

Liberty Hyde Bailey: Pragmatic Naturalism in the Garden

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We must get outside the garden fence as well as inside it... The more we know of nature as nature, the more readily can we understand nature in the garden.

— Liberty Hyde Bailey, 1885

Drawing the attention of his colleagues to “a conspicuous fence about the garden,” Liberty Hyde Bailey Jr. delivered an impassioned lecture at the Massachusetts State Board of Agriculture meeting in Farmingham, Massachusetts in December 1885. Acutely aware of the growing discourse surrounding the question of whether or not horticulture should be regarded as a science akin to botany, he argued for the formation of a “new horticulture,” stating, “Horticulture, the art, is old; horticulture, the science, is new. To get our science from the field and the laboratory into the garden, is the problem of the age.”<sup>1</sup> Bailey was intent on convincing his audience that cultivated plants constituted a worthy subject of scientific inquiry. The implications of “The Garden Fence,” as the lecture was appropriately named, would prove to be broad and enduring. An otherwise tightly defined methodological debate among botanists became the foundation for a new environmental philosophy. Using his platform to address a series of divisions in the process of knowledge-making that separated botany from the practical knowledge of the gardener and farmer, he eloquently revealed deeper problems at the heart of western metaphysics and epistemology. The intellectual edifice on which scientific naturalism rested began to crumble in the hands of gardeners.

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<sup>1</sup> Liberty Hyde Bailey. “The Garden Fence.” 1885. Liberty Hyde Bailey Papers, #21-2-3342. Division of Rare and Manuscript Collections, Cornell University Library. Box 19, folder 3. I henceforth abbreviate The Liberty Hyde Bailey papers as Bailey Papers.

The science of botany ignored the garden, reserving questions about the evolution of plant species for the field, the seemingly more natural world of plants not cultivated by men and women. Bailey objected, “the garden is a puzzle. Every leaf and flower is an interrogation point.” The mysteries of wilderness were not absent in the garden. The problem, he insisted, resided in the implications of this fundamental division between the natural and human worlds. Bringing his lecture to a crescendo, he stated, “Every question which is answered in the woods and fields is answered for the garden. One spirit pervades vegetation. We can scarcely draw a line between cultivation as practised by man and cultivation as practised by nature.” The garden fence obscured the fact that botanists were embedded in the very processes about which they theorized. Gardens were significant because they existed at the intersection between wilderness and civilization, theory and practice, subject and object, and different ways of knowing the world.<sup>2</sup>

Although dualistic frameworks could serve a number of purposes in scientific investigation, they had a tendency to become inflexible. The botanist’s reservations about the garden were indicative of a larger, more sinister problem than methodological oversights. Scientists placed too much faith in naturalistic explanations. Predicated on the ability of a human observer to completely isolate, understand, and learn to predict the world, a strict naturalism pitted humanity against nature. Scientists mistook conceptual frameworks for ontology, taking the dualisms that appear in language to mark hard distinctions between nature and culture. The successes of scientific method encouraged the belief that humans could transcend natural processes and discover the timeless laws that governed the environment. Bailey recoiled from

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<sup>2</sup> Bailey. “The Garden Fence.” 1885. Bailey Papers.

this hubris. It was time to climb the garden fence and challenge the metaphysical implications of our epistemology.

He formulated a *pragmatic* naturalism that embraced the limits of knowledge and restored humanity's place to the natural world. The scientist was not an isolated subject, standing outside or above the processes that he or she studied. Pragmatic naturalism rejected a spectator theory of knowledge and held truth as provisional. While an enthusiastic supporter of experimental method and the quest to uncover the laws of nature, Bailey understood these laws, and truth generally, as a provisional guide to action. Knowledge was always subject to the test of experience. Retaining an element of mystery in the world was good, he reasoned, because it humbled human aspirations and left room for the value of aesthetic experience. The entanglement between nature and culture was deep, complex, and even awe-inspiring in its mystery and beauty.

By reconciling scientific method with an aesthetic appreciation for nature, Bailey's pragmatic naturalism provided the foundation for a new environmental philosophy. Many scholars<sup>3</sup> have argued that American environmental thought can be characterized by the

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<sup>3</sup> Examples of work in which the anthropocentric/ecocentric binary appears includes classic texts by Samuel P. Hayes, Roderick Nash and Donald Worster. Hayes argues that the Pinchot-era conservation movement was overtly anthropocentric and primarily concerned with 'efficiency' in resource extraction. Nash's survey divides thinkers and ideas into the camps of conservation and preservation, and Worster's text relies on a central distinction between Arcadian and imperial ecological ideas. This dualistic framework also made an indelible mark on the development of the discipline of environmental ethics in the 1960s and '70s, as J. Baird Callicott has shown. Most recently, this framework has appeared in Jedidiah Purdy's work on the Anthropocene, which follows the lead of Nash and Worster in understanding the history of American environmental ideas as divided between anthropocentrism and ecocentrism. Andrea Wulf also employs this binary in her comparison of John Muir and George Perkins Marsh. Hayes, *Conservation and the Gospel of Efficiency: the progressive conservation movement, 1890-1920* (Pittsburgh: University of Pittsburgh Press, 1999); Nash, *The Rights of Nature: A History of Environmental Ethics* (Madison, Wis: University of Wisconsin Press, 1989); *Wilderness and the American Mind* (New Haven: Yale University Press, 1967); Worster, *Nature's Economy: A History of Ecological Ideas* (Cambridge University Press, 1994); Callicott in Robert Elliot, *Environmental Ethics: Oxford Readings in Philosophy*

opposing camps of anthropocentrism and ecocentrism — the former holding nature as instrumentally valuable and the latter suggesting it has intrinsic value. Bailey’s work explodes this historiographical imposition. Although a proponent of scientific method, he did not adopt the epistemology or metaphysics of his colleagues. He argued that human beings were not ontologically distinct from the natural processes they studied. He naturalized the mind, yet he carefully retained the unique quality of human experience in his philosophy. Knowledge, art, spirituality, morals, satisfactions — the experience of culture — emerged from the natural world. Our background, our home, our very being was nature. All of these themes came together in the garden, where civilization mingled with wilderness and plant science drifted into the realm of aesthetic appreciation. Bailey was at home here; he grew up in the garden.

