

## THE FUTURE OF AGRICULTURAL EDUCATION A VIEW FROM THE BLEACHERS

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This essay is about agricultural education and its future. Included is a consideration of agricultural education in the public schools, in the agricultural extension services and in agricultural colleges. It does not omit an extremely important dimension, agricultural research --- its presence, its process and its performance.

### Introduction and Point of View

This essay pivots on some distinctive and often unwelcome points of view about agricultural education, points of view which will be displayed at the outset so that readers will not be puzzled about the nature of the views which inform the essay. Directly or indirectly, most similar essays about agricultural education include their own framework for thinking or bases for choosing the arguments made. Here such a framework exists; it is laid out clearly at the very beginning.

A first view, one which transcends the entire essay, is the importance of agricultural education being perceived, and planned, as holistic. This means that agricultural education can and should function as a single interactive system as long as it relies on a single source of revenue, the longsuffering taxpayer. In contrast, agricultural education now functions as a collection of independent and competing republics with overlapping budgets, boundaries and missions.

As perceived herein, a holistic view does not require organizational merging or forced collaboration. But it does require that methods be regarded as subsidiary to goals and that coordination in goal attainment be seen as a measure of institutional and agency leadership as well as professionalism. If one's only source of information about agricultural education were the United States Department of Agriculture (USDA), the United States Department of Education (USDE) or the state and local subsidiaries of one or the other of these two federal departments, one would get a very incomplete and distorted picture of agricultural education in the country. Similar misinformation and distortion can be seen by looking at the information about education supplied officially by the United States to international organizations in which the country maintains membership. Agricultural education is among this nation's most territorialized activities and it should be no surprise to see institutionalized larceny as a fully accepted way of handling competing claims.

In such a context, a holistic view tends to seem strange and unloved. To many who are internal to the bureaucracy, a mere mention of this situation appears like biting the hand that feeds. So it is rarely on the agenda. Yet one should not claim to be discussing the future unless it is on the agenda. A holistic view is most acceptable at the level of local communities where the taxes are paid and programs operated. It is least acceptable at state and federal levels where regulations are written and bureaucracies are preserved. Glasnost (e.g. openness) is as important to American citizens as to Soviet citizens. The American public, and especially rural people deserve to know how much better they could be served if agricultural education could function in the framework of a holistic view at all levels.

A second point-of-view transcending this essay is that of an iconoclast, in this case a friendly, internal critic. An iconoclast is one step more severe than a dissident, one who merely disagrees. Ordinarily, an iconoclast will actively challenge established beliefs and institutions, not to destroy but to improve them.

In the United States, academic freedom is thought to be widely available and in constant use. Yet dissidents and iconoclasts may, in a variety of subtle ways, be as suppressed, muffled and deterred as in many countries of Eastern Europe or Asia. Academic freedom, nor any other kind, should ever be valued for its mere presence; it should be valued solely when exercised. Freedom is what people make of it. It is not a permanent condition; it must be rewon with each generation. And freedom unexercised is no freedom at all. In America, academic freedom is very often claimed and very seldom exercised.

The agricultural sector in the United States, particularly its academic elements, has existed for many years without the lively presence or the steady influence of iconoclasts. Some would regard this as paradoxical since academia claims to encourage dissent and pluralism. Others would view it suspiciously, wondering whether academic life would be too threatening for an iconoclast in agriculture. Both views are probably correct. And it is likewise true that the presence of iconoclasts could do much to introduce candor, to diminish cant and to avoid bureaucratic incest.

Peer review of agricultural research or administrative performance is never enough. Needed even more is recurring review and renewal of institutional functions and structures. The so-called peers in agriculture's peer review system tend to share what has come to appear as a grant of messianic privilege, that glow of self-indulgent optimism which flows from unquestioned faith in any self-serving ideology.

The presence of iconoclasts may have resulted in a totally different, and far more accurate, recorded history of agricultural development in the United States. Land-Grant Colleges and their alleged contribution may have had little or nothing to do with the actual success of American agriculture. It may have emerged from a combination of sparsely occupied land with abundant natural resources, a flow of literate immigrants clamoring for higher levels of literacy, a decentralized and loyally supported common school system, an undaunted work ethic, a context of industrial creativity and growing cities to absorb the human and food surpluses.

