Renewing husbandry.(PERSPECTIVE). Wendell Berry.
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I REMEMBER WELL a summer morning in about 1950 when my father sent a hired man with a McCormick High Gear No. 9 mowing machine and a team of mules to the field I was mowing with our nearly new Farmall A. That memory is a landmark in my mind and my history for reasons that are clear enough. I had been born into the way of farming represented by the mule team, and I loved it. I knew irresistibly that the mules were good ones. They were stepping along beautifully at a rate of speed in fact only a little slower than mine. But now I saw them suddenly from the vantage point of the tractor, and I remember how fiercely I resented their slowness. I saw them as "in my way." For those who have had no similar experience, I will explain that I was feeling exactly the outrage and the low-grade superiority of a hot-rodder caught behind an aged dawdler in urban traffic. It is undoubtedly significant that in the summer of 1950 I passed my sixteenth birthday and became eligible to solve all my problems by driving an automobile.

This is not an exceptional or a remarkably dramatic bit of history. I recite it here to confirm that the industrialization of agriculture is a part of my familiar experience. I don't have the privilege of looking at it as an outsider. It is not incomprehensible to me. The burden of this speech, on the contrary, is that the industrialization of agriculture is a grand oversimplification, too readily comprehensible, to me and to everybody else.

We were mowing that morning, the teamster with his mules and I with the tractor, in the field behind the barn on my father's home place, where he and before him his father had been born, and where his father had died in February of 1946. The old way of farming was intact in my grandfather's mind until the day he died at eighty-two. He had worked mules all his life, understood them thoroughly, and loved the good ones passionately. He knew tractors only from a distance, he had seen only a few of them, and he rejected them out of hand because he thought, correctly, that they compacted the soil.

Even so, four years after his death his grandson's sudden resentment of the "slow" mule team foretold what history would bear out: the tractor would stay and the mules would go. Year after year, agriculture would be adapted more and more to the technology and the processes of industry and to the rule of industrial economics. This transformation occurred with astonishing speed, and it did so because, by the measures it set for itself, it was wonderfully successful. It "saved labor," it conferred the prestige of modernity, and it was highly productive.

Though I never entirely departed from farming or at least from thoughts of farming, and my affection for my own homeland remained strong, during the fourteen years after 1950 I was much away from home and was not giving to farming the close and continuous attention I have given to it in the forty years since.

In 1964 my family and I returned to Kentucky and in a year were settled on a hillside farm in my native community, where we have continued to live. Perhaps because I was a returned traveler, intending to stay, I now saw the place more clearly than before. I saw it critically too, for it was evident at once that the human life of the place, the life of the farms and the farming community, was in decline. The old self-sufficient way of farming was passing away. The economic prosperity that had visited the farmers briefly during World War II and for a few years afterward had ended. The little towns, that once had been social and economic centers, thronged with country people on Saturdays and Saturday nights, were losing out to the bigger towns and the cities. The rural neighborhoods, once held together by common memories, common work, and the sharing of help, had begun to dissolve. There were no longer local markets for chickens or eggs or cream. The spring lamb industry, once a staple of the region, was gone. The tractors and other mechanical devices certainly were saving the labor of the farmers and farm hands who had moved away, but those who had stayed were working harder and longer than ever.

Because I remembered with affection and respect my grandparents and other country people of their generation, and because I had admirable friends and neighbors with whom I was again farming, I began to ask what was happening, and why. I began to ask what would be the effect on the land, on the community, on the natural world, and on the art of farming. And these questions have occupied me steadily ever since.

By now the effects of this process of industrialization have become so apparent, so numerous, so favorable to the agribusiness corporations, and so unfavorable to everything else, that the questions troubling me and a few others in the 60s and 70s are now being asked everywhere.

There are no doubt many ways of accounting for this change, but for convenience and brevity I am going to attribute it to the emergence of context as an issue. It has become increasingly clear that the way we farm affects the local community, and that the economy of the local community affects the way we farm; that the way we farm affects the health and integrity of the local ecosystem, and that the farm is intricately dependent, even economically, upon the health of the local ecosystem. We can no longer pretend that agriculture is a sort of economic machine with interchangeable parts, the same everywhere, determined by market forces and independent of everything else. We are not farming in a specialist capsule or a professionalist department; we are farming in the world, in a webwork of dependences and influences probably more intricate than we will ever understand. It has become clear, in short, that we have been running our fundamental economic enterprise by the wrong rules. We were wrong to assume that agriculture could be adequately defined by reductionist science and determinist economics.

