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AN ADDRESS
TO THE
WINDHAM COUNTY
AGRICULTURAL SOCIETY,

DELIVERED AT THEIR
ANNUAL MEETING,

OCTOBER 2, 1845,

BY J. D. BRADLEY, ESQ.

BRATTLEBORO, VT.:

WM. E. RYTHUR, PRINTER.

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ADDRESS.

PERHAPS it is difficult to say precisely why it is that exhibitions like this we have witnessed, should afford us so much pleasure. The first and obvious reason doubtless is, that *all* that is beautiful and perfect of its kind delights us. Had we seen them any where in the hands of strangers, and seen them separately, each of these specimens which have been gathered here, would alone and for its own sake have given us satisfaction. All beauty pleases us; and, so far as we know, it pleases us only. Man alone of all the visible creation, is authorized to appreciate and enjoy it. He alone of all the creatures on the earth can look on beauty of any kind and say this was made for me. The very existence then of beauty here on earth, is a message of kindness from Him who made it. It is to man as if the single tenant of a desert island were suddenly to hear a voice conversing with him, or were to see before him a friendly letter addressed to himself, and speaking to him of his own thoughts and wishes. But away with all comparisons, they weaken the simple truth itself. Beauty here on earth is the voice of the Great Spirit. It calls on man to separate himself in idea from the angels above him and the brutes below him, and to come forth and contemplate something made for him alone. It says, this have I created for thee and for thee alone. No wonder then, that we can look and enjoy.

I know not how it may be with others, but with me there is another reason why I love to look on these rival products of a thousand farms—each one of them good in itself, is a proof of other good—each one of them is measurably a token that there is comfort and happiness at the home from which it came. These things which we have seen have not been produced by accident, and such things are not apt to come from the household of want or the residence of vice. I like at any rate to imagine when I look on the forehead of the bull—the proud patriarch of the future herd—that I see hanging there not merely the ticket of his number in the inventory, but the motto, ‘all is right on our homestead.’ Then again the honest ox would seem to chew the cud and consider and give me his deliberate and well-matured opinion, that his owner is the right sort of man; a kind master, a hearty, whole-souled feeder, and, for a biped, one of the best he ever knew. Here too is the mild contemplative cow—the picture of benevolence and content. She too has come here for a prize! But it was no ambition of hers,—it was the project of her master and mistress. She knows that they are her prize and she is theirs; and she wishes all who doubt it, to just step into the dairy room.

Welcome, then, four-footed friends! ‘fellow mortals!’ You have each told us something of the home you have left among the mountains. Our hearts are better for having seen you; come again next year and bring your families.

Then again, here are the specimens of household arts. What a fireside history is told by every one of them. How each one of them has written on it the word ‘mother,’ ‘daughter,’ ‘sister,’

or 'wife.' How quick the thoughts fly from them to the picture of a blazing hearth, and a winter evening. We may well view them with respect, for they come here the delegates from a hundred homes.

I like these meetings for the favorable view they give not only of the beasts but the men. In all other contests there is a mixture of evil ; in all other strife there is an alloy of envy. Here all are victors—all are happy even in being outdone.

I like these meetings because they invite our thoughts to the contemplation of the *future*. And how much is included in that same word future, as applied to Agriculture. We have a right to reason of the future from the past. We may reasonably infer that such things as have happened will occur again ; and if we look at the other arts we shall find all their great movements have sprung from the application of their kindred sciences. Let us take an instance ; let us go back a few centuries and look at a certain light piece of steel, which it was found would point to the North after being rubbed with another piece of the same metal. What has this to do with the discovery of America ! Does any one pretend that the destinies of a continent are swinging on this well-balanced toy ? Yet such has been the fact. That piece of steel brought Columbus to our shores. It was that little trembling guide that enabled him to find for himself, and to mark down on parchment for others, his precise path across the ocean. The waves of the mid Atlantic from the morning of their creation had been rolling in silence ; six thousand years they had kept their sullen secret to themselves. This piece of steel has revealed their mystery to all coming ages. That piece of

steel was the Destiny of this Western World ; it has peopled our shores and built our cities ; it has created a commerce which has altered the face of the earth ; it has made distant nations neighbors to each other ; it has given to the paupers of the nineteenth century more of the physical comforts of life than had England's monarchs in the twelfth. And it has done all this, not then cease to be idle and to die, but the piece of steel is still at work, and now, after three hundred years have passed away, as if to remind us of Columbus and that first atlantic chart, it still lingers on his track and comes again to the West and whispers another of its revelations in the ear of our countryman, Morse. Magnetism is at this moment maturing one of its results, the magnitude of which is as difficult of conception or calculation as any that have gone before.