### From Flower Garden to Philosophy

Born on a farm in South Haven, Michigan in 1858, his father, Liberty Hyde Bailey Sr., was one of the first to settle the eastern shore of Lake Michigan. Ordering plants from the Ellwanger and Barry nursery in Rochester, New York, his father planted one of the region’s most successful apple orchards. The relationships binding land, labour, and community surfaced in young Bailey’s experiences of home. He was aware of the respect his father commanded among their neighbours. Known for his directness and skill as a farmer, his harder edges were softened by his commitment to the South Haven community, and his generosity to the poor. His father shared potatoes, beef, “and everything else from the farm” with those in need. Bailey junior acquired many of these characteristics and farming skills himself. He soon applied his hand to grafting on

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(New York: Oxford University Press, 1995); *Jedediah Purdy. After Nature: A Politics for the Anthropocene* (Cambridge, Massachusetts: Harvard University Press, 2015); Andrea Wulf, *The Invention of Nature: Alexander Von Humboldt's New World*, First American ed. New York: Alfred A. Knopf, 2015.

the expanding orchard. Like his father, who “would plant everything he could get ahold of,” he developed an unfailing respect for farming and gardening.<sup>4</sup>

His interest in plant cultivation was further encouraged by his mother, Sarah Harrison Bailey, who kept a garden on their land. He worked in this garden for years, maintaining the same plants throughout his childhood. Around the age of eight, his father granted him permission to create his own plot from the ground up. Supplied with mail-order seeds from Vic’s Catalogue he planted several flowers and experimented with his own sub-irrigation system.<sup>5</sup> Planting and tending these flowers turned out to be “one of the culminators” of his life-long interest in horticulture.<sup>6</sup> Cultivated nature contained mystery and inspired awe in the young man. He later remembered that his family’s cornfield was “a hiding place for many wild creatures and there were mysteries in the shadowed depths... every fence-corner at the end of the rows was a world of interest.”<sup>7</sup> He began to recognize elements of the wild at work in the fields and garden. As a result, the garden fence stood out as a somewhat arbitrary marker. Natural mysteries were prevalent on either side of the fence. Bailey’s interest in the workings of nature, then, was not confined to the cultivated lands on which he and his family worked.<sup>8</sup>

A small settlement surrounded by wilderness, South Haven proved to be a fertile ground of inspiration for a young naturalist. Much of the region’s natural features left a lasting impression, providing imagery that Bailey would often return to in his writing as an adult. A contemporary of his, Ione N. Klenk remarked, “Keenly observant, he found even the field mice a

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<sup>4</sup> Direct quotes from “Transcription of interview with George Lawrence,” Bailey Papers, Box 20, 116 and 134. The remaining biographical information in this paragraph is from Andrew Denny Rodgers, *Liberty Hyde Bailey: A Story of American Plant Sciences*, Princeton: Princeton Univ. Press, 1949, 6-8.

<sup>5</sup> Op. cit. “Transcription of Interview,” Bailey Papers, Box 20, 133

<sup>6</sup> Ibid., 133.

<sup>7</sup> Bailey quoted in Ione M. Klenk, “Philosopher, Scientist and Gardener: We Acknowledge a Debt of Gratitude to a Remarkable Man.” Bailey Papers, Box 17, folder 87.

<sup>8</sup> Op. cit. Rodgers. *Liberty Hyde Bailey*, 6-8.

constant source of entertainment and mystery. The memory of his horse, Fred, who took the barefoot boy uncounted miles into wild new places, is still fresh and dear to him.”<sup>9</sup> Bailey regarded one of his favourite brooks as both a teacher and a friend, attributing to nature qualities that were crucial to his development as an environmental thinker. As he would state on several occasions later in life, direct contact and respect for the environment were crucial components of responsible citizenship. His obsession with nature not only defined his childhood romps in the woods, it would determine the direction of his studies in school.

From an early age Bailey took an interest in natural history, participating in independent lessons with his grade-school teacher Julia Field. Together, they studied Latin and English grammar as well as a number of sciences, exposing his mind to the rudiments of taxonomy. He became fascinated by Charles Darwin’s *On the Origin of Species* (1859), a book that required the permission of his father — a widely-read Puritan — to bring home for study. He wrote his first article for the Michigan Pomological Society aged fifteen, the beginning of a career in writing that allowed him contribute many periodicals as a young man. Bailey eventually pursued his interests in college, graduating from Michigan State Agricultural College (MAC) in 1882. While there, he worked under the direction of William Beal, who had studied under the titans Louis Aggasiz and Asa Gray. The committed pupil had invited Beal to lecture in South Haven, providing the hospitality of his family’s home. Bailey’s intellectual curiosity and hard work as a student paid off, affording him an assistantship with Asa Gray at Harvard.<sup>10</sup>

Working with Gray highlighted the complexity of Bailey’s approach to knowledge and the environment. Their relationship proved to be difficult at times as they each had different

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<sup>9</sup> Op. cit. Klenk, “Philosopher, Scientist and Gardener,” Bailey Papers. Box 17, folder 87.