If you can keep the context narrow enough (and the accounting period short enough), then the industrial criteria of labor saving and high productivity seem to work well. But the old rules of ecological coherence and of community life have remained in effect. The costs of ignoring them have accumulated, until now the boundaries of our reductive and mechanical explanations have collapsed. Now, in the midst of much unnecessary human and ecological damage, we are facing the necessity of a new start in agriculture.

And so it is not possible to look back at the tableau of team and tractor on that morning in 1950 and see it as I saw it then. That is not because I have changed, though obviously I have; it is because, in the fifty-four years since then, history and the law of consequence have widened the context of the scene as circles widen on water around a thrown stone.

My impatience at the slowness of the mules, I think, was a fairly representative emotion. I thought I was witnessing a contest of machine against organism, which the machine was bound to win. I did not see that the team arrived at the field that morning from the history of farming and from the farm itself, whereas the tractor arrived from almost an opposite history, and by means of a process reaching a long way beyond that farm or any farm. It took me a long time to understand that the team belonged to the farm and was directly supportable by it, whereas the tractor belonged to an economy that would remain alien to agriculture, and it functioned entirely by means of distant supplies and long supply lines. The tractor's arrival had signaled, among other things, agriculture's shift from an almost exclusive dependence on free solar energy to a total dependence on costly fossil fuel. But in 1950, like most people at that time, I was years away from the first inkling of the limits of the supply of cheap fuel.

We had entered an era of limitlessness, or the illusion thereof, and this in itself is a sort of wonder. My grandfather lived a life of limits, both suffered and strictly observed, in a world of limits. I learned much of that world from him and others, and then I changed; I entered the world of labor-saving machines and of limitless cheap fossil fuel. After that, it took me years of reading, thought, and experience, to learn again that in this world limits are not only inescapable but indispensable.

My purpose here is not to disturb the question of the use of draft animals in agriculture--though I doubt that it will sleep indefinitely. I want instead to talk about the tractor as an influence. The means we use to do our work almost certainly affect the way we look at the world. It would be absurd to assume otherwise. If the fragment of autobiography I began with means anything, it means that my transformation from a boy who had so far grown up driving a team to a boy driving a tractor was a sight-changing experience.

Brought up as a teamster but now driving a tractor, the boy almost suddenly, almost perforce, sees the farm in a different way: as ground to be got over by a means entirely different, at an entirely different cost. The team, like the boy, would grow weary, but that weariness has all at once been subtracted, and the boy is now divided from the ground by the absence of a link enforcing sympathy as a practical value. The tractor can work at maximum speed hour after hour without tiring. There is no longer a reason to remember the shady spots where it was good to stop and rest. Tirelessness and speed enforce a second, more perilous change in the way the boy sees the farm: Now he sees it as ground to be got over as fast as possible and, ideally, without stopping. In the midst of farming he has taken on the psychology of a traveler by interstate highway or by air. In other words, the focus of attention and the point of reference have shifted from the place to the technology.

I now suspect that if we work with machines the world will seem to us to be a machine, but if we work with living creatures the world will appear to us as a living creature. Be that as it may, mechanical farming certainly makes it easy to think mechanically about the land and its creatures. It makes it easy to think mechanically even about oneself, and the tirelessness of tractors brought a new depth of weariness into human experience, at a cost to health and family life that has not been fully accounted.

Once one's farm and one's thoughts have been sufficiently mechanized, industrial agriculture's focus on production, as opposed to maintenance or stewardship, becomes merely logical. And here the trouble completes itself. The almost exclusive emphasis on production permits the productive processes to be determined, not by the nature and character of the farm in its ecosystem and in its human community, but rather by the national or the global economy and the available or affordable technology. The farm and all concerns not immediately associated with production have in effect disappeared from sight. The farmer too in effect has vanished. He is no longer working as an independent and loyal agent of his place, his family, and his community, but instead as the agent of an economy that is fundamentally adverse to him and to all that he ought to stand for.

After mechanization it is certainly possible for a farmer to maintain a proper creaturely and stewardly awareness of the lives in her keeping. If you look, you can still find farmers who are farming well on mechanized farms. After mechanization, however, to maintain this kind of awareness requires a distinct effort of will. And now we must ask what are the cultural

resources that can inform and sustain such an effort of will. I believe that we will find them gathered under the heading of husbandry, and here my speech arrives finally at its subject.