In an atmosphere so rich in all of the necessary ingredients, e.g., natural resources, human initiative and creativity, one must conclude that it would be an enormous mistake, as often happens in histories written solely from a Land Grant College perspective, to overlook them. And it would be a mistake to ignore the ways in which agricultural education can combine with these ingredients in the future to prompt even more vigorous development.

A third point of view is identified in the title of this essay. It is a view from the bleachers. This does not mean that the view is casual, indifferent or uninformed. Quite the opposite, a view from the bleachers means that there is full knowledge of the game, its players, the rules of ethics and the conditions under which it is played.

Readers who are uncomfortable with these points-of-view should choose not to go on. For them, the journey could become even more uncomfortable. These points-of-view have been adopted because the public is not well served when public programs begin to employ ostrich maneuvers. To snipers and jesters, such maneuvers always expose a highly vulnerable part of one's being.

It was undoubtedly an overstatement when an expert in government waste decided to include the Agricultural Extension program among the country's "Ten worst taxpayer rip-offs" (Lambro, 1986). Unless agricultural education designs a future for itself which includes introspection, a holistic view, some iconoclasts and a view from the bleachers, any criticism directed at the field in the future is likely to be an understatement.

#### **The Dominant Forces of the Century**

The foregoing involves points-of-view which may be accepted, rejected or amended. No such convenience can be attached to the two major forces which have dominated the events, and thus shaped the patterns of human history, in the 20th century. Sometimes these forces are as subtle as they are pervasive. It is in the public interest, accordingly, to scrutinize their influence on agricultural education and on rural life.

The first of these forces is the development of the sciences and technology. It is undoubtedly the greatest success story of the century. Developments in communication, transportation and in the techniques of production have been spectacular. Yet developments in the sciences and technology have introduced some of the major disasters or potential disasters of the century. The intolerable mountains of waste from overbuilt nuclear weapons systems by superpowers are among the least discussed and yet among the most serious. Environmental pollution in all forms is a derivative of the success story of science and technology.

While development in the sciences and technology has been global in scale with influences reaching to every home and to every classroom, the nature of this influence has been very uneven. Large groups of people and important industries are relatively unserved, indeed even shortchanged. This is particularly true of agriculture and rural people. While continuing to sustain allusions that

agriculture and Rural America are well served by research, agricultural colleges and experiment stations, an important part of the agricultural education complex, do not have a record of performance to match their claims. More on this later.

The second force dominating the events and shaping the record of the century is the presence of ideological rigidities, forces which have altered the lives of nearly every member of the human family. These include totalitarian tyrannies, recurrent nationalism, racism and the frequent renewal of theocracies. It is seen in divided countries, barriers to intellectual exchange, abuses of secrecy and expressions of tribalism.

It's now quite clear that the greatest conflicts of the century have not been between capitalism and socialism or between religion and secularism but between those who are still seeking the truth and those who are certain that they have already found it. It would be foolhardy to think that agricultural education in colleges and experiment stations has not succumbed to such ideological rigidity. It is seen regularly in a dogged reliance on unquestioned answers, a commitment to the one best way of doing things, a rejection of pluralism and repeated expressions of the need to give unearned loyalty.

So it is not necessary to look beyond the boundaries of agricultural education to find ideological rigidities. They have become so common and so unquestioned that they exist comfortably alongside pronouncements to the contrary. They are particularly visible in an ideological attachment to certain methods and procedures as if such were somehow ordained by special dispensation.

Such belief in absolutes may be the greatest enemy of intellectual life. It is monistic, deductive, hierarchical, and most often rewarded only by top-down decision or authority. Those who favor absolutes are also those who favor first principles, rules which enforce prior certainty. In agricultural education, absolutes often appear in curriculum requirements called prerequisites or foundations, a variation of an absolute whose validity is rarely questioned. The maximum danger occurs when such absolutes are procedural in character, advancing the one best way to discover, construct or convey correctness or truth. To an excessive degree, the production and dissemination of agricultural knowledge in the United States has become a victim of this kind of absolutism. It has become imprisoned within the boundaries of bureaucratic incest and indifferent to the extent to which the means of the bureaucracy have become more important to those in charge than the ends which are important to clients.

### **The Collegiate Level - Mandates Accepted and Redirected**

The agricultural college in each state which is authorized by its state legislature to be the recipient of Morrill Act funds occupies an enviable pinnacle. It is the flagship of the entire agricultural education system and sometimes all other systems. It wields enormous power and prestige. It stands above the State Departments of Agriculture and above most other publicly - supported agricultural activities.