<sup>10</sup> Op. cit. Rodgers. *Liberty Hyde Bailey*. 10-11; and Philip Dorf, *Liberty Hyde Bailey: an informal biography*. Ithaca, New York: Cornell University Press, 1956, 34.

ideas about the role of science in horticulture. On one level, they agreed that botanical science could have practical applications for those toiling in the fields. They also agreed that farmers and gardeners possessed a unique form of knowledge about the natural world.<sup>11</sup> Their agreement ended there, however, as Bailey remained uncomfortable with Gray's insistence that botany did not require horticultural knowledge. Drawing attention to what he believed was a staid approach to plant science, Bailey argued that botany should not be divorced from practical application in the garden — science and experimentation should not only occur in a lab or herbarium, but also in fields and gardens. Knowledge of plants should not be removed from the experience of farmers and gardeners.

Botanists had much to learn from those without formal scientific training. Having grown up on a farm himself, Bailey felt compelled to incorporate the insights and needs of people who actually worked the soil. Gray disagreed and warned his apprentice that he would undermine his career as a scientist if he moved into the discipline of horticulture. Bailey demurred.<sup>12</sup> He accepted a job at his alma mater, MAC, in 1885 as inaugural chair in horticulture and landscape gardening, a post that eroded the credibility and respect he garnered as a result of working under Gray. Choosing to taint scientific study with the informal learning of the amateur, he soon lost favour among botanists all over the country. He admitted with some regret, "I queered myself with the whole botanical fraternity by taking a professorship of horticulture. I cheapened myself. I contaminated all my botanical work. I made it useful."<sup>13</sup>

Bailey's tension with Gray was in the background of "The Garden Fence," which he delivered the same year he took his position at MAC. To some degree, the Farmingham lecture

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<sup>11</sup> Op. cit. "Transcription of Interview," Bailey Papers, Box 20, 150.

<sup>12</sup> Klenk, Rodgers, and Dorf chronicle the debate between Bailey and Gray.

<sup>13</sup> Op. cit. "Transcription of Interview," Bailey Papers, Box 20, 148.

was actually reserved. Bailey was reluctant to directly assail his colleagues. Sounding at times more like a dry academic than an impassioned environmental ethicist, he stressed the importance of factual knowledge and discovering of nature's laws. He pushed gently to make his points about the need to understand horticulture. While the "art" of horticulture is well-understood, "We do not know the scientific principles which underlie these handicrafts," he stated. Veering into technical descriptions of fungus growth, grafting, and cross-breeding among other subjects, he displayed his full command of the science of botany and plant cultivation. While threading such material into his talk, however, he always returned to the broader implications of scientific method. Although he championed botany as a useful tool for understanding plants, he held a nuanced view of its underlying epistemology. He advocated "intelligent investigation," but revealed, at this early stage in his career, reservations about the finality of scientific knowledge.<sup>14</sup>

Bailey supported a particular conception of scientific method, one that did not divorce the botanist from the gardener and, further, did not subscribe to the notion of fixed truth. He declared, "Science is ever new. It has no depth, no height, no boundaries; it stretches away into the infinite." The human quest for knowledge had no terminus as discovery of one truth would yield only desire to learn more. "Endeavor", he declared, "is a winsome goddess, who leads us through copses and along hazardous banks, but she never leads us to the ends of nature." Bailey was concerned with the dual risks of uncritically engaging in scientific investigation and, at the other end of the spectrum, blindly adhering to traditional forms of knowledge. The scientist and the gardener needed to work together in an effort to understand a world defined by ongoing change. In a well-crafted closing, he remarked of the gardener's yearning for knowledge, "Some objects are near at hand and well defined, others are misty on the horizon. He [the gardener]

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<sup>14</sup> Op. cit. Bailey, "The Garden Fence," Bailey Papers, Box 19, folder 3.



tries to grasp them; they flit away like a pleasant dream; the prosaic garden fence is before him.”<sup>15</sup>

The garden was a unique space because it highlighted the perspectival nature of experience and knowledge. While botanists dealt in the language of species, gardeners spoke of races — one occurring in wild nature, the other in processes of cultivation. Gardening was informed by tradition, practices passed down from generation to generation, and tended to inspire an aesthetic appreciation for nature. Learning from his mother and his own flower garden, he recognized the importance of this form of knowledge and sympathy as a child. Although he disagreed with Gray’s position on the complete authority of scientific knowledge, he did recognize the importance of the botanist’s method for understanding the world. He wanted to bring botany into the garden, where existing knowledge tended to be uncritical and sometimes haphazard. The scientist could provide experimental method, the practice of testing variables and making controlled observations in the art of gardening. He would refine these themes five years later, after accepting a position at Cornell University as the inaugural chair of practical and experimental horticulture.

Bailey expanded on his ideas about horticulture and botany during his first years at Cornell. In “A New Science,” (1890) he argued that “botany, of right the science of plants, has fixed for itself a wholly conventional boundary, and has not reached the garden.” Returning to the problematic division between nature and culture, he wrote, “It [botany] pursues the study of plants whose parts and habits are normal, or natural, as some would say, which have never been modified by the agency of man. Botany has been repelled by the garden fence.” Conscious of a larger field of relations that entangle humans and the environment, the gardener begins where

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<sup>15</sup> Ibid.

botanists stop. If natural processes are not circumscribed by fences, Bailey believed, “we must determine why and how it is that plants possess heredity, and vary, and can be made to vary under culture.” It was key to understand that cultivation takes place in the natural and human worlds. While human agency is perhaps unique, it still operates under the same laws and principles that appear to govern nature. Pruning, fertilizing, tilling, and mulching are all processes that occur inside and outside the garden. He admitted that cultivation practiced by humans tended to be more intense, producing a number of new varieties in a short time-period, but he maintained that this was a difference of degree, not kind. Ultimately, “Cultivation is but an empiricism suggested by nature.”<sup>16</sup> Moving beyond the philosophy of science, Bailey would build his analysis of the garden fence into an environmental ethics with his publication of *The Holy Earth* in 1915.

