

## **Cultivating Community: Bringing Ecology, Economics, and Ethics Together on the Land**

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I would like to begin with a few expressions of gratitude. First, I want to thank the Society for inviting me to be with you this morning – and especially Rebecca Power and DeWayne Johnson. I am honored to be here. I want to thank you all, too, for the work you do all the other days of the year, in all your places and communities. I know that, in keeping with the title of my talk, you cultivate community every day, in ways that are so easily overlooked and taken for granted. And thank you, finally, for the courage you have shown in taking on the theme of the conference. It is no small commitment to explore the connections among ethics, economics, and ecology; indeed, it is such a *big* and important thing that few other professional organizations that I am aware of have dared to do so explicitly. As I will note later in my remarks, I hold that leadership does not come from wealth, or influence, or position; rather, it reflects a willingness to face realities and make difficult – but ultimately transformative – connections. I honor your commitment.

I would like to offer one more thank-you, and acknowledge a debt. Much of what I will share with you this morning draws upon conversations I have had over the years with our good friend and colleague Paul Johnson. Many of you know Paul, and are aware of the tremendous challenge he has faced in the last several months in recovering from the accident on his farm. I spoke with Paul recently, and can report that he has made a substantial recovery. He has come a long way back, and his grumpy frustration with not having come back 100% is a sure indicator that he is doing well. And I know he appreciates all the concern and good wishes that so many of you here have extended to him.

I cannot help but acknowledge the circumstances under which we meet. It is hot outside. And dry. If you flew or drive into Fort Worth, especially from across the Midwest, you saw it: our land is brown and sere with heat and drought. On my way here from Wisconsin, I saw countless stressed farms, desiccated corn fields, cottonwood leaves turning yellow, ponds at half capacity, rivers of sand and gravel, critters domestic and wild gathered up at whatever water bodies are still standing. It is a hard summer for all, and we are still only in mid-July.

This is not a data talk, but let me flash at least a few recent maps and graphs to acknowledge what is on many of our minds, and perhaps waiting for you at your desks back home. The question, of course, is on all our minds: Will this finally be the episode that makes us take seriously the facts before us, the reality of climate change, and the need to build resilience into our lives, our communities, and our landscapes?

Our colleague Pete Nowak has recently written in the Society's journal: "...Conservation is not a practice, a program, a technical standard, or a plan. Neither is conservation another name for a

government financial incentive. ...Conservation is a journey.”<sup>1</sup> I agree with Pete. It is a journey that we all take as individuals, but that we all also take together as a society, a greater community. And we are at a critical juncture in the journey of conservation. As Wes Jackson has written, “This is the most important moment in the history of *Homo sapiens*. It comes down to this... Can we keep ourselves fed? Can we save the stuff, the soil and water, of which we’re made? All of us are just stopovers between soil and soil.”<sup>2</sup>

I do not think Wes is exaggerating; it *is* the most important moment in our history as a species. I hesitate to rehearse what I sometimes call “litany of environmental woe,” but I suppose it must be done. With the temperatures rising, the polar ice melting, the oceans acidifying, and the coastal dead zones proliferating; with the world’s soils stressed and its waters bearing the weight of our demands; with the ongoing loss of biological diversity in our forests, grasslands, wetlands, and arid lands, in our aquatic ecosystems, and in our heritage of domestic crops and livestock; with our economy addicted to fossil fuels and to a tragically narrow concept of growth and development; with our human communities stretched out and stretched thin, fragmented, and increasingly divided between top and bottom, left and right, urban and rural: with all this, we face an unprecedented reality. Our social, economic, and environmental challenges are many, and they are connected, converging, compounding, and synergistic. This is why the theme of this conference is so critical, appropriate, and necessary. We *do* stand at the most important moment in history. We can shrink from it, or we can make it *our* moment in history.

It is helpful, under such circumstances, to touch ground with the history we have already experienced. So let me begin with two stories of a place so important in the story of your own field: Coon Valley, Wisconsin. Many of you know the history: that it was at Coon Valley, in western Wisconsin, in the 1930s, that the Soil Erosion Service, and then the Soil Conservation Service, undertook the first of its watershed conservation demonstration projects.<sup>3</sup> It was an epic moment in the conservation journey of hundreds of farmers and their neighbors, and in our collective conservation journey. It showed a new way to pursue conservation, especially on private lands.

