,” Frost responded both to Darwin’s theory and to the great range of arguments by both critics and defenders of his theory.

Frost’s open-mindedness regarding Darwin’s theory functioned within the all-inclusive frame of reference provided by his philosophical dualism of matter and mind or spirit, and by his growing conviction that all thinking (except possibly mathematical cognition) was essentially metaphorical. This meant that, unlike spiritual monists, such as religious fundamentalists, he did not reject Darwin’s theory out of hand; and in sharp contrast to materialist monists and scientific fundamentalists who defended Darwin’s theory and used it as a weapon to attack religious belief, he at once retained his lifelong belief in God and respect for religion while accepting as valid whatever appeared to be true in Darwin’s thought. Whether in religion, science, literature, or anything else, fundamentalism was to Frost a state of mind and feeling which treated conceptual ideas and philosophical principles with literal-minded rigidity, and often with a fanaticism that lacked all sense of metaphor.

The trinity of Frost’s open-minded eclectic method, his philosophical dualism, and his faith in metaphorical thinking makes his response to Darwin’s theory of evolution extremely complex. His deep knowledge of that theory, his positive response to much of it, his important differences with its propounder, and his conflicts with some of its defenders and critics require an accurate and thorough study of the whole controversy over evolution as experienced by him throughout his adult life. Only after making such a study can readers of his poetry make those important distinctions that are necessary to appreciate the nature and extent of the impact that evolutionary theory had on his thought and verse.
Frost was aware that his mother continued to be troubled by Darwin's theory, especially that crucial aspect of it which supposedly traced the origin of man and his descent from a common ancestry with the apes. To counteract that view, she quoted from Genesis, 11, 7: "And the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul." Belle Frost was unaware that in a letter to Thomas Henry Huxley (December 25, 1859), Darwin had candidly admitted that "...we know nothing as yet [of] how life originates," and that in the *Origin of Species* (Chapter XV), he had noted "the old belief in the creation of species from the dust of the earth." In response to this expression of his mother's troubled state of mind, Frost had a "ready answer," which he came to regard, in retrospect, as his first memorable witticism: "You say, God made man of mud, and I think God made man of prepared mud." Frost was well read in Emerson, and he may have taken his cue from that thinker's statement: "Man was made of social earth." In fact, he became so fond of his youthful witticism, made in 1892, that he repeated it, with significant variations, many times until his death in 1963.

In a poetry reading at Bread Loaf (June 30, 1955), he provided an addition to his witticism that explicitly harmonized Genesis with Darwin: "It doesn't make any great difference to give up saying that God made [man] out of mud. All you have to say is that God made him out of prepared mud—worked it up from animal life. So it comes to the same thing—it's a Darwinian thing." Metaphorically speaking, as it applies to the origins of life and the evolution of man, it does indeed come to the same thing, whether the appeal is primarily to things of the spirit, as in religion, or to things rooted in matter, as in scientific theory. Frost's philosophical dualism of spirit and matter provided him with different metaphorical ways of explaining the same phenomena. Implicit in his witticism is his general belief that, despite apparent contradictions, there was no real conflict between science and religion, only "contrarieties" that needed to be resolved into a harmonious whole. The basic method of resolving all such contrarieties was through the free play of metaphorical thinking—the exploration of comparisons, contrasts, similarities, differences, analogies, parallels, parables, and so on, which involved saying spirit in terms of matter, and matter in terms of spirit.

It is enormously significant that sixty-seven years after Frost first made his witticism, he contended in “The Future of Man” symposium (1959), that the general public eventually came to reconcile its faith in traditional religion with Darwin's theory by accepting the core idea in his witticism. He imagined what a contemporary scientist would say to the public in defending the radical and disturbing implications that science had created in its recent explorations of outer space, and he then drew a parallel between how the public had come to accept Darwin's theory and how it could respond to the "new novelties" of space exploration: "It seems a shame to come on you with our new novelties when you are hardly up around after what Darwin, Spencer, and Huxley did to you last century.... Remember how you were helped by being reminded all you were asked to do was change from your old idea that God made man out of mud to the new idea that God made man of prepared mud." Frost came to have three very distinct and separate views of Darwin, Spencer, and Huxley; but, in considering how science (or matter) and religion (or spirit) are related, he clearly believed that new scientific theories or discoveries, which were always subject to change, did not destroy basic and enduring revealed religious truths, but merely com-
pelled mankind to modify its understanding of them.