The Morrill Act of 1862 (also known as the Land Grant Act) was legislation passed by Congress during the nation's most serious social crisis. The legislation became the nation's most significant educational reform; it created an entirely new system of public colleges and universities. Such an action was a courageous act of faith in a country whose resources had been severely drained by war, whose unity was threatened by 18 states having already seceded from the union and in a country which already had an abundance of public colleges and universities. The legislation was thought to be warranted by the severity of the social crisis and by the determination of Congress to create new types of institutions intended to be an escape from elitism, institutions designed to serve the previously unserved — the "sons and daughters of farmers and mechanics". This was soft legal language for what, in those years, would have been better understood had they been called schools for the working classes or the poor. In those years, Harvard College, for example, was still among those attempting to make membership in the Social Register a requirement for admission.

Administrative offices in Land-Grant institutions have done much to redirect the intent of the Morrill Act, to rewrite the record to yield a preferred history and to substitute an alternative imagery. A favorite alternative is the three-legged stool of research, extension and resident instruction. This is defective history and, worse, it is questionable ethics. Neither the Morrill Act nor any of its amendments mentioned research or extension. Its central feature was teaching. More importantly, it said almost nothing about what to teach, how to teach or where to teach. It had a singular focus, namely, on who to teach.

### The Collegiate Level - Modes of Operation

During the 20th century, agricultural colleges in America have existed in two sequential modes, an interactive mode and a proprietary. In turn these will be discussed in the following paragraphs. The move from one mode to the other is a part of the redirection of the intent of the Morrill Act.

An interactive mode is the proper term to associate with Land-Grant Colleges during the first four decades of this century. The institutions were on their way toward being leaders in educational thought, practice and technology. To support pioneering efforts in agricultural research, the agricultural colleges at Rothemstad, Ames, St. Paul and Raleigh had become the leading places, for example, to study the mathematics of probability. Colleges of agriculture were among the first to conduct summer session instruction for teachers. The colleges and their faculties worked closely and cooperatively with school systems; farmer's organizations; groups interested in rural electrification, food preservation, educational television, and with other state institutions or activities endeavoring to serve rural people. In general, the era of the interactive mode was one in which agricultural colleges saw themselves as another major player in the game of attempting to define a wider and deeper community of interest in the problems faced by rural society.

A proprietary mode is an appropriate description for the style of Land-Grant Colleges during the fifth through the ninth decades of the century. Agricultural research began to suffer seriously from structural stagnation. In the early decades of the century, agricultural colleges owned the state-of-the-art and controlled the state-of-knowledge in agriculture. All or most of it could be found on the college's acres, in its laboratories or classrooms. In the later decades, much of the state-of-the art was to be found in corporations or in other government organizations or institutions. Industrial technology and machinery moved far ahead of agricultural technology or machinery. Agricultural engineering shops and laboratories in colleges of agriculture began to resemble museums. Other departments in the colleges found it easier to hide their stagnation.

Even more of the stagnation is internal. In a highly traditional way, research is organized within commodity boundaries corresponding to departmental organization. This sustains the faulty premise that there is a reasonable fit between the reward and tenure goals of commodity-organized researchers and the need for a flow of new knowledge into the variety of educational channels leading to utilization in agriculture or for rural people. Owing to the absence of a forum in which clients can participate, nothing is more opaque than the issue of whether agriculture's research should be focused toward individuals, institutions, corporations, agencies or groups. Similarly opaque is the question of balance in benefits accruing to such entities. In this proprietary mode, the needs of clients continue to appear subsidiary to the arbitrary and capricious choices made within the research bureaucracy. And feedback from practitioners, once thought to be a special strength of agricultural research, has become disorganized, fragmented and without any sense of ownership by those affected.

It is the extension enterprise, however, which illustrates most of the defining character of the proprietary mode. It is the familiar scenario wherein agricultural knowledge is vertically integrated, that is, it is held within proprietary administrative boundaries from the time of its origin to its delivery to an ultimate user. This role is not shared with any other intermediary and there is no effort, accordingly, to strengthen, support or even acknowledge other intermediaries. Protective custody joins research, extension and teaching activity in an inward-looking mode. It is insular, self-serving, limiting and increasingly separated from the frontiers of educational thought and practice.