Aldo Leopold figured importantly in the story of Coon Valley, and so we went there while working on our documentary film *Green Fire*, to tell a bit of its story of degradation and renewal. The others on the film team hailed from far distant lands – California! Colorado! – and so they were new to the driftless area landscape of the upper Mississippi—but well pleased with its photogenic quality, especially at sunrise. At one point, we found ourselves visiting a ridgetop Amish farm outside town. We’d made a bargain: the farmer let us film on his farm in exchange for helping him with his hay bales. The barter economy is alive and well in the driftless area! While we were waiting for the right filming moment, we noticed, in the schoolyard across the valley, a bunch of Amish kids on recess, involved in an intense game of baseball. I would add that, being in our hilly driftless country, the field had at least a 20% slope; all one had to do was jerk one into left field, and it would roll on forever, and you were home free.

While we watched this scene unfold, my friend Steve, the film director, leaned over to me and said only half-jokingly, “I have never felt so American in all my life!” I think I knew what he meant. We have come a long way from the Jeffersonian vision of a prosperous nation of small farms and towns. We could discuss just how widely the founders shared that vision, or understood the forces that would undermine it. In any case, however battered and abandoned the vision was and is, there are places, communities, where we can gain some sense of what might have been, and what, in some updated form, what might yet be—and perhaps what *needs* to be. Coon Valley is one of those places. And through the remarkable story of the Coon Creek watershed, and its rehabilitation, we find a bit of promise amid unpromising times.

Now, for the second story, let us go back in time eighty years with one of those who helped make change happen. *Not* Aldo Leopold, but his son Luna, later to become perhaps the foremost hydrologist of his generation, but then just seventeen years, at work on one of his first jobs, in the fields and streams of Coon Valley. “In 1932,” he said, “I saw the deep gullies, the degraded hardwoods, the up-and-down cultivation on the hills.... Now...Coon Valley is as good an example as we have that proper land management can solve many of the problems of water quality.”<sup>4</sup> Luna learned life lessons at Coon Valley, but also foundational scientific concepts and conservation principles. And they intersected in that phrase “*proper* land management.” What did he mean?

Time travel now to the early 1980s. I am a young and callow graduate student, at work on a biography of Luna’s father, and interviewing Luna for the first time at his office at the University of California-Berkeley. Luna was well known to harbor, shall we say, curmudgeonly tendencies, even as he took the careful measure of you. And so he did with me. But after a couple days, we’d come to know one another. I by then felt comfortable asking him questions—not only as a Leopold sibling, but as a leading world expert in water and its role in ecosystems. I was curious about the changes that had come to soil and water conservation in his lifetime. I asked him how World War II had changed the young field. His comment, as best as I can reconstruct it, was: “Well, after the war the engineers took over. Before then, we conserved soil and water by agronomic means. But after the war, the ditch-dredgers and stream-straighteners took over. We poured concrete.” Now Luna had in fact been trained as a civil engineer, and he was a brilliant one. But he well understood the limits of engineering solutions pursued apart from any kind of ethical framework, without appreciation of the ecological complexity of specific places, and justified according to narrow and short-term economic criteria.

I believe Luna first gained that perspective on the banks of Coon Creek, Wisconsin. There he came to know that, however essential engineers were to solving systemic environmental problems, their work had to jibe with the knowledge of landowners, with the expertise of foresters and wildlife managers and soil scientists and tax specialists, with the needs of the larger community of people, and with the still larger reality: the community of the soils, waters, plants, and animals. The teenage Luna Leopold was at a critical moment along his own journey. Standing knee deep in Coon Creek, Luna stood in fact at the confluence of two great storylines in conservation and in American history: that of his boss, Hugh Hammond Bennett, and that of his father, Aldo Leopold.

Hugh Hammond Bennett: Has there ever been a human being who knew so much about soil, who cared so much about soil, who did so much to restore and sustain soil? By the time he put the Coon Valley project into motion, he had already made historic contributions to soil science and to the emerging soil conservation movement. It began early for Bennett, in his home hills of North Carolina. The story is told of his helping his father lay out contour lines on the family land, but not quite knowing why. His father replied: "To keep the land from washing away!"<sup>5</sup> It was only the opening moment of his odyssey. There would follow many years of education and research that would take him around the world, and establish him as the world's foremost student of soils; field experiences that would awaken him to the full scale of soil erosion and degradation, and take him beyond science into policy and conservation; frustration over his inability to prod his bureaucratic superiors into action; his opening forays into the public arena as a crusader for soil conservation.

In his landmark 1928 publication *Soil Erosion: A National Menace*, he wrote, "To visualize the full enormity of land impairment and devastation brought about by this ruthless agent [of erosion] is beyond the possibility of the mind. An era of land wreckage destined to weigh heavily upon the welfare of the next generation is at hand."<sup>6</sup> Understanding the process of such "wreckage" was a matter of scientific insight; but to act to forestall it was to imply an *ethical* and *economic* imperative to do so. Five years later Bennett became the head of the new Soil Erosion Service, and Coon Valley became the first of the forty watershed conservation demonstration sites.