For example, in *The Masque of Reason* (1945), Frost has God clarify to Job how the novelty of science, with its constant change, compares with the metaphysics of religion and its enduring moral wisdom:

*My forte is truth,*  
*Or metaphysics, long the world’s reproach*  
*For standing still in one place true forever;*  
*While science goes self-superseding on.*  
*Look at how far we’ve left the current science*  
*Of Genesis behind. The wisdom there though,*  
*Is just as good as when I uttered it.*  
*Still novelty has doubtless an attraction.*

This vital passage is a summary of what Frost had recorded in *Notebook 001729* (in the Baker Library, Dartmouth College):

What's wrong with Genesis is the science in it. Let science be called to answer for it, not religion.... The science is what is defective in the Old Testament, not the religion.... Let religion enter into combination with the science of its time, for it will whether we let it or not.... The science that religion takes over today religion will sooner or later drop. The science changes. The religion persists. The religious part of religion has been nearly the same 5,000 years at least.

Clearly, for Frost, no scientific theory was ever cast in stone. He believed that any assumed conflict in doctrines and perspectives between science and religion was not an irreconcilable contradiction which forced individuals to choose sides; rather, he saw such conflicts as an opportunity to explore whatever elements of truth were to be found in each set of beliefs.

Frost's poem, "Sitting by a Bush in Broad Sunlight," (in *West-Running Brook*, 1928), takes its archetypal metaphor from the Biblical account of the burning bush, and exemplifies how the central point in his original witticism regarding the origins of man is found in both religion and in Darwin's theory of evolution:

> When I spread out my hand here today,  
> I catch no more than a ray  
> To feel of between thumb and fingers;  
> No lasting effect of it lingers.  
> There was one time and only the one  
> When dust really took in the sun;  
> And from that one intake of fire  
> All creatures still warmly suspire.  
> And if men have watched a long time  
> And never seen sun-smitten slime  
> Again come to life and crawl off,  
> We must not be too ready to scoff.  
> God once declared he was true  
> And then took the veil and withdrew,  
> And remember how final a hush  
> Then descended of old on the bush.  
> God once spoke to people by name.  
> The sun once imparted its flame.  
> One impulse persists as our breath;  
> The other persists as our faith.

Frost had neither gnostic hatred of matter nor denial of spiritual revelation. To him the truths regarding matter as revealed by science and the truths of spirit as contained in religion are among the great metaphors by which mankind lives and finds meaning in life. Their complex interrelationships are best understood not by treating each as a separate, absolute, autonomous, and wholly self-sufficient reality, as in materialistic and spiritual monism, but as vital contributions to the enduring culture of civilized life, within a philosophical dualism of both matter and spirit.

It took Frost the better part of his adult lifetime to develop fully his dualistic belief that all science, including Darwin's materialist theory of evolution, was compatible with the vital element of mind or spirit, as contained in the humanities, arts, and religion. While he was a student at Harvard University, from autumn 1897 to spring 1899, his knowledge and under-
standing of Darwin’s theory was greatly enriched and extended. Moreover, through his studies of the classics at Harvard, he intensified his faith in the power of metaphorical thinking through literature, and thereby strengthened his incipient dualistic philosophy. Indeed, it would be hard to overestimate the importance of Harvard in shaping Frost’s intellectual life, both for the development of his views on evolution, and for his future as a poet.

Lawrence Thompson’s account of Frost’s experience as a student at Harvard, largely centered in the influence of William James, whose courses he never attended, is wholly inadequate, because it does not clarify what his teachers there contributed toward his greater understanding of Darwin’s theory. Moreover, Frost never attended the courses of Asa Gray (1810-1888), who, in the years prior to Frost’s arrival at Harvard, had converted many of the faculty, including the poet’s teachers, to his understanding of Darwin’s theory. Gray’s comprehensive Manual of the Botany of the Northern United States (1848), so greatly admired by Frost, had led Darwin to begin a correspondence with the Harvard botanist, who was privileged to read a manuscript outline of the Origin of Species before its publication. His three articles, “Darwin and His Reviewers,” Atlantic Monthly, VI (1860), introduced the Victorian conflict over evolutionary theory to the American public. As editor of the American Journal of Science, Gray defended Darwin’s theory in the March 1860 number as compatible with theism and belief in a divine mind, will, and personality. His anthology, Darwiniana: Essays and Reviews Pertaining to Darwinism, which went into a second edition in 1876, greatly extended knowledge of Darwin’s thought among Americans.