#### Saving Science and the Environment: Pragmatic Naturalism in the Garden and Beyond

As the book’s title implies, Bailey believed that the world is divine in nature. He was conscious of challenging a dualism on this fundamental point. If God created the earth, he believed, then the world and everything on it was worthy of moral consideration. Religious outlooks should regard the environment as an important element in human experience, not merely a stage in a journey to the afterlife. There should be no distinction between the material earth and a higher spiritual realm — nature should not be neglected in an otherworldly-focused religion. Critical of dogma, he wrote:

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<sup>16</sup> Bailey, “A New Science.” Bailey Papers. Box 19, folder 22. This document is a preprint of an article that was scheduled to appear in the May, 1890 issue of *The American Garden*.

Still do we carry the ban of the early philosophy that assumed materials and ‘the flesh’ to be evil, and that found a way of escape only in renunciation and asceticism. Nature cannot be antagonistic to man, seeing that man is a product of nature.

The non-human world deserved both celebration and respect. Bailey suggested, “One does not act rightly toward one's fellows if one does not know how to act rightly toward the earth.”

Ethical considerations were not limited to human relationships because they could not be conceived of separately from the environment. Human will had clear moral limits.<sup>17</sup>

Elements of a dualistic religious outlook surfaced in the assumptions of modern science. Scientific naturalism rightly celebrated the unique ability of humans to understand their environment, but scientists incorrectly equated uniqueness with ontological difference. The pursuit of absolute knowledge hardened otherwise flexible categories employed to make sense of the world. The result—a crass anthropocentrism—celebrated human dominion over a static environment. Nature was hardly alive in such a reductive framework. Contrary to this view, he argued, the earth actually “goes through many vicissitudes; the conditions on its fruitful surface are ever-changing; and the forms of life must meet the new conditions: so does the creation continue, and every day sees the genesis in process.” Under such conditions, the scientist could learn a lot from the amateur. Those without professional training had the benefit of traditional knowledge, experiential learning, and a spiritual connection with nature. Bailey dwelled on that intangible experience of hopefulness and awe one encountered in the face of ceaseless change and mystery. He looked to the farmer and the gardener as models for the scientist because they

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<sup>17</sup> Bailey. *The Holy Earth*. New York: C. Scribner's Sons, 1915, 10 and 3.

were exposed, in the immediacy of their experience, to the constant flux and interdependency “the early philosophy” of “renunciation and asceticism” ignored.<sup>18</sup>

The horticulturalist was invested in the pursuit of knowledge as a participant in the environment. Gardening and farming encouraged a rare form of contact between nature and culture. Bailey wrote, “A useful contact with the earth places man not as superior to nature but as a superior intelligence working in nature.”<sup>19</sup> Contextualizing the pursuit of knowledge, he argued that plant cultivation required the ability to recognize, respond, and adapt to nature. The earth was not simply an environment on which humans lived. In “Can Agriculture Function As Literature,” he wrote, “The setting of agriculture is the face of the earth: all the panorama of nature is there, the boundless reaches of sky, the stimulation of changing weather, the movements of the forms of life.” The earth shaped and was shaped by human experience, and the farmer occupied a central role in these exchanges. For horticulturalists, natural processes were not far removed from daily life. Their knowledge rested on the intersections of culture and the environment — at a space where the conceptual division between the two only existed in name and functioned as a tool for talking about the world.<sup>20</sup>

As Klenk pointed out, “Interwoven [in Bailey’s philosophy] is his feeling that we must be naturalized to the natural world... For of these things science can not rob us—it but deepens the wonder of the creation and widens horizons.” If modelled on the experience of useful contact, Bailey believed scientific method would continuously expand human horizons. Knowledge reinforced an open conception of the universe. Although he advocated a collective form of truth

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<sup>18</sup> Ibid., 5 and 10.

<sup>19</sup> Ibid., 74.

<sup>20</sup> Bailey, “Can Agriculture Function As Literature,” Bailey Papers, Box 2, folder 15.

testing in an effort to uncover “facts” or laws that governed this world, he did not believe in final truths. He wrote:

The best thing in life is sentiment, and the best sentiment is that which is born of the most accurate knowledge. Mere facts are dead, but the meaning of the facts is life. The getting of information is but the beginning of education.

Our interactions with the world were a part of a process of never-ending education. Although Bailey attributed some epistemic weight to science and the experimental method, he believed facts, and the world generally were subject to change.<sup>21</sup>

Taking any statement or fact as always and everywhere ‘true’ risked creating prejudice and inflexibility in our methods for navigating the world. Conceptual frameworks should be informed and tested by experience, not the other way around. Dogma and partisanship resulted from the ossification of ideas. Too often uncritical, we read opinions back onto the world, effectively forcing experience to conform to preconceived ideas. Bailey believed the potential for reflexivity in scientific method could combat the tendency toward partisanship. In “The Science-Spirit in a Democracy,” he wrote, “The science-spirit removes at once the fear of truth and the fear of dogma and the fear of nature.” The method of experimenting and moving between the abstract and everyday, tying theory to practice and making testable predictions was key to the scientific outlook. There is an element of relativity in the world, but one is still able to arrive at provisional truths that serve as the starting point for an endless educational project.<sup>22</sup>

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<sup>21</sup> Op. cit. Klenk, “Philosopher, Scientist and Gardener,” Bailey Papers. Box 17, folder 87. Quotes from Bailey and Klenk.

<sup>22</sup> Bailey. “The Science Spirit in a Democracy.” Bailey Papers. Box 17, folder 43. Published in *Nature-Study Review*. 12(1): 1-12 (Jan) 1916.