The word husbandry is the name of a connection. In its original sense, it is the name of the work of a domestic man, a man who has accepted a bondage to the household. We have no cause here, I think, to raise the issue of sexual roles. We need only to say that our earthly life requires both husbandry and housewifery, and that nobody, certainly no household, is excused from a proper attendance to both.

Husbandry pertains first to the household; it connects the farm to the household. It is an art wedded to the art of housewifery. It means caretaking. To husband is to use with care, to keep, to save, to make last, to conserve. Old usage tells us that beyond the household there is a husbandry of the land, of the soil, of the domestic plants and animals--obviously because of the importance of these things to the household. And there have been times, one of which is now, when some people have tried to think of a proper human husbandry of the nondomestic creatures. One reason for this is the dependence of our households and domestic life upon the wild world. Husbandry is the name of all the practices that sustain life by connecting us conservingly to our places and our world, the art of keeping tied all the strands in the living network that sustains us.

And so it appears that most and perhaps all of industrial agriculture's manifest failures are the result of an attempt to make the land produce without husbandry. The attempt to remake agriculture as a science and an industry has excluded from it the age-old husbandry which was central and essential to it, and which denoted always the fundamental domestic connections and demanded a restorative care in the use of the land and its creatures.

This effort had its initial and probably its most radical success in separating farming from the economy of subsistence. Through World War II, farm life in my region (and, I think, nearly everywhere) rested solidly upon the garden, dairy, poultry flock, and meat animals that fed the farm's family. This was the husbandry and the housewifery by which the farm lived. It was simply unthinkable that the farm family would buy at the store any food that they could produce at home. And especially in hard times these families, and their farms too, survived by means of their subsistence economy. The industrial program, on the contrary, suggested that it was "uneconomic" for a farm family to produce its own food; the effort and the land would be better applied to commercial production. The result is utterly anomalous and strange in human experience: farm families that buy everything they eat at the store.

An intention to replace husbandry with science was made explicit in the renaming of disciplines in the colleges of agriculture. Soil husbandry became soil science, and animal husbandry became animal science. This change is worth lingering over because of what it tells us about our susceptibility to poppycock. When any discipline is made or is called a science it is thought by some to be much increased in preciseness, complexity, and prestige. When husbandry becomes science, the lowly has been exalted and the rustic has become urbane. Purporting to increase the sophistication of the study of the humble art of farming, this change in fact brutally oversimplifies it.

Soil science, as practiced by soil scientists, and even more as it has been handed down to farmers, has tended to treat the soil as a lifeless matrix in which soil chemistry takes place and nutrients are made available. And this, in turn, has made farming increasingly shallow--literally so--in its understanding of the soil. The modern farm is understood as a surface on which various mechanical operations are performed, and to which various chemicals are applied. The under-surface reality of organisms and roots is mostly ignored.

Soil husbandry is a different kind of study, involving a different kind of mind. Soil husbandry leads, in the words of Sir Albert Howard, to understanding "health in soil, plant, animal, and man as one great subject." We apply the word health only to living creatures, and to soil husbandry a healthy soil is a wilderness, mostly unstudied and unknown, but teemingly alive. The soil is at once a living community of creatures and their habitat. A good farm, like its good soil, is both a community and a dwelling place. The farm's husband, its family, its crops and animals, all are members of the soil community; all belong to the character and identity of the place. To rate the farm family merely as "labor" and its domestic plants and animals merely as "production" is thus an oversimplification, both radical and destructive.

Science is too simple a word to name the complex of relationships and connections that compose a healthy farm--a farm that is a full membership of the soil community. If we propose, not the reductive science we generally have, but a science of complexity, that too will be inadequate. A science even of complexity will not be complex enough, for any complexity that science can comprehend is going to be necessarily a human construct, and therefore too simple.

The husbandry of mere humans of course cannot be complex enough either. But husbandry always has understood that what is husbanded is ultimately a mystery. A farmer, as one of his farmer correspondents once wrote to Liberty Hyde Bailey, is "a dispenser of the 'Mysteries of God.'" The mothering instinct of animals, for example, is a mystery which husbandry must use and trust mostly without understanding. The husband, unlike the manager or the would-be objective scientist, belongs inherently to the complexity and the mystery that is to be husbanded, and so the husbanding mind is both careful and humble. Husbandry originates precautionary sayings like "Don't put all your eggs into one basket" and "Don't count your chickens before they hatch." It does not boast of technological feats that will "feed the world."