But the pertinence of Gray’s interpretation of Darwin to Frost’s own mature views of evolution is most evident in his two lectures to the Yale University Divinity School, Natural Science and Religion (1880). Like Frost, Gray was a philosophical dualist and conceived of human nature as compounded of both spirit and matter: “Man, while on the one side a wholly exceptional being, is on the other an object of natural history,—a part of the animal kingdom.... Man, in short, is a partaker of the natural as well as the spiritual.” Gray quoted Genesis on the origins of life out of dust, and in defense of evolution asked: “Is there any warrant for affirming that these processes were instantaneous?” Frost himself recorded the same question in his notebook. In light of Frost’s rejection of monism and of his intense dislike for the word “agnostic,” Gray’s comment on both is highly significant: “The Darwinian Naturalist,” he wrote, is “not the monistic and agnostic philosopher,—from whom...we have kept as clear as has Mr. Darwin in every volume and every line.” Like Frost in his later years, he took issue with “the assurance with which monistic evolutionists press their answer” to the great mysteries of man’s origins and ends. Gray’s strong opposition to evolutionary monists anticipates Frost’s own belief: “With all life goes duality. There is the matter, and there is the life.... The duality runs through the whole. You cannot reasonably give over any part of the field to the monist, and retain the rest.”

Gray also discussed at length the vital problem of design in a way that anticipated Frost’s poem on that subject. He noted that, although Darwin’s theory seems “to yield only a crop of accidents,” still it was possible “to harmonize our ineradicable belief in design with the fundamental scientific belief of continuity in nature, now extended to organic as well as inorganic forms....” He concluded that “... the true issue as regards design is not between Darwinism and direct Creationism, but between design and fortuity, between any intention or intellectual...
cause and no intention nor predictable first cause." Furthermore, he noted that mind, will, and intention are part of God’s design, and that “our wills, in their limited degree, modify the course of nature,” two beliefs that Frost came to hold. In his poem, “Accidentally on Purpose,” he wrote: “Grant me intention, purpose and design—/That’s near enough for me to the Divine,” and on several occasions he made it clear that to a certain extent man’s reason and will could direct the course of evolutionary change.

As Jon H. Roberts has shown in Darwinism and the Divine in America (1988), Asa Gray was Darwin’s foremost American apologist in the United States between 1859 and 1888. For forty-six years he was Harvard’s most famous professor of botany, and he imbued many of the faculty with his belief that Darwin’s theory was wholly compatible with the orthodoxy of Christian theism. In his insistence that the human mind and will were vital factors in evolution, Gray was a precursor of William James’s psychology in The Will to Believe (1897), which Frost had probably read in magazines in 1895, and which had inspired him to go to Harvard. Following Asa Gray’s work, as early as 1868 James had absorbed a positive intellectual response to Darwin: “The more I think of Darwin’s ideas the more weighty they appear to me.” During his sophomore year, Frost strengthened his dualistic philosophy of mind or spirit and matter, and his insights into both religion and science, through reading James’s textbook, Psychology: The Briefer Course, a text that he used in teaching at Plymouth in 1912. Like Gray, James presented an open minded and favorable view of Darwinian evolution that included mind and spirit.

James expounded upon Darwin’s famous phrase “the survival of the fittest,” which the evolutionist had adopted from Herbert Spencer, as superior to “natural selection” in describing how changes occur in the perpetuation or the extinction of species. James argued that a modicum of selfishness was necessary for anyone to survive and to fulfill himself. Thompson mistakenly believed that Frost adopted this principle in order to justify the sacrifices he had to make to be a poet, and concluded that his selfishness made Frost a social Darwinist both in his personal life and in his social philosophy. But there is ample evidence that Frost rejected Spencer’s philosophy, and that he distinguished between a legitimate self-interest and ruthless selfishness. Frost did not reject common ethical norms in human relationships. Thompson also ignored the fact that James had qualified “survival of the fittest” for minds “altogether apart from any interest in the pure ego which they also possess.” But contrary to Thompson, the exact nature and full extent of James’s influence on Frost can best be appreciated by noting how much that philosopher owed to Asa Gray’s exposition of Darwinian evolution.