Joining many progressive-era reformers, Bailey ardently and energetically supported ‘nature study.’<sup>23</sup> According to Klenk, “Revolting against the teaching of science for science’s sake, [Bailey] advocated nature study on the broadest terms, his conception being the foundation” of his teaching and research.<sup>24</sup> If brought outside the lab or herbarium, scientific method functioned as a hands-on form of learning, putting the student into direct contact with the environment. He thought it was crucial to bring students outside the classroom to study specimens in their natural setting.<sup>25</sup> By emphasizing contact with the environment, Bailey argued, nature study “expands the child’s spontaneous interest in his surroundings into a permanent and abiding sympathy and philosophy of life.”<sup>26</sup> He applied this pedagogy widely, and suggested, “The person must live with his environment. He must live with common things. The most important means of education, therefore, are those subjects that are nearest man.” Education should not get lost in the weeds of abstraction. Nor should it be reduced to the rote memorization of manuals or other textbooks.

The goal of learning was to orient the student in a web of relationally determined experiences. As one historian notes, “Nature study was a way to bring holistic perspectives into atomized lives.”<sup>27</sup> Accordingly, Bailey stressed the need of a diverse range of activities in acquainting pupils with nature. In “The Playground in Rural Communities,” he argued, “The diversity in affairs ... multiplies one’s points of contact with the world, opens the mind, enlarges

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<sup>23</sup> For a detailed discussion of nature study, see Kevin C. Armitage, *The Nature Study Movement: The Forgotten Popularizer of America’s Conservation Ethic*, Lawrence: University Press of Kansas, 2009; and Sally Gregory Kohlstedt, *Teaching Children Science: Hands-on Nature Study in North America, 1890-1930*, Chicago and London: University of Chicago Press, 2010.

<sup>24</sup> Op. cit. Klenk, “Philosopher, Scientist and Gardener,” Bailey Papers. Box 17, folder 87.

<sup>25</sup> Op. cit. Kohlstedt, *Teaching Children Science*, 87.

<sup>26</sup> Bailey, “The New Education.” Bailey Papers. Box 17, folder 125. Published in *Country Life in America*. 5(1): 34-35 (Nov) 1903.

<sup>27</sup> Op. cit. Armitage, *Nature Study Movement*, 8.

the horizon, stimulates the imagination, and, therefore, adds to one's resources." If modernity was defined by long working hours and little time for leisure, by income and debt, it would be easy to lose sight of human entanglement with nature. With his eye towards the farm, Bailey argued that engaging nature allowed one to "hang all the hours of work on a golden cord, connecting everything and losing none."<sup>28</sup>

The farm presented an ideal alternative to routinized modern life. Farming allowed a child to develop first-hand knowledge of natural processes. Believing reform should start with how an individual interacts with the environment, broadly conceived, Bailey argued that farm life provided a crucial background for intellectual development.<sup>29</sup> Children needed exposure to cultivated space because its dynamic quality obscured the division between nature and culture. Solving problems in the fields ensured that "Childhood, adolescence and age are... a continuous growth into a natural situation, only modified but not made by human ingenuity; and here also still lie the wonders of the world."<sup>30</sup> Urban experience, while dynamic in its own ways, tended to reinforce a bifurcated worldview, whereas the farm "is a natural preserve, unspoiled by meaningless 'improvements'. Here the child sees or may see the problem of life face-to-face and connectedly; the route from cause to effect, or at least from beginning to ending, is covered unhurriedly."<sup>31</sup> He celebrated those who worked the land because "theirs is the full life; their backgrounds are the realities."<sup>32</sup>

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<sup>28</sup> Bailey, "The Playground in Rural Communities," Bailey Papers, Box 17, folder 14; and "Blossoms," Box 17, folder 16.

<sup>29</sup> Bailey. "The Qualifying of the Rural Child." Bailey Papers. Box 2, folder 27. Miscellaneous manuscripts 1929-1932.

<sup>30</sup> *Ibid.*

<sup>31</sup> *Ibid.*

<sup>32</sup> *Op. cit.* Bailey, "Blossoms," Bailey Papers, Box 17, folder 16.

For Bailey, the background symbolized the entanglement of nature and culture. When humans tapped into the background, they developed an inherent sympathy for the natural world. Second, the background served as a knowledge base, a foundation for understanding and solving problems in experience. Although this base was always shifting as one developed new ideas, it served as a reference point against the horizons he wanted to explore. Bailey was not proposing a static conception of nature that one could juxtapose to human culture. Instead, the background served as an anchor in experience — an evolving epistemological base from which we could make claims about the world. He argued, “The life of every one of us is relative. We miss our destiny when we miss or forget our backgrounds. We lose ourselves. Men go off in vague heresies when they forget the conditions against which they live.”<sup>33</sup>

Remembering this background was not only important, but was as easy as planting a flower garden. He contended, “The joy of flowers is of the backgrounds. ... the joy of things growing... The appeal is the deeper because we cannot analyze it, nor measure it by money.”<sup>34</sup> Gardens encouraged intellectual development in varied ways. They could easily function as a classroom and laboratory for the purposes of teaching plant science. Botanists and amateur gardeners could learn from one another about soil composition, irrigation, pruning and so on. As he made clear in “The Botanic Garden Idea”, horticulture was about more than successful application of plant science. Society had much to gain by preserving the knowledge of non-professional horticulturalists. Gardening served as a reminder that natural processes bring life and beauty to the world. Plant life “conditioned” the “lives of animals and men,” was “limitless in variety and beauty,” and exerted “unaccountable influence on the mind of the race.”<sup>35</sup>

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<sup>33</sup> Bailey. *The Holy Earth*. 150-151.

<sup>34</sup> Op. cit. Bailey, “Blossoms,” Bailey Papers, Box 17, folder 16.