Aldo Leopold: He had returned to his native Midwest after fifteen years in the U.S. Forest Service in the Southwest. His conservation interests could not be corralled within any one field or discipline. He was already well recognized as a national leader in forestry, recreation policy, wilderness protection, and game management. But intersecting with all of them was his abiding interest in soils and watersheds, honed in his years of horseback travel through the rangelands and forests of Arizona and New Mexico. "I have a new hobby," he wrote to his mother in 1920. "I am seriously thinking of specializing in erosion control."<sup>7</sup> He was half-right; it is more accurate to say that he added one more to his growing collection of specialties. In the next several years, he would aim to raise awareness of erosion processes and watershed degradation every bit as forcibly as he would advocate for protecting wilderness. They were all of a piece. He wrote, "Erosion eats into our hills like a contagion, and floods bring down the loosened soil upon our valleys like a scourge. Water, soil, animals, and plants—the very fabric of prosperity—react to destroy each other and us." But then he added this: "In my opinion, however, one can not round out a real understanding of the situation in the Southwest without likewise considering its *moral* aspects."<sup>8</sup> For Leopold, as for Bennett, the ecological reality, the economic implications, and our ethical obligations were bound together—inseparable and, in the end, indistinguishable.

As the work in Coon Valley began, Leopold published two landmark essays. In "The Conservation Ethic" (1933) he wrote: "Civilization is not, as [historians] often assume, the enslavement of a stable and constant earth. It is a state of mutual and interdependent

cooperation between human animals, other animals, plants, and soils, which may be disrupted at any moment by the failure of any of them.”<sup>9</sup> In “Conservation Economics” (1934), he wrote this: “This disease of erosion is a leprosy of the land, hardly to be cured by slapping a mustard-plaster on the first sore. The only cure is the universal reformation of land-use, and the longer we dabble with palliatives, the more gigantic grows the job of restoration.”<sup>10</sup> At Coon Valley, Leopold’s sweeping views of history, ethics, and land conservation would find their proving ground. And he would hold to a strong conviction: that conservation in this place had to attend not only to the vulnerable soils from which Coon Valley’s farmers derived their livelihoods; it had to attend to the whole of the land—its croplands and pastures, its waters and woodlands, its wildlife and scenery—the entire suite of assets that made Coon Valley home to its people and its full community of life. And along the way, he would contribute the sweat equity of not only Luna Leopold, but Luna’s older brother Starker as well.

Leopold summarized the work and lessons of the project in his 1935 article “Coon Valley: An Adventure in Cooperative Conservation.” The Soil Erosion Service, he writes, “offered to each farmer... the cooperation of the government in installing on his farm a reorganized system of land-use, in which not only soil conservation and agriculture, but also forestry, game, fish, fur, flood-control, scenery, songbirds, or any other pertinent interest were to be duly integrated. It will probably take another decade before the public appreciates either the novelty of such an attitude by a bureau, or the courage needed to undertake so complex and difficult a task.”<sup>11</sup> Indeed.

The work at Coon Valley, and Leopold’s insight into its “novelty” did not, however, escape the full attention of the man at the center of it all in Washington. Bennett read with appreciation Leopold’s article. And Leopold, we can imagine, read with like appreciation the letter he received from Bennett: “You have certainly packed into this brief article a great deal of profound thought,” Bennett wrote, “and you have expressed these thoughts in a way that will appeal to the people.”<sup>12</sup> High praise from a public official who could close down whole counties and draw tens of thousands of people to hear a talk about soil conservation.

The essential lessons of Coon Valley and all the other pioneering demonstration sites of the 1930s could not be more relevant to our conference theme, at this, the most important moment in our history. Bennett, Leopold, and their contemporaries faced profoundly sobering realities: the destabilization of entire ecosystems (most notably of course in the persistent blight of the Dust Bowl), for which the ecologists and conservationists were unprepared; a Great Depression, for which the economic specialists were unprepared; and the looming international catastrophe of World War II, for which ethicists, philosophers, and theologians were unprepared. It may seem a great leap from the local problems of a quiet valley in the Upper Mississippi River basin to the great continental and global problems of contemporary humankind. But let me try to make that leap.