Let us take a more recent instance where science has given a lift, (and it was indeed a lift) in the Mechanic world. Let us go back a few years and look at a man who is intently gazing at something,—it is the lid of a boiling kettle. He is wondering that the mere vapor of heated water should lift that iron. What care we for his thoughts ? What has all this to do with the peopling the interior of America, or the navigation of the Mississippi, the Nile, the Niger, or the Ganges ? What if there is some little vim in hot water, what has that to do with the shores of Lakes and Rivers in the untrodden wilderness ? Shall Rail Roads exist because pot lids rattle ? Yes, my friends, the spirit of the kettle has rivalled its brother of the magnet ; it has looked into the bowels of the earth and decreed that coal beds lying there in its hitherto inaccessible depths shall remain so no longer, but shall lift themselves (not

be lifted, but lift themselves) to the surface among men; it has turned spindles, thrown shuttles, and sent forth to naked millions the luxury of clothing; it has invited industry to the margin of every lake and river; it has again moved up continents still nearer together, and made ferries across oceans; it has unhooked the noble horse from the whipple-tree and has called out, string together your whole caravan! load it with the cargo of a ship or the provisions of an army! for I, the spirit of steam can draw it!

What is past of Commerce and Manufactures is future to Agriculture, for no great division of wants or the industry of Man has appealed to science in vain. Like causes will produce like effects; such things as have happened will occur again.

When I speak of the future progress of agriculture, I am perfectly willing to confess that I expect results every way as brilliant as those which have been mentioned. But let me not be misunderstood. It is not by any one sudden Millerite ascension that Agriculture is to be elevated; it was not so with the Magnet or the Steam Engine. They were the growth of centuries and are probably destined to grow for centuries to come. It is seldom that great advances in human knowledge are of that sudden kind. Inspiration itself was sometimes gradual. The young Jewish Prophet, you remember, was *three times* called and three times answered 'here am I.' Shall Agriculture expect more favor? What I mean is, that Agriculture is now called. Science has already been applied with energy to Commerce and Manufactures, including the Mechanic arts, and the time has now come for the same thing to

be done in this third and last, and greatest division of human industry. I need not labor to prove this. You have heard it, seen it, felt it, that for the last twenty-five years Agriculture and Science have been calling aloud for each other, and the votaries of one and of both have seen that these twain were hereafter to be one.

But what is this problem of which we are speaking—what is expected of Science? What is to happen to Agriculture? Am I sufficiently explicit; if not, it is easy to become so.

Let us take for example a field of that noblest of all plants, Indian Corn. Who is there that has not looked on such a field—admired it as a whole, and on closer scrutiny found some one stem or cluster of stalks with its treble and quadruple burthen? Such a person has the problem before him. Let science tell me all the causes which makes that plant to differ from its fellows, and the problem, so far as one variety is concerned, is solved. Let me know all those causes and know them accurately and thoroughly, and I will have a field of maize like that one hill. Give my neighbors the same knowledge and their fields shall be like mine. This is a simple question; and just such questions can be put about all the other products of the earth. But there is work to be done before the answers can be given. Slowly, steadily, but I believe surely, these answers will be given. The responses, indeed, are already coming, and the younger portion of this audience will a few years hence give a far better account of this matter than we can give to-day.

But if silence has heretofore been silent, why expect her to speak now? Why expect from the future more than we have received from the past?

I answer that the tools have not been ready. The implements with which science will work have been in progress of preparation. This is an entertainment to which chemistry was invited. The world has been waiting till she took her seat among the sciences. Chemistry, without whose help the problem of the cornfield never could be solved, and by whose assistance that same question will be answered, has but yesterday come among us,—but she is now here. Chemistry, since she left the dark and secret chambers of her parent alchemy, has given to the world such a series of brilliant wonders as it never saw before. What corner of the useful arts is not marked by the touch of her hand?