<sup>35</sup> Bailey, “The Botanic Garden Idea,” Bailey Papers, Box 17, folder 64, 18 and 8.



Horticulture was not based solely on hard utilitarian principles. Rock and nature gardens, for example, were of little economic value, but they recalled nature's "charming" beauty and inspired conservation efforts. Perhaps most important, in an era of "quantity-production of standardized products" and "commercial education," the unique beauty of gardens restored an appreciation for nature's mysteries. Caring for plants sparked a "reverential attitude" as well as a deep respect for "every pulse of life on the planet." Respect for life entailed limits on both human knowledge and action. Always the agrarian, Bailey believed this reverence for nature made democratic government possible.<sup>36</sup>

Proposing a radical conception of government, Bailey argued that democracy "expresses itself in humbleness of spirit." Democratic government was a way of life, one that found its expression in each individual. In *What is Democracy* (1918), he wrote that "Democracy is primarily a sentiment — a sentiment of personality. It is the expression of the feeling that every person, whatever his birth or occupation, shall develop the ability and the opportunity to take part." He believed that citizens should not equate democracy with the state. Bailey suggested that democratic institutions were the expression of a democratic ethos, not the other way around. "The character and the quality of the people determine the nature of the State." The state did not stand over or outside of the individuals of which it was composed. By stressing the importance of democracy as a way of life, he was attempting to navigate a binary separating organic and classical liberal theories of democratic government.<sup>37</sup>

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<sup>36</sup> Ibid., 18-24.

<sup>37</sup> Bailey, *What is democracy?* Ithaca, N.Y.: L.H. Bailey, The Comstock Pub. Co., 1918. 42, 49, 36 and 42.

Returning to yet another conspicuous fence, Bailey was trying to identify a way of thinking beyond conceptions of the state defined by a crass individualism or collectivism.<sup>38</sup> He believed that government was not just “a body of restraints, correctives and punishments”<sup>39</sup> nor was it was it a form of social organization that favoured the whole over the individual. His emphasis on community or “brotherhood,” which appeared in *The Holy Earth* in connection to his environmental ethics, never overrode his appreciation for individual creativity. The community, as he wrote in “The Science Spirit of Democracy,” should also function as a form of collective truth testing, where individuals move beyond organized partisanship and consider facts and experiences against a shared background, not rhetoric or preconceived ideas, in an effort to build a “philosophy of action.”<sup>40</sup> He believed that democratic forms of government could become static, wherein public processes functioned to perpetuate the power of interest groups or ossified ideas, not solve specific problems or contribute to education and personal growth. He argued, in *The Holy Earth*, “The justification of a democratic form of government lies in the fact that it is a means of education.”<sup>41</sup> Bailey considered the terms “infallibility” and “dogmatism” to be antonyms of democracy.<sup>42</sup> His democratic ideal held that individuals should cooperate in critical engagement with a dynamic world, always aware of the background from which they emerged.

Often, for Bailey, the archetype of such a democratic citizen was based on the farmer.

Farmers had a “deeper and much more fundamental relationship” with nature, which made them

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<sup>38</sup> Bailey’s understanding of community resembles that of Warder Clyde Allee, Alfred Emerson and other Chicago biologists who were influenced by John Dewey and William James. See Gregg Mitman, *The state of nature: Ecology, community, and American social thought*, Chicago, IL: University of Chicago Press, 1992.

<sup>39</sup> *Ibid.*, 12.

<sup>40</sup> Bailey, “The Science Spirit in a Democracy,” Bailey Papers, Box 17, folder 43.

<sup>41</sup> *Op. cit. The Holy Earth*, 146.

<sup>42</sup> *Op. cit. What is Democracy?* 42.

ideally suited to interpret “the earth in our civic relations.”<sup>43</sup> Once again, it was the connection to the background that proved most important:

*The farmer is part of his environment, matching himself into his background perhaps unconsciously, much as a bird is matched, or a tree, or a quadruped. His plan of operation, his farm-management, is an expression of his situation in nature; he has worked it out because it fits...His situation does not admit of compromise, and therefore it may not be understood by teachers, publicists, officials, and others.*<sup>44</sup>

Farm life was demanding in unique ways. Weather, seasons, soil profile, and overall land health proved to be uncompromising variables that dictated life in the fields. A farmer’s dependence on natural processes, he wrote in *The Holy Earth*, made them the best “agent or the representative of society... he must exercise his dominion with due regard to all these obligations.” Democracy required citizens to be familiar with the interrelationships that defined the world.<sup>45</sup> Following from his environmental ethics and views of knowledge, Bailey looked to the background as a source of democratic sentiment. It was for this reason that many of his ideas began with the farmer and gardener, for those “great nature-folk... must hold us to our planet.”<sup>46</sup>

Bailey’s understanding of radical democracy fits seamlessly with his epistemology and environmental ethics. He believed an individual must understand and respect nature in order to qualify for participation in democratic deliberation. The cultivation of plants afforded one the ability to see beyond the garden fence, allowing one to acknowledge the degree to which human experience and action is wedded to the environment. “The farmer exemplifies, in the human range, what the naturalist knows as ‘adaptation.’”<sup>47</sup> As farm life illustrated, democratic

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<sup>43</sup> Ibid., 96.

<sup>44</sup> Ibid., 96-96. Bailey’s italics.

<sup>45</sup> Op. cit. Bailey, *The Holy Earth*, 33 and 149.

<sup>46</sup> Bailey, untitled speech notes, Bailey Papers, Box 18, folder 5.