In this mode, faculties in colleges of agriculture do not appear anxious to join in any way with faculties in other systems within a state, even those involved in agriculture. Shared goals in institutional missions are rarely sought or discovered. The most rapidly expanding system of higher education in America during the past 30 years has been the community college system. To this, colleges of agriculture have responded, not with cooperation and collaboration, but with indifference or disdain. A few have tried to compete by establishing their own two-year technical colleges, thus emphasizing even more their proprietary tendencies.

The instructional function in agricultural colleges has become the subject of widespread consternation. As a proportion of total post-secondary school enrollments, College of agriculture enrollments have been plummeting for three decades. It has now dropped to about 1.5 percent of all four-year degrees granted in the country. Of all of the four-year degree programs in the country, colleges of agriculture have demonstrated the most dramatic disengagement with their clients or

potential clients. As claimed by the colleges, agriculture may be more than farming, but it will never be more important than farmer's or rural people.

One further comment should be made about the proprietary mode, namely, the domination of this mode in America's effort to assist with agricultural development in third world countries. Combined with an absence of an holistic view and a land grant concept which evolved as a bureaucratic redirection (rather than a accurate historical reality), the proprietary mode has been the most dominant feature of America's enormous investment in the agricultural development of the third world. It is an investment with meager dividends and few success stories. One shouldn't expect more of an effort which is primarily methodological and one which continues to invest most of its energy in celebrating an ideological rigidity. As usual, ideology became a major substitute for thought. One can only hope that in the 21st century, agricultural development resources will be invested more carefully.

#### **Agricultural Extension and Agricultural Instruction in Schools: Change and Vulnerability**

Agricultural teachers in schools and agricultural extension workers constitute the largest block of public employees in the agricultural sector. There are about 12000 in each category. Almost all of the teachers live and work in local communities. About half of the extension workers exist at state levels.

The two groups serve the same areas of local geography and the same local clients. Their source of funds is the same; the taxpaying public. Structurally and professionally, the two groups are completely separated. Their professional literature is distinctly separate. Professionals in one group rarely publish in the literature of the other. The individuals in the two groups do not attend each other's conferences. News or information sent by supervisory levels to one group at public expense is not sent to the other. There are few, if any, examples of joint effort to differentiate or join the missions of the two groups to assure coordinated effort or even to assure a more effective use of public resources.

It is not easy to describe how this could happen. It is impossible to justify. Bureaucratic inadequacy and incompetence, perverse ideology, a vacuum of leadership, neglect by the press, legislative indifference and the triumph of a proprietary mode of operation in agricultural colleges - all of these are present. It is the seedbed in which government waste can flourish and mismanagement can thrive.

The literature of both fields shows some growing anxiety and apprehension about the future. It is clear that both fields have begun to feel threatened. Agriculture teaching in schools became a victim of the excellence movement of the 80's. The movement defined a subject-matter route to excellence and agriculture, an elective subject, was crowded out of many schools. Predictably, agricultural colleges reacted with aloofness and indifference. The previously mentioned observation about agricultural extension being a flagrant "taxpayer rip-off" is a part of this growing apprehension.

Both of the fields have undertaken recent efforts to engage in review and evaluation. A recent effort in each field will be mentioned. In 1987, the United States Department of Agriculture and the Virginia Cooperative Extension Service produced a report entitled, Extension in Transition: Bridging the Gap Between Vision and Reality, (Futures Task Force, 1987). The Report rejects the notion that agriculture's idea-marketplace would continue to be driven by the project-funding success of researchers linked to commodity-oriented research orthodoxies. Also it began to dull the glow of earlier paradigms — the technology transfers, the adoption mystiques and the self-congratulatory excesses which had set the tone for much of the earlier writing. The Report lamented the commodity orientations to which agriculture's research agenda is linked but it offered no actionable alternative. It is written to lead readers to believe that the USDA and the state extension services are independent variables, which they aren't, and that everything influenced by extension is a dependent variable which, again, is untrue. Agricultural teaching is not mentioned in the Report. A holistic view is obviously missing.

In 1988, the National Research Council's Board on Agriculture completed a 3-year study and issued a report entitled, Understanding Agriculture: New Directions For the Future (National Research Council, 1988). The Report offered 12 recommendations. Most are not actionable by the sponsors of the study and the report contains no "new directions for education" to be taken by colleges of agriculture. The Report is clearly indicative of how the Board on Agriculture of the NCR is, in its

membership and its actions, among the most tradition-bound organizations in existence. There is almost no likelihood that the Report will have even the slightest effect on the agenda or mission of colleges of agriculture in the United States.