What region of the earth is not full of her labor? But Chemistry herself, brilliant as she is, must be allowed to do things in her own order; and the votaries of medicine and agriculture have clearly seen, and sighed when they saw it, that their turn was destined to be last. In other words, that animal and vegetable chemistry would require of the science the maturity of her strength, and the arms and munitions taken in many a precious victory.

The reason of this is, that a new difficulty here presents itself; whether in medicine or agriculture, whether dealing with plants or animals, there is present at your experiment a new and inscrutable agent, the principle of life. Something you cannot see, touch or define; a spirit that laughs at crucibles and retorts, and mocks at your analysis. When asked what life is, we can indeed cover our ignorance up in words—we can christen it anew, and those who wish to amuse themselves are at liberty to do so. They may tell us learn-

edly that life is the faculty of assimilating other matter, but they have only spoken of one of the properties or effects of life. Suppose we were to describe a horse in this manner to a person who never saw one, and should tell him that a horse was a capacity for assimilating oats, what idea of the animal would the hearer acquire? It is both more honest and more wise to admit at once that life is the mystery of mysteries, and that we cannot fathom it. I am willing to go still further and own that I have no expectation that it ever will be fathomed. Perhaps there is no train of reasoning that will prove it to be so, but there is a kind of consciousness within us that whispers that we are destined never to know in this world, what life is.

But although it is natural that this check should both in medicine and agriculture have rendered the chemist cautious and slow, should have induced him to postpone what he would otherwise have hastened, it is far from having cause for despair. We cannot, indeed, understand what life is, but we can know, and the chemists promise us we shall know, the precise nature of those things which help or hurt life. To this compromise of the matter the world have consented, and the chemists are accordingly at work.

And it is a work full of promise, full of hope. Columbus sailed forth, followed by pity for his madness, or contempt for his folly. Agricultural Chemistry is cheered onward by the wants and the blessings of a toiling world. Columbus launched forward into a dark and stormy abyss, peopled only with superstitious terrors. These Chemists have their own high goal in sight, and every step of their progress receives its full instalment of gratitude and praise.

But it is not chemistry *alone* that is to have an agency in this regeneration of agriculture. There is a minute knowledge of all plants to be perfected. There is the natural history of all animals, including the myriads of insects, yet to be studied, and for this purpose there must be not merely such an investigation as will satisfy the naturalist that his classification is correct, that his wheat weevil for instance is put in the right compartment of his cabinet, or the right chapter of his book. Before this work is finished every suspicious insect must be tried as a vagrant ; he must be forced to tell how he gets his living ; and if his habits are vicious a police of spies must watch for his unguarded moments.

I invite, then, the practical farmer to be the friend of science. He can well afford to be so, for he has the right to look to it as the power which is destined to elevate his calling to the very first rank among human occupations. Instead of being moved by a sneer at 'book farming,' instead of fearing that science will call on him for experiment and expenditure, let him remember that science enables him to be *more* practical to try fewer experiments. It is the very province of science to separate knowledge from guess-work. To draw the boundary line between what is known and what is unknown. This boundary I admit is not stationary. It is not a Chinesewall ; it is rather like the limit of our own West, moving onward. Time honored errors are falling like the venerable forest trees before the axe of the emigrant, and there is sunshine fertility and happiness where they stood.

Let no one suppose that we are looking for-

ward too far, or expecting too much. When centuries of industrious research shall have passed away, this work will be advancing. Ten thousand such centuries would only find it still in progress. We cannot indeed be perfect, but we may forever advance towards perfection. There is room enough, between the finite and infinite, between man and God for a never ending yet never disappointed effort to advance towards him. Sir Isaac Newton spoke of himself as "a child picking up pebbles on the shore of the Ocean of knowledge;" and it is true, and always will be true of man. That ocean we cannot cross, for it is endless; its lowest depths we cannot see, for it is bottomless; but its tides have receded, and will again before him who shall walk calmly and boldly in: he shall visit unhurt what were once its darkest caverns, examine the "thousand fearful wrecks" of others and find

"Wedges of gold, great anchors, heaps of pearl,

"Inestimable stones, unvalued jewels

"All scattered in the bottom of the sea."

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