Two other teachers of Frost at Harvard, Josiah Royce in philosophy and Nathaniel Southgate Shaler in geology, also enriched his understanding of Darwin’s theory by their attempts to reconcile it with their own personal brand of philosophical idealism. Two chapters in Royce’s The Spirit of Modern Philosophy (1892) explore Darwin’s theory: “The Rise of the Doctrine of Evolution” (pp. 265–307), and “Nature and Evolution, The Outer World and its Paradoxes” (pp. 311-340). Royce was steeped in the tradition of English empiricism, but he was essentially a Platonist. He defended idealism because “it maintains that the world is... a world of mind or of spirit” (Preface, xiv). He approved of George Berkeley’s idealism, with its stress on the power and reality of the mind: “The world, then, is such stuff as ideas are made of. Thought possesses all things” (p. 380). After paying tribute to the importance of Darwin’s
Royce noted that Herbert Spencer had anticipated Darwin, and he claimed that Spencer was the dominant power in evolutionary thought after the *Origin of Species* (pp. 294–300). Royce noted that Spencer was in the tradition of Thomas Hobbes, and that his object was to unify all science and thought into a materialist monism. To Frost, who denied that he was a Platonist, Royce's own non–materialist monism was not a satisfactory response to Darwin's theory. Nevertheless, Royce made him aware that the dimension of mind or spirit was omitted from Darwin's theory, so that it was seriously inadequate if regarded as a total philosophy of life. As Jay Parini has noted, it is quite likely that the philosophical problems raised by Royce regarding Darwin's theory resulted in Frost's writing "The Demiurge's Laugh" and "Design."25

Lawrence Thompson has recorded the general importance of Professor Shaler's course in "Historical Geology" in Frost's intellectual life: "Here was science which interlocked also with his early passion for astronomy and with his later concern for the Darwinian concept of evolution."26 Shaler was in his twenties when the *Origin of Species* appeared, and years later he recalled that "to be caught" reading Darwin "was as it is for the faithful to be detected in a careful study of heresy."27 But Shaler was deeply influenced by Asa Gray, and was a disciple of Sir Charles Lyell, whose many editions of *Principles of Geology* (1830–33) dominated geological studies during the Victorian era. Lyell believed that mind and will were paramount in man, so that he was very reluctant to accept Darwin's theory, and he became a "convert" only by retaining much of his belief in idealistic philosophy. Like Gray and Lyell, Shaler held fast to his religious faith and harmonized it with his understanding of geology. In his poem "Directive," Frost utilized geological imagery ("...lines ruled southeast northwest, /The chisel work of an enormous glacier"), and the concept of raw power in nature, in a geological primitive setting, is clearly evident in "The Most of It." Frost's sense of geological time is also evident in other poems, such as "I Could Give All to Time." Undoubtedly, far more than Thompson realized, and in ways that included both spirit and matter, Shaler's course did much to deepen Frost's awareness of the geological basis of Darwin's theory, within the framework of his philosophical dualism.

In 1898 Frost took a course in philosophy with George Santayana. The basic textbook, Alfred Weber's *History of Philosophy* (1896), covered all of European philosophy from the pre–Socratic Greeks to the end of the nineteenth century. He presented all of European philosophy in terms of the two great opposed traditions of thought—pluralism or dualism versus monism. Pluralists and dualists perceived reality as composed of two distinct but closely related elements, matter and spirit. Monists held that reality was either all matter or all spirit, or a unified blending of both into one harmonious whole, as in pantheism. Weber made it clear that in the perennial conflict between the claims of the One and the Many, neither a monistic nor a dualistic system of thought exists in any absolute sense: "Even the most decided monists advance a relative dualism," and "conversely...the most characteristic pluralistic system acknowledges the relative truth of monism."28

Aldous Huxley has noted the extent to which science and scientific theory is centered in a philosophical monism: "For science in its totality, the ultimate goal is the creation of a monistic system in which...the world's enormous multiplicity is reduced to something like unity...."29 Frost was always skeptical of any system of this kind; he utterly rejected any schema that posited a rational order aimed at
total unity, whether in science, religion, or politics, because such a closed system invariably excluded everything which contradicted its premises, logic, and ultimate end. His dualism set great value on the separation of the parts within any unified order, and he was skeptical of systematic ideological theories. Frost responded very favorably to Weber’s argument that no system of thought is ever an axiomatic absolute beyond dispute. He valued Weber’s textbook so much that it became a permanent part of his personal library, and he brought it with him for many summers after 1938, when he went to his farm in Ripton, Vermont.

A section of one chapter in Weber’s text was titled “Darwinism and Contemporary Monism” (pp. 560-573), in which the evolutionist’s theory was identified as a completely materialistic system among contemporary monisms. But Darwin had not limited his theory to matter alone. In the Origin of Species he had made “natural selection” the chief but not the sole method of changes in species for their survival or extinction. In The Descent of Man (1871), he had given “sexual selection” the central role in human evolution. This meant that man’s will, reason, passion, and creativeness were factors in making evolutionary changes. Weber made Frost aware that, although Darwin’s theory was essentially materialist, it was best understood not as an unqualified monistic philosophy as “found among the pure materialists,” and certainly not “in the camp of the spiritualists,” but somewhere “between the two camps.”