Husbandry, which is not replaceable by science, nevertheless uses science, and corrects it too. It is the more comprehensive discipline. To reduce husbandry to science, in practice, is to transform agricultural "wastes" into pollutants, and to subtract perennials and grazing animals from the rotation of crops. Without husbandry, the agriculture of science and industry has served too well the purpose of the industrial economy in reducing the number of landowners and the self-employed. It has transformed the United States from a country of many owners to a country of many employees.

Without husbandry, soil science too easily ignores the community of creatures that live in and from, that make and are made by, the soil. Similarly, animal science without husbandry forgets, almost as a requirement, the sympathy by which we recognize ourselves as fellow creatures of the animals. It forgets that animals are so called because we once believed them

to be endowed with souls. Animal science has led us away from that belief or any such belief in the sanctity of animals. It has led us instead to the animal factory which, like the concentration camp, is a vision of Hell. Animal husbandry, on the contrary, comes from and again leads to the psalmist's vision of good grass, good water, and the husbandry of God.

(It is only a little off my subject to notice also that the high and essential art of housewifery, later known as home economics, has now become family and consumer science. This presumably elevates the intellectual standing of the faculty by removing family life and consumption from the context--and the economy--of a home or household.)

Agriculture must mediate between nature and the human community, with ties and obligations in both directions. To farm well requires an elaborate courtesy toward all creatures, animate and inanimate. Perhaps it is sympathy that most appropriately enlarges the context of human work. Contexts become wrong by being too small--too small, that is, to contain the scientist or the farmer or the farm family or the local ecosystem or the local community--and this is crucial. "Out of context," as Wes Jackson has said, "the best minds do the worst damage."

Needing a way to give an exact sense of this necessary sympathy, the feeling of husbandry at work, I have found it in a book entitled Feed My Sheep by Terry Cummins. Mr. Cummins is a man of about my age, who grew up farming with his grandfather in Pendleton County, Kentucky, in the 1940s and early 50s. In the following sentences he is remembering himself at the age of thirteen, in about 1947:

> When you see that you're making the other things feel good, it gives you a good feeling, too. The feeling inside sort of just happens, and you can't say this did it or that did it. It's the many little things. It doesn't seem that taking sweat-soaked harnesses off tired, hot horses would be something that would make you notice. Opening a barn door for the sheep standing out in a cold rain, or throwing a few grains of corn to the chickens are small things, but these little things begin to add up in you, and you can begin to understand that you're important. You may not be real important like people who do great things that you read about in the newspaper, but you begin to feel that you're important to all the life around you. Nobody else knows or cares too much about what you do, but if you get a good feeling inside about what you do, then it doesn't matter if nobody else knows. I do think about myself a lot when I'm alone way back on the place bringing in the cows or sitting on a mowing machine all day. But when I start thinking about how our animals and crops and fields and woods and gardens sort of all fit together, then I get that good feeling inside and don't worry much about what will happen to me. (1)

This passage goes to the heart of what I am trying to say, because it goes to the heart of farming as I have known it. Mr. Cummins's sentences describe an experience regrettably and perhaps dangerously missing now from the childhood of most children. They also describe the communion between the farmer as husband and the well-husbanded farm. This communion is a cultural force that can exist only by becoming personal. To see it so described is to understand at once how necessary and how threatened it now is.

So far, I have tried to say what husbandry is, how it works, and why it is necessary. Now I want to speak of two paramount accomplishments of husbandry to which I think we will have to pay more deliberate attention, in our present circumstances, than we ever have before. These are local adaptation and local coherence of form. It is strange that a science of agriculture founded on evolutionary biology, with its practical emphasis on survival, would exempt the human species from these concerns.

True husbandry, as its first strategy of survival, has always striven to fit the farming to the farm and to the field, to the needs and abilities of the farm's family, and to the local economy. Every wild creature is the product of such an adaptive process. The same process once was a dominant influence on agriculture, for the cost of ignoring it was hunger. One striking and well-known example of local adaptation in agriculture is the number and diversity of British sheep breeds, most of which are named for the localities in which they were developed. But local adaptation must be even more refined than this example suggests, for it involves consideration of the individuality of every farm and every field.