<sup>47</sup> Op. cit. *What is Democracy?* 96-97. TRAVOR P HERE?

processes unfolded in an evolutionary context.<sup>48</sup> If humans occupied a special place in nature, it was only as an organism with a uniquely evolved ability to communally test knowledge and solve context-specific problems in a democratic culture. As such, Bailey did not subsume humans into the natural world, losing sight of the important role culture plays in the environment. Nor did he merely cite human well-being as a reason for protecting nature. Instead, he stressed the relational quality of existence and dismissed distinctions between the individual and the community, subject and object, and nature and culture.

By suggesting the importance of the background in his environmental ethics and political thought, Bailey underscored the idea that individuals shared in a collective project of meliorating problematic situations. The background could take the form of shared histories, experiences, and ideas. It also surfaced in our confrontation with the limits of knowledge. No matter its form, however, it was always co-terminal with the natural world. If the foundation of human knowledge, politics, and ethics rested in the environment, Bailey believed, then the fence separating nature and culture was tenuous at best. His application of pragmatic naturalism in the late-19th and early 20th centuries would profoundly alter the history of modern American environmental ideas.

### Conclusion

Bailey's work compliments recent shifts in the historiography of American environmental thought. Whereas early accounts framed the history of environmentalism around the poles of

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<sup>48</sup> The language of organism and environment is prevalent in Bailey's work. Paralleling John Dewey, he emphasized the interactions and evolutionary processes that bind these features of the natural world. For further discussion of the organism-environment dyad in Dewey's philosophy, see Trevor Pearce, "The Origins and Development of the Idea of Organism-Environment Interaction," in Gillian Barker, Eric Desjardins, and Trevor Pearce, *Entangled life: organism and environment in the biological and social sciences*, Dordrecht: Springer, 2014.

anthropocentrism and ecocentrism, recent trends show an interest in examining contexts outside of the suspiciously neat categories of previous historians. For example, battles over logging or automobile use in ecologically sensitive areas, as some have argued, are suggestive of the varied motives at the heart of environmental activism.<sup>49</sup> Hoping to emphasize coherence and continuity across contexts, others have looked to the “theocentric”<sup>50</sup> origins of environmental ideas. An account that examines religious history has the benefit of corralling thinkers according to their denominational affiliation (lapsed or otherwise), helping to explain both points of departure and common ground among environmentalists.<sup>51</sup> The search for an alternative “third-way” between anthropocentrism and ecocentrism characterizes yet another recent trend in the field. On this reading, figures like Bailey have more in common with the American pragmatists than the ecocentrism of John Muir or anthropocentrism of Gifford Pinchot.<sup>52</sup>

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<sup>49</sup> Darren Speece’s fantastic study of the redwood wars illustrates the complex motives of environmentalists. Paul Sutter insightfully argues that the modern wilderness ideal was the product of a shared concern about the changing nature of outdoor recreation during the interwar period. See Darren Frederick Speece, *Defending giants: The redwood wars and the transformation of american environmental politics*, Seattle: University of Washington Press, 2017; and Paul S. Sutter, *Driven wild: How the fight against automobiles launched the modern wilderness movement*, University of Washington Press, 2004.

<sup>50</sup> Patrick Dooley employs the term ‘theocentric’ to indicate a third-way position between anthropocentrism and ecocentrism in the work of Willa Cather. See Patrick K. Dooley, “Biocentric, Homocentric, and Theocentric Environmentalism in *O Pioneers!*, *My Antonia*, and *Death Comes for the Archbishop*,” *Cather Studies* 5 (2003), Willa Cather Archive, [http://cather.unl.edu/cs005\\_dooley.html](http://cather.unl.edu/cs005_dooley.html) (accessed July 22, 2017).

<sup>51</sup> For an excellent overview of different environmental perspectives within a variety of religious traditions, see Mark Stoll, *Inherit the Holy Mountain: Religion and the Rise of American Environmentalism*, New York, NY: Oxford University Press, 2015.

<sup>52</sup> Char Miller has convincingly argued that these binaries are hardly exclusive and make little sense for understanding Gifford Pinchot. See Char Miller, *Seeking the Greatest Good: The Conservation Legacy of Gifford Pinchot*, Pittsburgh PA: University of Pittsburgh Press, 2013. On intersections of pragmatism and environmentalism, see Kevin Armitage, “‘The Science-Spirit in a Democracy:’ Liberty Hyde Bailey, Nature Study, and the Democratic Impulse of Progressive Education” in Jeff Crane and Michael Egan, *Natural Protest: Essays on the History of American Environmentalism*, New York: Routledge, 2009, “The Continuity of Nature and Experience: John Dewey’s Pragmatic Environmentalism” *Capitalism Nature Socialism*: 14:3, 49-72; Ben A. Minter, *The Landscape of Reform: Civic Pragmatism and Environmental Thought in America*, MIT Press, 2006; and Paul B Thompson, *The Agrarian Roots of Pragmatism*. Nashville: Vanderbilt University Press, 2000.

Bailey's philosophy certainly resembles that of William James and John Dewey, and it is also hard to deny the influence of Congregationalism and the context of the Progressive Era on his writing. On some level, these different influences might suggest why an element of tension marked his thought. At times he employed anthropocentric language — for instance, he sometimes thought of farmers as conquerors of the earth, extracting its resources — and at other times he was clearly ecocentric, arguing that “Every animal and plant lives for itself and apparently as completely as if man had never existed.”<sup>53</sup> He seemed to celebrate science yet adhere to an anti-modern agrarianism as well. It is very unlikely, however, that Bailey thought of his interests and ideas as contradictory or at odds with one another. Looking only at his religious background or the agrarian and Progressive Era context will do little to shed light on his ideas. He shares unmistakable affinities with the pragmatists, and therein lies an important clue for understanding American environmentalism.