The problem at Coon Valley (and, as Leopold noted in his article, a thousand other farming communities) was a degraded and weakened watershed. The solution to the problem was to adopt a revolutionary, integrated, community-wide approach, appropriate to the scale at which

the problem existed. Coon Valley was, and is, representative of a broader principle in (and well beyond) conservation: we create problems when we heedlessly separate, segregate, fragment, and overspecialize; we solve problems by bringing people and knowledge and shared values together. H. L. Mencken said it best: “There is always a well-known solution to every human problem — neat, plausible, and wrong.”<sup>13</sup> This is the lesson that Luna Leopold the civil engineer was reflecting on in his office that day in Berkeley. Our first, and often our last, response to our systemic conservation problems is so often to devise a short-term fix, to engineer a change in the land; but we are slow and reluctant to change *ourselves*, to make the necessary connections, to confront and transform the forces that are at the root of our problems. Hugh Hammond Bennett and Aldo Leopold saw the connections in the landscape and they made the connections in their heads and in their hearts. They saw that conservation necessarily involves the merging of economic *and* ethical concerns, and that *sound* conservation must necessarily be informed by knowledge, cultural and ecological, of the land.

Let me depart for a moment from the flow of my presentation to make the point that these approaches are still with us, and are increasingly with us as we confront the ultimate matter: our changing climate. In this week’s issue of the *New Yorker*, journalist Elizabeth Kolbert provides the opening commentary, a discussion of the current heat wave and what it portends. She writes, “One of the most salient—but also, unfortunately, most counterintuitive—aspects of global warming is that it operates on what amounts to a time delay. Behind this summer’s heat are greenhouse gases emitted decades ago. Before many effects of today’s emissions are felt, it will be time for the Summer Olympics of 2048. (Scientists refer to this as the “commitment to warming.”) What’s at stake is where things go from there. It is quite possible that by the end of the century we could, without even really trying, engineer the return of the sort of climate that hasn’t been seen on earth since the Eocene, some fifty million years ago.”<sup>14</sup>

Contrast that, then, with this excerpt an opinion piece in yesterday’s *Sunday New York Times*, entitled “There is Still Hope for the Planet”: “‘Our best hope,’ says Benjamin H. Strauss, a scientist who is the chief operating officer of Climate Central, a research group, ‘is *some kind of disruptive technology* that takes off on its own, the way the Internet and the fax took off.’”<sup>15</sup> What the writer hopes to see emerge are “policies intended to help find a breakthrough technology that can power the economy without heating the planet.” No words here about the assumptions and policies that shape and drive that economy, and that have forced the warming. No words about the ethical dimensions of the challenge, or the limits of silver bullet solutions in addressing complex global realities. And this we can take as a modest proposal. More ambitious yet are emerging proposals to pursue global-scale geoengineering solutions: to purposefully alter and engineer the Earth’s atmosphere with the aim of cooling us off.<sup>16</sup> No need to change *ourselves*; we can and will change the Earth around us to correct for our prior short-sightedness.

Let us imagine ourselves in the company of such ambitious planners, with Big Hugh and Aldo at our back. Let us try to share the lessons garnered from *our* areas of knowledge, from our days and decades afield, from our conversations in our communities. Let us try to explain the terms of *our* merger of ecology, economics, and ethics.

And let us begin with the soil. Ecology has shown us that soil, far from being the inert dirt beneath our feet—a mere collection of compounds ready for conversion to usable commodities—is in fact a living community of animals and plants and fungi and microbes, providing us with our daily bread and every other good and necessary thing, since time immemorial. Our soils are part of the still larger community of the land, linked to the waters that flow over and through it, to the common skies above and the common oceans below. This is the revolutionary view of reality that ecology has given us. “Ecology,” Leopold wrote in 1939, “is a new fusion point for all the natural sciences. ...The emergence of ecology has placed the economic biologist in a peculiar dilemma: with one hand he points out the accumulated findings of his search for utility, or lack of utility, in this or that species; with the other he lifts the veil from a biota so complex, so conditioned by interwoven cooperations and competitions, that no man can say where utility begins or ends.”<sup>17</sup> Our basic, global problem is that our dominant schools of economics were formulated before we began to understand this reality of the land’s complexity. Meanwhile, our dominant faith traditions and value systems, many (if not most) of which have deep legacies of respect for the Earth, now speak little of the soil from which they sprung, or the lands and waters that have informed and inspired them.

Let us next address the matter of economics, or better yet, *economy*—not to be confused with “*the economy*.” In *Green Fire*, our documentary film about Aldo Leopold and his legacy, we introduce the Coon valley segment with this quotation: “The destruction of soil is the most fundamental kind of economic loss which the human race can suffer.”<sup>18</sup> That sentence invites the question: When was the last time you heard a prominent economist or elected official or candidate or think-tank media star say anything about *soil*? Hugh Bennett said this: “Soil conservation is not just an incidental bit of the mechanics of farming; it becomes part and parcel of the whole business of making a living from the land, and is the only way by which we may have permanently productive land for a permanent agriculture to support a permanent nation.”<sup>19</sup> We have built a globalized economy that believes itself divorced and separate from the soil, from the land, from local places, and that acts upon that belief *ad infinitum*.