### **A Goal Worth Achieving**

The Agricultural Colleges of the United States have gone through several self-assessments and reviews. Most have occurred in individual institutions, none has been planned deliberately for the system as a whole. I say deliberately because the one which occurred in November 12-16, 1961 was not intended to be a critique of the system; it was intended to be a festival of accolades describing the achievements of the system on its 100th birthday. It was the Centennial Convention of the American Association of Land-Grant Colleges and State Universities holding their 75th annual Convention in Kansas City, Missouri. Invited to give comments on two major presentations on the evaluation of the system was Dr. Theodore Schultz, a Professor at the University of Chicago who had attended one Land-Grant College, served as a Department Chairman in another and who later became a Nobel Laureate in economics for his work in human capital formation at a third.

Professor Schultz moved quickly to his most important point, a point which he called a "neglected opportunity of major magnitude, so close and such a natural part of the task of Land Grant colleges that it is hard to believe that it could be overlooked all these years. But it is not in plants and animals, soils and yields, growth regulators or genetic improvements or in the fundamentals of science that open doors to the development of new and better techniques of production. The neglected opportunity is in the education of farm people." "The education of farm people "Shultz continued, "lags behind most other groups in the nation. They are the least benefitted from science and technology, even much of what has occurred in agriculture" (Shultz, 1961).

Schultz added that "Agricultural college officials will say," "Too bad, but elementary and high schools, even those in agriculture are not our business?" Shultz responds, "Nor is farming your business but you have contributed greatly to it. You can also develop and mobilize intellectual resources in behalf of the schools which serve farmers and their children."

At the end of the conference, Professor Shultz concluded that the neglected opportunity for agricultural colleges and the central purpose of the Morrill Act is "still open to them." Now, almost three decades later, as we prepare to enter the last decade of the century, the opportunity has not been seized. It is still open!!!

### **Imperatives for the Future of Agricultural Education**

In considering the future, there should be no mystique nor guesswork even though the future may include a great deal of uncertainty. The future will be influenced by forces presently at work which are likely to continue. Some may exert stronger influences in the future, some may weaken and some entirely new forces may appear on the scene. Becoming informed about the future involves the orderly process of analyzing the influence of these forces.

Some would argue that the future doesn't merely happen; it is created or invented. This means that humans tend to nurture the forces which move them toward desired futures and they suppress the forces which move them toward undesirable ends. This appears as if it were merely particularizing the obvious but it is, nevertheless, the way futures are created.

Others would argue that a better way to consider the future is to invent alternative scenarios of the future and to carefully analyze the comparative costs and consequences of each scenario. This is not greatly different from the first example but it has the advantage of presenting a mix or a configuration of forces at work.

The first and most important imperative for the future of agricultural education is to focus on people. This is the unfinished work of American's most important educational reform, the Morrill Act of 1862. Elevating human possibilities among rural people is the most important goal which agricultural education can pursue.

A second imperative for the future is to recognize, and act upon, agriculture's leadership crisis. Here it would be a mistake to limit a focus on the simple ability of individuals to convene, to appoint or to manage budgets. This is merely the ability to utilize assigned power. What is imperative for the future is the ability to identify and hone the creative talents of people and to direct these toward

elevating human possibilities. Contrived leadership has had its turn. It is now time for real leadership.

A third imperative for the future involves recapturing a creative role for science and technology in agriculture and for rural people. This means that ways should be sought for every aspect of rural life to be informed by inquiry with agricultural colleges leading the inquiry and also the informing process. Agriculture and rural people need not become the residual claimants of new technology; those who receive it many years after it is introduced to other industries. Agriculture and rural people should become prior claimants; those among the first to benefit from advancing technology, not only to maximize production but to conserve productive capacity.

A fourth imperative for the future of agricultural education is to recognize and to reduce the effect of ideological rigidities, the propensity to find one best way to do things and to find it excessively easy to substitute means for ends. Agricultural education needs a massive renewal of intellectual life. The best way to begin is through introspection, an acceptance of pluralism and a willingness to be in the forefront in educational thought and practice.

To reach such a future during the 21st century, agricultural education needs more than tinkering, it needs a thorough transformation.

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