Indeed, Darwin himself provided Frost with the best case for a dualist or pluralist approach to his theory by insisting that natural selection was not the sole method of making changes in species. In his final edition of the Origin of Species (1872), Darwin set aside his lifelong bland and genial temperament, and in anger strongly criticized those who persisted in misrepresenting his basic principle as an exclusive absolute:

As my conclusions have lately been much misrepresented, and it has been stated that I attribute the modification of species exclusively to natural selection, I may be permitted to remark that in the first edition of this work, and subsequently, I placed in a most conspicuous position—namely at the close of the Introduction—the following words: “I am convinced that natural selection has been the main but not the exclusive means of modification.” This has been to no avail. Great is the power of steady misrepresentation; but the history of science shows that fortunately this power does not long endure.
Darwin's basic principle was misrepresented not only by religious monists, such as literal-minded Biblical fundamentalists who condemned his theory as a denial of Genesis and all revealed religion, but also by social Darwinists, such as Herbert Spencer, and by pseudo-Darwinists, scientific materialist monists, such as Thomas Henry Huxley, who praised and defended his theory while digressing radically from its central principle of natural selection. To Frost, religious monists and scientific monists had far more in common with each other, although they despised each other, than they had with pluralists or dualists whose thought was essentially metaphorical, and who included several principles within the framework of spirit or mind and matter. A common fundamentalist mentality and literal-mindedness characterized both religious and scientific materialist monists, and often led to a rigidity and dogmatic fanaticism that Frost despised. His dualism and his sense of metaphor, in total contrast with the literal-minded monism of religious and scientific fundamentalism, were centered in a constant intellectual “play” that required careful mediation between the separate but related claims of mind or spirit and matter.

Frost's dualistic and metaphorical approach to evolution led him to retain a highly favorable view of Darwin, and to be very critical of Spencer and Huxley. Among modern scholars on evolution, Frost's approach to Darwin is very similar to Steven Jay Gould's interpretation of his theory. Gould, a Harvard University scientist, is very much in the tradition of Frost's teachers there. In “Evolution: The Pleasures of Pluralism” (The New York Review of Books, June 26, 1997), Gould, like Frost, assumes Darwin's complex metaphorical view of evolution. He notes that “Darwin began the last paragraph of the Origin of Species (1859), with a famous metaphor about life's diversity and ecological complexity," in which the evolutionist described how different species of life are so “dependent on each other in so complex a manner...produced by laws acting around us.” Gould then draws the sharp contrast between how “fundamentalist” scientific monists and metaphorical pluralists understand Darwin's theory:

The “fundamentalists” among evolutionary theorists revel in the belief that one overarching law—Darwin's central principle of natural selection—can render the full complexity of outcomes (by working in conjunction with auxiliary principles, like sexual reproduction, that enhances its rate and power). The “pluralists,” on the other hand—a long line of thinkers including Darwin himself, however ironic this may seem since the fundamentalists use the cloak of his name for their distortion of his position—accept natural selection as a paramount principle (truly primus inter pares), but then argue that a set of additional laws, as well as a large role for history's unpredictable contingencies, must also be invoked to explain the basic patterns and regularities of the evolutionary pathways of life. Both sides locate the “grandeur” of “this view of life” in the explanation of complex and particular outcomes by general principles, but ultra-Darwinian fundamentalists pursue one true way, while pluralists seek to identify a set of interacting explanatory modes, all fully intelligible, although not reducible to a single grand principle like natural selection.35

Frost accepted not only the evolutionist's grand principle of natural selection, but in what he called “passionate preference” he also accepted Darwin's principle of “sexual selection.” Finally, like Darwin, he held that in the mysterious and unpredictable course of human history, mind, will, creative power, and memory of man were valid elements in evolution.

By the time Frost left Harvard in 1899, through the indirect influence of Asa
Gray, his readings in William James, and Alfred Weber’s text, and the direct influence of Royce and Shaler, his knowledge and understanding of Darwin’s theory, and the whole Victorian controversy over evolution, were essentially established. During the years on the Derry farm, and in those spent in teaching at Pinkerton Academy and in Plymouth, New Hampshire, 1900–1912, Frost read voraciously in many subjects, and further consolidated his knowledge and understanding of Darwin’s thought, beyond the principle of natural selection. Frost knew well the evolutionist’s *The Voyage of H.M.S. Beagle* (1839); the *Origin of Species* (1859); and *The Descent of Man* (1871). Soon after its publication in 1911, he read *The Life and Letters of Charles Darwin, including an Autobiographical Chapter*, (1911), edited by his son, Francis. He probably also knew Darwin’s *The Expression of the Emotions in Men and Animals* (1895), and in 1925 he was given a copy of Darwin’s *Journal of Researches*.