At this point, I would defer to our friend and wise elder, Wendell Berry. This spring Wendell delivered in Washington D.C. the prestigious Jefferson Lecture in the Humanities, sponsored by the National Endowment for the Humanities. If I did not think that Wendell would have gotten word, I would have pilfered large chunks of his well-chiseled prose. I encourage you all to read his lecture, or listen to it on-line, for it deals essentially and powerfully with the theme of this conference. And at its core is his identification of the basic dilemma: economics, as we have allowed it to become defined and as we have allowed it to define our lives, is cut off from the very sources of its own health and vitality. We are in the grips now of globalized economic powers that have lost—have thrown off—any moorings in ecology and ethics. Berry writes:

An authentic economy, if we had one, would define and make, on the terms of thrift and affection, our connections to nature and to one another. Our present industrial system also makes those connections, but by pillage and indifference. Most economists think of this arrangement as “the economy.” Their columns and articles rarely if ever

mention the land-communities and land-use economies. They never ask, in their professional oblivion, why we are willing to do permanent ecological and cultural damage “to strengthen the economy?”<sup>20</sup>

If we need any proof of Berry’s observation, let us reflect on the last four years of local, national, and global economic disruption and turmoil. Lacking any systemic view of the ultimate sources of wealth, and the ultimate consequences of their heedless exploitation, the system lurches, the common wealth of our lands and waters and atmosphere and oceans continues to degrade, and the ideological warriors in our body politic double down.

There is another way. Conservationists from George Perkins Marsh to Teddy Roosevelt to Hugh Hammond Bennett to Aldo Leopold to Wendell Berry have contributed to its definition for 150 years. Economists from Kenneth Boulding to Herman Daly to the late Nobel-prize winner Eleanor Ostrom have defined it in more formal terms. A colleague, Peter Brown of McGill University in Montreal, has laid out his understanding of its basics in his recent book *Right Relationship: Building a Whole Earth Economy*. Brown writes:

The current system operates on the assumption that the earth’s environment is a subset of the human economy, and that the earth belongs to humans. If these are the assumptions, it makes sense to transfer as much of the earth’s natural capital as possible into the engines of the industrial economy. These assumptions, though, are fantastically at odds with scientific reality; human culture and its economic goals are, in pure scientific fact, a subset of the earth’s environment and resources, and humanity is only one of millions of species that depend on them.<sup>21</sup>

For those of us with an ecological view of the world, and the nagging conviction that “the economy” cannot right itself, or sustain itself, without solid ethical foundations, these are voices of profound reason. They are striving mightily to bring economics back to reality.

Our third “E”—ethics—is one that, paradoxically, informs all that we say and think on these matters in our professional and public lives, and yet is rarely spoken of or considered out loud in professional conferences or public meetings. Hence, again, my appreciation of this Society’s courage in not only speaking it aloud, but putting it front and center at this conference. Ethics, in the simplest formulation, are the guidelines for appropriate behavior in a community. What matters then is the definition and boundaries of the *community*. The boundaries of the moral community have expanded throughout human history. Aldo Leopold’s great and novel contribution to this ancient human conversation was to bring his ecological insight to bear, and to call for expanding the boundaries of the community to include *the land*. “We abuse land,” he wrote, “because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.”<sup>22</sup> He made the full argument in his landmark essay “The Land Ethic.” Given our newly gained ecological knowledge, he reasoned, we must all assume responsibility for land health, which he defined as “the capacity for self-renewal in the soils, waters, plants, and animals that collectively comprise the land.”<sup>23</sup>

Leopold's idea has been called revolutionary, and so it was in many ways. But it also had precedents in Western, non-Western, and indigenous belief systems. It was revolutionary in 1949 mainly because the increasingly widespread impacts of the industrialized economy, then and yet to come, were readily apparent, but ecologists had not yet lodged a critique. As noted above, earlier conservationists and scientists had seen the trends, and the conservation movement since its origins had sought to moderate, reform, and redirect the human economic enterprise. What Leopold recognized was the direct relevance of ecology to ethics through economics. He made the connections.