Our recent focus upon productivity, genetic and technological uniformity, and global trade--all supported by supposedly limitless supplies of fuel, water, and soil--has obscured the necessity for local adaptation. But our circumstances are changing rapidly now, and this requirement will be forced upon us again by terrorism and other kinds of political violence, by chemical pollution, by increasing energy costs, by depleted soils, aquifers, and streams, and by the spread of exotic weeds, pests, and diseases. We are going to have to return to the old questions about local nature, local carrying capacities, and local needs. And we are going to have to resume the breeding of plants and animals to fit the region and the farm.

The same obsessions and extravagances that have caused us to ignore the issue of local adaptation have at the same time caused us to ignore the issue of form. These two issues are so closely related that it is difficult to talk about one without talking about the other. During the half century and more of our neglect of local adaptation, we have subjected our farms to a radical oversimplification of form. The diversified and reasonably self-sufficient farms of my region and of many other regions have been conglomerated into larger farms with larger fields, increasingly specialized, and subjected increasingly to the strict, unnatural linearity of the production line.

But the first requirement of a form is that it must be comprehensive; it must not leave out something that essentially belongs

within it. The farm that Terry Cummins remembers is remarkably comprehensive, and it is not any one of its several enterprises alone that made him feel good, but rather "how our animals and crops and fields and woods and gardens sort of all fit together."

The form of the farm must answer to the farmer's feeling for the place, its creatures, and its work. It is a never-ending effort of fitting together many diverse things. It must incorporate the life cycle and the fertility cycles of animals. It must bring crops and livestock into balance and mutual support. It must be a pattern on the ground and in the mind. It must be at once ecological, agricultural, economic, familial, and neighborly. It must be inclusive enough, complex enough, coherent, intelligible, and durable. It must have within its limits the completeness of an organism or an ecosystem.

The making of a form begins in the recognition and acceptance of limits. The farm is limited by its topography, its climate, its ecosystem, its human neighborhood and local economy, and of course by the greater economies, and by the preferences and abilities of the farmer. The true husbandman shapes the farm within an assured sense of what it cannot be and what it should not be. And thus the problem of form returns us to that of local adaptation.

The task before us, now as always before, is to renew and husband the means, both natural and human, of agriculture. But to talk now about renewing husbandry is to talk about unsimplifying what is in reality an extremely complex subject. This will require us to accept again, and more competently than ever before, the health of the ecosystem, the farm, and the human community as the ultimate standard of agricultural performance.

Unsimplification is difficult, I imagine, in any circumstances; our present circumstances will make it especially so. Soon the majority of the world's people will be living in cities. We are now obliged to think of so many people demanding the means of life from the land, to which they will no longer have a practical connection, and of which they will have little knowledge. We are obliged also to think of the consequences of any attempt to meet this demand by large-scale, expensive, petroleum-dependent technological schemes that will ignore local conditions and local needs. The problem of renewing husbandry, and the need to promote a general awareness of everybody's agricultural responsibilities, thus becomes urgent.

How are we to do this? How can we restore a competent husbandry to the minds of the world's producers and consumers?

For a start of course we must recognize that this effort is already in progress on many farms and in many urban consumer groups scattered across our country and the world. But we must recognize too that this effort needs an authorizing focus and force that would grant it a new legitimacy, intellectual rigor, scientific respectability, and responsible teaching. There are many reasons to hope that this might be supplied by our colleges of agriculture, and there are some reasons to think that this hope is not fantastical.

With that hope in mind, I want to return to a precaution that I mentioned earlier. The effort of husbandry is partly scientific but it is entirely cultural, and a cultural initiative can exist only by becoming personal. It will become increasingly clear, I believe, that agricultural scientists, and the rest of us as well, are going to have to be less specialized, or less isolated by our specialization. Agricultural scientists will need to work as indwelling members of agricultural communities or of consumer communities. Their scientific work will need to accept the limits and the influence of that membership. It is not irrational to propose that a significant number of these scientists should be farmers, and so subject their scientific work, and that of their colleagues, to the influence of a farmer's practical circumstances. Along with the rest of us, they will need to accept all the imperatives of husbandry as the context of their work. We cannot keep things from falling apart in our society if they do not cohere in our minds and in our lives.

(1) Published with permission from Terry Cummins.

WENDELL BERRY *

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