On several occasions, Frost remarked that Defoe’s *Robinson Crusoe*, Thoreau’s *Walden*, and Darwin’s *The Voyage of the Beagle* were among the books he most esteemed: “I set those three on a special shelf of mine.”37 It is significant that all of these works are centered in man’s struggle to survive, one of the central themes in evolutionary theory, and one consistent with Frost’s lifelong belief that man’s life on earth is a constant trial by existence.

Frost was well aware that to scientists and the general public Darwin’s *Origin of Species* was of paramount importance in his theory, but he took sharp issue with those who ranked it among the world’s best one hundred books (as distinct from influence), while omitting *The Voyage of the Beagle*:

...People who think they’re making a list of the hundred best books...put in Darwin’s *On the Origin of Species*. This other one—*Voyage of the Beagle*—this is where he thought of it (natural selection) on that enterprise. That’s the beauty of it. A beautiful story—people and things and animals and observations, great world travel. It’s one of the wonder books.38

The term “wonder books” was one of Frost’s ways of identifying outstanding works in the tradition of the arts and the humanities. In sharp contrast, the *Origin of Species*, as Darwin himself admitted, was a highly compressed abstract, an empirically factual and metaphorically speculative work which demanded a close reading of its descriptive and analytical propositions. But it had no redeeming art to make it aesthetically attractive or emotionally satisfying.

*The Voyage of the Beagle*, however, was a masterpiece which combined clear scientific observations of plants, animals, and geological formations in a natural and humanized landscape. Moreover, its appeal included those qualities Frost cherished most; literary sensibility and deep appreciation of metaphorical thinking. Small wonder that he called it a “book of the worthies and unworthies through the ages,” and considered it one of the four best works of prose written during the nineteenth century. During his life on the Derry farm, Frost delighted in reading portions of *The Voyage of the Beagle* to his children. To him it was a prime example of how science at its best was a vital part of the humanities in Western civilization.

Although *The Voyage of the Beagle* confirmed his appreciation of Darwin’s theory, Frost was probably in error in assuming that the evolutionist first thought of his basic principle of natural selection during his almost five years as the official naturalist on the *Beagle*, from December 17, 1831, to October 2, 1836. Darwin’s statement that the voyage on the *Beagle* was by far the most important event in his life as a scientist, and that it determined his whole career, may have
led the poet astray. Frost’s error is readily understandable. He knew that Darwin had taken Charles Lyell’s *Principles of Geology* (1830) with him on the *Beagle*. He had correlated fossil specimens through geological ages with living “animals of all classes,” and with the botany and zoology of South America and all of the islands in the Pacific Ocean where the *Beagle* had landed.

But as Darwin recorded, he did not open his notebooks until July 1837, nine months after his return to England. As he said in his *Autobiography*, he then had worked for over a year “on true Baconian principles, and without any theory collected facts on a wholesale scale.” According to the evolutionist, for many months his theory of how natural selection could be applied to organisms living in a state of nature remained a mystery to him. Ironically, his germinal concept of how evolutionary changes occurred, derived from his reading in October 1838 of Thomas Malthus’s ideological and speculative *Essay on the Principle of Population* (1798). From that treatise he “had at last got a theory by which to work.” By June 1842, he had written “a brief abstract” of thirty-five pages on his theory. He enlarged it to 230 pages in 1844. Twelve years later, in 1856, he completed his manuscript, but continued the process of revision. He would have continued to revise his theory, but unexpectedly his “plans were overthrown...in the summer of 1858,” when he received an article by Alfred Russell Wallace which “contained exactly the same theory” as his own. Thus, twenty-three years after he had gathered his “harvest of facts” during his voyage on the *Beagle*, Darwin was pressured into publishing the *Origin of Species* in November 1859.39

Many things in Darwin’s personal character and temperament and in his careful and thorough methods as a scientist appealed deeply to Frost. The poet believed that the evolutionist was courageous. Moreover, he did not agree with those who charged that Darwin’s long delay in publishing his theory derived from a fear of criticism. Frost knew that the evolutionist had said that he had learned “never to trust in science to the principle of exclusion,” which made him very cautious in his theoretical speculations about empirical facts. The poet also knew that Darwin was well aware that his theory had some serious weaknesses, especially regarding large gaps in the geological record and the ignorance of scientists regarding the laws of genetics. In fact, Darwin’s mind was not doctrinaire, dogmatic, and closed: it was open to revisions in his theory through further discoveries. This attitude was consistent with Frost’s belief expressed in “The White-Tailed Hornet”: “Won’t almost any theory bear revision?” Darwin hated controversy and never engaged in public debates about his theory. Moreover, he was content to let his “converts” plead his cause, even when they did not agree with him on some basic principles.