So now we have laid our terms on the table. *Ecology* deals with ecological systems, their diversity, function, and resilience, and is necessary to help us see the full context and dimensions of our problems. *Economics* deals with economic systems, and in theory addresses human material needs, wants, and demands—but in practice has done so as if we were the sole focus and measure of value in the universe. *Ethics* deals with our social systems, our ways of carrying on and sustaining our community life. Add them together, and it is indeed a complex world we exist in (and that is without even bringing in such necessary and intimately related concepts as *beauty* and *health* and *justice*). But let us heed again the words of H.L. Mencken: simplistic solutions to the problems of complex systems will not suffice. Problems must be addressed, in an integrated way, at the scale of the “problem-shed” (to use my friend Steve Born's term). We must solve, as Wendell Berry has stated, *for pattern*.<sup>24</sup> That is, we cannot address our many and varied problems as if they were isolated, separate, disjunct; we must look for the pattern and address it. Perhaps that defines the difference between a mere silver bullet and an elegant solution.

Can we bring the “three E's” together? There is a good case to be made that we have begun to do so over the decades. As I have mentioned, conservation itself as a movement has arguably done so for more than a century. The environmental movement made the case, but apparently could not reach the deeper foundations of our conduct and public policy and economy. *Sustainability* is our latest term for the effort. After several decades, the jury is still out: whether sustainability will succeed in meaningfully integrating ecology, economics, and ethics, or settle comfortably into an exercise focused mainly on engineering for efficiency and profitability. Recall Luna's post-World War II complaint. No doubt his fellow civil engineers felt that their concrete—pun intended—solutions were what we would now call sustainable. But were they *sustaining* the life of the land?

I would suggest that we are indeed bringing the three E's together, and cultivating community in the process. We see it, for example, in the rise in recent decades of new interdisciplinary fields such as ecological economics, environmental ethics, and sustainable agriculture, in such rapidly emerging concepts as ecosystem services, in the movements for community-based conservation and environmental justice. Many of you here in this room are part of these movements and using tools from these emerging fields. We see it in the establishment and expansion of ecological restoration programs, going so far beyond the early efforts of the farmers, specialists, and CCC boys at Coon Valley. It is remarkable, if we stop to think about it,

how rapidly restoration has become a basic component of our conservation work. We see it in the recent rise of the food movement in general, but especially in the urban agriculture part of that movement. People are not waiting for those in high positions of authority and influence to lead in bringing ecology, economics, and ethics into communion; they are *taking* the lead, and making the connections. Whether in rehabilitating abandoned city lots of Detroit and Cleveland, in the 7000-and-growing farmer's markets across the country, in the watershed and rangeland collaborations in the arid West, in the tenacious defense of tribal lands and waters, in the restored wetlands that so many of you have, yes, engineered, or in the tenuous recovery of at least some marine fisheries, we see what can happen when we align our ecology, our economics, and our ethics—when we engage in what Luna Leopold so plainly called “proper management.”

These are encouraging trends, but if we are honest we must admit that all together they are still only modest steps toward the ultimate goal. If we are to bring our science, our material needs, and our ethics together on the land, and if we are to cultivate our communities at the scale necessary to make a difference, then there is no avoiding the point: in the next generation we must move away from an economy that extracts and depletes and discards and externalizes its costs as a matter of course, and toward one that conserves, cultivates, and restores as a fundamental practice. It is a task commensurate with this most important moment in human history, and a challenge to this next generation: to build a restorative economy. For you of the upcoming generation, I offer this small, yet great, comfort. You are not starting from scratch. You stand on the shoulders of (among so many others) Hugh Hammond Bennett and Aldo Leopold.

I do not like to give “big picture” presentations like this one without coming at the end toward at least some kind of practical recommendations to consider. So with all this history and tentative signs of progress in mind, what specific things might we do to further advance the integration and deployment of ecology, economics, and ethics?

Let us first bring them together in our heads and hearts. And where can we do this to greatest and quickest effect? This month we are marking the 150<sup>th</sup> anniversary of one of the most important legislative acts in the history of the United States, although you would never know it from the complete lack of interest or attention in the media, or even among those who should be celebrating the anniversary. On July 2, 1862, Abraham Lincoln found time amidst the Civil War to sign the Morrill Act, making it possible for the states to establish the land-grant colleges. The mission of the colleges, in the words of the Act, was “without excluding other scientific and classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts.”<sup>25</sup>

In this original mission, the nation's land grant colleges have been monumentally successful, and we have all benefited beyond measure. But let me suggest that the nation's land grant colleges need a revised mission for the next 150 years. I say this fully aware that many interests and priorities are vying to define the role of the land grants, and that their very existence as public institutions serving the public interest is at risk. My recommendation: *put the land back*

*in the land grants*; not merely land as a commodity to maximize productivity and profit, but land to understand and cultivate as a *community*. How do we do this? Most if not all of you work with your state's land grant college. Start the conversation. We cannot afford to wait another generation to make the necessary connections. But let us state it positively: every student who studies at a land grant college ought to be competent in seeing and debating and making the connections between our economic activity, our ecological circumstances, and our ethical foundations. It is not such a radical notion: they ought to be fully prepared to inhabit well the world that they are inheriting. To do so will require not only a specialized competence, but the capacity to think critically about the big picture.