Bailey's underlying epistemology and metaphysics was not singular. Similar to William James and John Dewey, his ideas grew out of a larger Darwinian moment in American intellectual history.<sup>54</sup> Darwin at once assaulted teleological models of humanity's origin as well as the notion that humans were somehow exempt from the laws governing the environment. His world was marked by contingency and chance, not divine intention or linear development. In the

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<sup>53</sup> Bailey, *The Outlook to Nature*, New York: Macmillan, 1905, 272.

<sup>54</sup> On Darwinism and its reception, see Randall Fuller, *The Book that Changed America: How Darwin's Theory of Evolution Ignited a Nation*, New York, New York: Viking, an imprint of Penguin Random House LLC, 2017; Peter Bowler, *Evolution: The history of an idea*, Berkeley: University of California Press, 2003; and Barry Werth, *Banquet at Delmonico's: Great minds, the gilded age, and the triumph of evolution in america*, 1st ed. New York: Random House, 2009; Cynthia Eagle Russett, *Darwin in America: The Intellectual Response, 1865-1912*, San Francisco: W.H. Freeman, 1976; and Paul F. Boller, *American Thought in Transition: The Impact of Evolutionary Naturalism, 1865-1900*, Chicago: Rand McNally, 1969. For a thorough treatment of Darwin's influence on pragmatism see David Hoeveler, *The evolutionists: American thinkers confront Charles Darwin, 1860-1920*, Lanham: Rowman & Littlefield, 2007; and Philip P. Wiener, *Evolution and the Founders of Pragmatism*, Cambridge: Harvard University Press, 1949.

late-19th century, Americans responded to these ideas in different ways. Theorists such as Louis Agassiz and Amos Bronson Alcott regarded evolution as grossly reductive, sapping the world of meaning and value. Others, such as Asa Gray, suggested evolution worked by design, and thereby reconciled Darwin's theory with theism. Taking a different approach, William James and John Dewey viewed culture as an emergent natural phenomenon. They celebrated mystery and the search for contingent truth to find meaning in Darwin's world. If nature and culture were embedded in the same dynamic processes, this did not mean the universe was subject to a reductive and deterministic materialism. For the pragmatic naturalist, the world was not completely devoid of all meaning or wonder.

Broadly speaking, then, Bailey's work rests at the conjunction of numerous developments in the history of religion and science. He was raised a "Vermont puritan" though he was hardly committed to those beliefs, even as a child. Saying more about his father's religiosity than his own, he considered it "a real episode" when Bailey Sr. gave him a copy of *On the Origin of Species*.<sup>55</sup> As it had for the pragmatists, Darwin's theory had a profound impact on Bailey. Outlining the core of his environmental philosophy, he wrote in *Outlook Toward Nature* (1905), "Man is a part of the evolution record; he is partaker in the process, not a passive looker-on; He is democrat amongst democrats, not autocrat created of some different and cleaner stuff."<sup>56</sup> He synthesized and reinterpreted the underlying assumptions of his worldview during Darwin's revolution. Religion shaped his thought, but he was not theocentric. Rather than specific religious beliefs, it is the larger tradition of religious pluralism in the United States that proves

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<sup>55</sup> See Lawrence interview, Bailey Papers, Box 20. 101 and 108.

<sup>56</sup> Op. cit. *The Outlook to Nature*, 287.

most important for understanding Bailey's approach to science.<sup>57</sup> He drew from numerous wells, both experiential and intellectual, and was open to different ideas as he formulated his own pragmatic naturalism. Any attempt to understand American 20<sup>th</sup>-century environmental thought will be incomplete if it ignores the history of science and the changing meaning of natural philosophy.

Bailey's ideas do not represent just another perspective in a widely varied environmental tradition. He defined the terrain in which 20th-century thinkers would labour to justify protections for nature.<sup>58</sup> One hears echoes of Bailey in Aldo Leopold's land ethic, Bob Marshall's attempt to salvage individualism, Rachel Carson's criticism of science, Wendell Berry's appreciation for place and a "worshipful" attitude in life, and even the deep ecology of Bill Devall among others. Rather than looking to theocentrism or to a third-way, it is perhaps more accurate to argue that one broad tradition defines American environmental ideas. Bailey was a coherent, if complex, thinker and his legacy continues to shape our ideas about nature. Much like the flower, rock, and botanic gardens he loved, the American intellectual landscape is dynamic, always responding to changing contexts; yet, it coheres within a set of identifiable, though permeable borders. Ecocentrism and anthropocentrism are present, but not as fixed and fully exclusive positions. The language of centrism hardly makes sense within the framework of pragmatic

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<sup>57</sup> See Chris Beneke's for an exceptional history of religious pluralism in the United States. *Beyond Toleration: The Religious Origins of American Pluralism*. New York: Oxford University Press, 2006.

<sup>58</sup> By highlighting continuity across the 20th century, I am objecting to scholars who argue that modern environmentalism developed independently of historical precursors. See, Riely E. Dunlap and Angela G. Mertig, eds., *American Environmentalism: The U.S. Environmental Movement, 1970-1980* (Philadelphia: Taylor and Francis, 1992); Donald Fleming, "Roots of the New Conservation Movement," *Perspectives in American History* VI (1972), 7-91; Samuel P. Hays and Barbara D. Hays, *Beauty, health, and permanence: environmental politics in the United States, 1955-1985* (Cambridge: Cambridge University Press, 1987); Kirkpatrick Sale and Eric Foner, *The Green Revolution: The American Environmental Movement, 1962-1992* (New York: Hill and Wang, 1993); Adam Rome, *The bulldozer in the countryside: suburban sprawl and the rise of American environmentalism* (Cambridge: Cambridge University Press, 2001); and J. E. de Steiguer. *The Origins of Modern Environmental Thought* (Tucson: AUP, 2006).



naturalism. A pluralist at heart, Bailey rejected both anthropocentrism and ecocentrism. To talk about environmental ethics from either point of view would represent a failure to climb the garden fence.