Darwin also took great pains not to antagonize the religious sensibilities of those who disagreed with him and expressed deep respect for “the judgment of the many able men who have fully believed in God.” But he admitted that for him “the whole subject is beyond the scope of man’s intellect; but man can do his duty.” In chapter 15 of the *Origin of Species* he wrote: “I see no good reason why the views in this volume should shock the religious feelings of any one.” Like Frost, Darwin believed that religion and science involved two very different ways of understanding reality; he declared that “theology and science should each run its own course.”

Darwin’s principle that all species of life are involved in a constant struggle to survive was especially appealing to Frost, and it was consistent with his belief that man’s life on earth was an eternal “trial by existence.” The poet knew that, unlike
Spencer and Huxley, and many other ardent Victorian disciples, Darwin had some reservations that his theory was the basis for a belief in the idea of "progress" that would lead mankind to a future Utopian state. Nor did he hold that his theory should be extended beyond biology, botany, and zoology into every branch of human concerns. But above all, Darwin's metaphorical way of presenting many aspects of his theory was particularly attractive to Frost. The poet appreciated the great pains he had taken to stay within the valid bounds of evolution as a scientific metaphor, as well as his care not to extend his theory into social, political, economic, and religious matters.

It is important to note that during the years that Frost was initially most concerned with Darwin's theory, in the last decade of the nineteenth century and during the first several decades of the twentieth century, many scientists, theologians, belles lettres, and the public at large had become so critical of his theory that it appeared destined for the dustbin of history. Darwin himself had contributed something toward his demise by admitting that, in the literal sense, "natural selection is a false term," a concession that raised questions about his central principle. In fact, the metaphorical ambiguities and difficulties inherent in the concept of natural selection continued to trouble him until his death. Even before publishing the Origin of Species, in a letter to Asa Gray in 1857, he admitted that "multiform difficulties will occur to every one, with respect to this theory."40

As Robert M. Young has observed, the phrase "natural selection" had caused so much trouble by 1866 that Wallace wrote a friendly letter urging Darwin to drop it altogether:

I have been so repeatedly struck by the utter inability of numbers of intelligent persons to see clearly, or at all, the self-acting and necessary effects of Natural Selection, that I am led to conclude that the term itself, and your mode of illustrating it, however clear and beautiful to many of us, are yet not the best adapted to impress it on the general naturalist public.41

Ultimately, Darwin was persuaded to substitute "survival of the fittest" for natural selection. But this concession gave credence to those who converted his theory into social Darwinism, thereby further weakening support for his theory, since it appeared to attack the traditional Judaeo-Christian ethics of Western civilization. Other serious problems combined with the steady attacks launched by literary critics undermined almost completely the public's belief in Darwin's conception of evolution.42