Second, let us think too about how to bring things together in our culture. The beauty here is that we can do so in whatever manner we feel most passionate about, and most rewarding. Back home in Wisconsin, I work with a small non-profit, the Wormfarm Institute, that has a great mission: "to put the culture back in agriculture."<sup>26</sup> It does so by bringing farmers, chefs, artists, writers, and other stray cats into conversation, and into shared activity. Reconnecting the arts and humanities to the land is part of this same great work.

You might have heard, too, that we in Wisconsin have had some political discussions lately as well. And we are all once again in a political season. I do not believe it a partisan statement to say that we in this room must help to reclaim conservation as a shared commitment across jurisdictional boundaries, across the rural-urban divide, and across the gaping ideological chasm in our country. And as part of that we need to reclaim respect for science as the foundation for sound public policy. So my recommendation here is simply to *use your voice*, to be the voice of ethics, ecology, and economics together. It may be the voice of a scientist, or artist, or writer, or musician, or community member, or citizen, or voter. But you are the ones who think most deeply about the connections, and are most committed to this in your work. Your voice is needed. And let me add this. This great drought of 2012 is what it is, and we all must decide for ourselves how we shall talk about it. For myself, I am "going there." It is time, in my world, to talk about climate and environmental change and resilience with anyone who will listen.

Third, let us think about how to bring them together in our landscapes. And so let us talk about the Farm Bill. I almost hesitate to bring up the topic, as during this round of political wrangling I have had too many other demands on my time to be very attentive to the process and the results. And I know that here in this room are collected together many of the people most informed about the Farm Bill in the country. But I shall plunge on! Even as many of you are still analyzing provisions of the new bill, and catching up on sleep, and perhaps licking some wounds, I will say the words you may not want to hear: *It is not too early to start thinking about the next farm bill!*

Will the next Farm Bill be the one that makes history? It will if it takes seriously the connections we have explored this morning, and will explore further at this conference. It will make history if it strengthens and builds upon those connections in new and creative ways. I have no illusions about this; it is the work of a generation—of several generations. But the deep changes and transitions we need to make will happen sooner or later. Sooner is better.

So let begin the conversation in these hallways. And we can just open it with the questions. How can the next Farm Bill work to build a restorative economy and a resilient landscape together? How can it better recognize ecological processes, limits, and opportunities, and better reflect our ethical obligations to our neighbors, to our fellow citizens, to future generations, and to the full community of life? Can we better serve, through the Farm Bill, all the people, and all the components of the land? Can we create healthier connections across the landscape, between our rural and urban communities, and begin to heal the divide between them? Can we focus on the details of the needs of the future—the need, for example, to build resilience into our watersheds and waterways; the need to sequester carbon as much and as quickly as possible in our forests, pastures, croplands, and rangelands; the need to get more permanent pasture and cover across the entirety of the Mississippi basin. Can we at last begin to think long-term? Can we look seriously at proposals such as the 50-year Farm Bill that Wes Jackson and Wendell Berry have outlined? Can we imagine a companion Private Lands Conservation Act, as Paul Johnson has championed? You would have a hundred other questions to add, I am sure. The point is, let us not wait until the ugly crunch time of immediate legislative action is upon us. Let the conversation begin now, and let it grow and advance as far as possible.

My three, perhaps utopian, recommendations have a common denominator: If any of these things are to happen, it will be because *you* will do it. *You* are the ones who have shown, by your participation in this conference, the courage to connect. *You* are the leaders; *you* are the ones who understand the connections, and can make them; *you*, and all the landowners and partners you work with, are the stewards of the foundations of community in this country.

You are the ones who know where your own foundations rest. You are the heirs of Hugh Hammond Bennett, who said in 1947: “What a frightful lack of insight, and what terribly false economy it would be, if we did not go ahead with soil conservation.”<sup>27</sup> We went ahead. You are the heirs of Aldo Leopold, who said, also in 1947, “Cease being intimidated by the argument that a right action is impossible because it does not yield maximum profits, or that a wrong action is to be condoned because it pays. That philosophy is dead in human relations, and its funeral in land-relations is overdue.”<sup>28</sup>

Conservation is a journey. We stand at the most important moment in human history. We are called to meet the moment, by those who came before us, by those who will follow us, and by all those on whose behalf we can and must speak, act, and move forward.