book in The Baker Library at Dartmouth College, Number 001275, he wrote: "When the fact of evolution came up to shake the Church's certainties about creation and the date of it 4004 B.C. I bade myself be not dismayed. The old idea we were asked to give up was that God made man out of mud at one stroke. I saw that the new idea would have to be that God made man out of prepared mud that he had taken his time about working up gradation. I was not much put out or off my own thinking. There was as much of a God in it as ever.” 11. See “The Future of Man,” Richard Poirier and Mark Richardson, eds., Frost: Collected Poems, Prose, and Plays (The Library of America, 1995), 869–870. This is an edited fragment of the symposium. 12. Quoted with the permission of the Estate of Robert Frost. 13. For a full explication of Frost’s notes in preparing to write “Sitting by a Bush in Broad Daylight,” and his comments on the analogies between Genesis and Darwin’s theory, see Lawrence Thompson, Robert Frost: The Years of Triumph, 1915–1938, 627–630. Hereafter cited as Thompson, The Years of Triumph. 14. For James’s influence on Frost at Harvard, see Thompson, The Early Years, 238–243. Thompson ignores the influence of Gray. 15. Asa Gray, Natural Science and Religion (New York, 1880), 54–55. 16. Ibid., 55. For a detailed account of Gray’s interpretation of Darwin’s theory, see James R. Moore, The Post-Darwinian Controversies (Cambridge, Eng., 1979), 269–280. 17. Ibid., 82. 18. Ibid., 104. 19. Ibid., 105. 20. Ibid., 85. 21. Ibid., 89. 22. Ibid., 87 and 93. 23. See Ralph Barton Perry, The Thought and Character of William James, I, 265–266. 24. For mind and will as vital factors in James’s view of evolution, see Robert J. Richards, Darwin and the Emergence of Evolutionary Theories of Mind and Behavior (Chicago, 1987), 440–450. On this important point Thompson wrote: “...One of his strongest reasons for admiring William James was the ability of this particular scientist to make his own approaches 'pluralistic' enough to encompass physics and metaphysics.... Like James, Frost wanted to be ‘pluralistic’ in the sense that he could combine naturalism and idealism, physics and metaphysics, skepticism and mysticism. It was a feat which he managed to maintain throughout the rest of his life....” Thompson, The Early Years, 243 and 246. Thompson’s last sentence indicates that he rejected Frost’s dualism as a form of self-deception. That is why, although he was aware of the dualistic opposites in Frost’s philosophy “throughout the rest of his life,” he nevertheless almost completely ignored Frost’s dualism in discussing the poet’s beliefs in science, religion, poetry, education, politics, and art. This error goes a long way toward explaining why Thompson’s biography is so badly flawed. His index on Frost omits dualism entirely. 25. Jay Parini, Robert Frost: A Life (1999), 63. 26. Thompson, The Early Years, 247. Shaler also taught “Outlines of the Half Course in Natural History, with reference to Dana’s Manual of Geology, and Notes,” in which he made use of Darwin’s recordings on changes in typography (p. 16), and on “atolls...found by masses of coral growing on sunken craters of old volcanos,” (p. 19). (Pusey Library, Harvard University Archives. Clearly, Frost learned a great deal about Darwin’s theory from Shaler.) 27. Moore, Post-Darwinian Controversies, 88. 28. Alfred Weber, History of Philosophy (1896), 596 and 526. 29. Aldous Huxley, Literature and Science (London, 1963), 11. 30. Weber, History of Philosophy, 597. 31. Ibid., 572. 32. Ibid., 563. 33. Naturally, there were other differences between Frost and Darwin. The poet rejected the evolutionist's belief in a conditional “progress,” and in his calling himself an agnostic. 34. See Moore, The Post-Darwinian Controversies, 174. Darwin had indeed concluded each introduction to each edition of the Origin of Species with this sentence: “I am convinced that Natural Selection has been the main, but not the exclusive, means of modification.” The only variant was in the first edition, with “most important” rather than “main.” 35. Stephen Jay Gould, “Evolution: The Pleasures of Pluralism,” The New York Review of Books, June 26, 1997. In another article, “Darwinian Fundamentalism,” Ibid., June 12, 1997, 34–37, Gould criticized “the general fallacies of ultra-Darwinian fundamentalism.” 36. Clarence Cook Little, the President of the University of Michigan, presented Frost with a first English edition of Darwin’s Journal of Researches. See Thompson, The Years of Triumph, 284. During the summers of 1939–1944, Frost mentioned all of these works by Darwin in conversations with Peter Stanlis. 37. See Cook, Robert Frost, 65. 38. Ibid. 39. Darwin, The Life and Letters, I, 56 and 68–69; and II, 110. 40. Robert M. Young, Darwin's Metaphor (Cambridge: Cambridge University Press, 1985), 92. See also 78–125. 41. Ibid., 100. For further problems regarding natural selection, see B.H. Beddall, “Wallace, Darwin and the Theory of Natural Selection,” Journal of the History of Biology, I (1968), 261–323. 42. For detailed accounts of the great decline in the acceptance of Darwin’s theory, see G.J. Romanes, Darwin and After Darwin (1892–1897); Samuel Butler, “The Deadlock in Darwinism,” The Universal Review (April–June, 1890), and republished in 1904 and 1913; Vernon Kellogg, Darwinism Today (1907); J.T. Dennert, At the Deathbed of Darwinism (1904); Peter J. Bowler, The Eclipse of Darwinism (Baltimore, 1983); and Peter J. Bowler, The Non-Darwinian Revolution (Baltimore, 1988), 92, 98–99, 104, 117, 121, and 184.