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<sup>1</sup> Nowak, P. 2011. The conservation journey. *Journal of Soil and Water Conservation* 66(3):61A-64A.

<sup>2</sup> Jackson, W. 2011. Between soil and soil. Accessed 7/23/2012 at <http://www.progressive.org/jackson1210.html>.

<sup>3</sup> Anderson, R. 2002. Coon Valley days. *Wisconsin Academy Review* 48(2):42-48.

<sup>4</sup> Novak, B. 2002. Leopold: water must be priority.” *The Capital Times* (Madison, WI), 23 October 2002, p. 2A.

<sup>5</sup> Cook, M. n.d. Hugh Hammond Bennett: the father of soil conservation. Accessed 7/23/2012 at <http://www.soil.ncsu.edu/about/century/hugh.html>.

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- <sup>6</sup> Bennett, H.H. and W. R. Chapline. Soil erosion: a national menace. U.S. Department of Agriculture Circular No. 33. Washington, D.C., U.S. Government Printing Office, 1928.
- <sup>7</sup> Meine, C. 2010. *Aldo Leopold: His Life and Work*, 2010 ed. Madison: University of Wisconsin Press, 186.
- <sup>8</sup> Leopold, A. 1979. Some fundamentals of conservation in the southwest. *Environmental Ethics* 1:131-141.
- <sup>9</sup> Leopold, A. 1933. The conservation ethic. *Journal of Forestry* 31:634-643.
- <sup>10</sup> Leopold, A. 1934. Conservation economics. *Journal of Forestry* 32:537-544.
- <sup>11</sup> Leopold, A. 1935. Coon Valley: an adventure in cooperative conservation. *American Forests* 41(5):205-208
- <sup>12</sup> H.H. Bennett to A. Leopold, 22 May 1935. Aldo Leopold Papers, University of Wisconsin Archives.
- <sup>13</sup> Quotation accessed 7/23/2012 at [http://en.wikiquote.org/wiki/H. L. Mencken](http://en.wikiquote.org/wiki/H._L._Mencken)
- <sup>14</sup> Kolbert, E. 2012. The big heat. *The New Yorker*. 23 July 2012.
- <sup>15</sup> Leonhardt, L. 2012. There is still hope for the planet. *New York Times*. 22 July 2012, SR1.
- <sup>16</sup> Specter, M. 2012. The climate fixers: is there a technological solution to global warming? *The New Yorker*. 14 May 2012.
- <sup>17</sup> Leopold, A. 1939. A biotic view of land. *Journal of Forestry* 37:727-730.
- <sup>18</sup> Meine, C. and R.L. Knight, eds. 1999. *The Essential Aldo Leopold: Quotations and Commentaries*. Madison: University of Wisconsin Press, p. 76.
- <sup>19</sup> Bennett, H.H. 1943. Adjustment of agriculture to its environment. *Annals of the Association of American Geographers* XXXIII (December, 1943): 163-198.
- <sup>20</sup> Berry, W. 2012. It all turns on affection. 2012 Jefferson Lecture in the Humanities. Accessed on 7/23/2012 at <http://www.neh.gov/about/awards/jefferson-lecture/wendell-e-berry-lecture>.
- <sup>21</sup> Brown, P. and G. Garver. 2009. Right Relationship: Building a Whole Earth Economy. San Francisco: Berrett-Koehler Publishers, p. 8.
- <sup>22</sup> Leopold, A. 1949. *A Sand County Almanac and Sketches Here and There*. New York: Oxford University Press, p. viii.
- <sup>23</sup> Flader, S.L. and J.B. Callicott, eds. 1991. *The River of the Mother of God and Other Essays by Aldo Leopold*. Madison: University of Wisconsin Press, p. 318..
- <sup>24</sup> Berry, W. 1981. Solving for pattern. Ch. 9 in *The Gift of Good Land: Further Essays Cultural & Agricultural*. San Francisco: North Point Press.
- <sup>25</sup> Accessed on 7/23/2012 at [http://en.wikipedia.org/wiki/Morrill\\_Land-Grant\\_Acts](http://en.wikipedia.org/wiki/Morrill_Land-Grant_Acts).
- <sup>26</sup> See <http://wormfarminstitute.org>.
- <sup>27</sup> Accessed on 7/23/2012 at [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/about/history/?&cid=nrcs143\\_021412](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/about/history/?&cid=nrcs143_021412).
- <sup>28</sup> Leopold, A. 1947. The ecological conscience. *The Bulletin of the Garden Club of America* (Sept 1947): 45-53. Reprinted in *The Journal of Soil and Water Conservation* 3:3 (July 1948), 109-112.