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Structural Change in Higher Education: Implications for Agricultural Economics Extension; or Does Diffidence, Decadence and Dissonance Make a Difference?

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Abstract

Discussion of changes taking place in American agriculture followed by a review of the traditional model of extension suggests there is dissonance between what is needed to inform contemporary agriculture and what extension actually does. The paper further suggests that difficulty in packaging the newly needed information in ways that achieve the institutional maintenance objectives of extension explain a part of the system's decadence and reluctance to change. Since the intellectual problems of market failure, even political market failure, are within the domain of economists, diffidence by agricultural economists to those issues within the Land-Grant system can make a difference.

Key Words: contemporary agriculture, dissonance, extension, institutional maintenance, market failure.

Introduction

I'm not sure what "structural change in higher education" means. However, I do have some sense that there are significant changes taking place in the character of the social and economic environment within which universities, particularly Land-Grant universities, operate. I propose to argue that some of the fundamental insights about what is happening to the Land-Grant system are to be had from our economics discipline. We in Agricultural Economics are best able to describe to our Land-Grant colleagues the sources of the dissonance between contemporary reality and current programs and budgets that clearly fit the definition of decadence. If that is true then our diffidence to that situation will make a difference.

No place in the Land-Grant system is the change more evident than in the dilemmas facing the extension system. Pink slips to all of the field staff in Iowa, a twenty-eight percent cut in the budget in Georgia, almost that magnitude of cut in Virginia over three years, and massive reorganizations and realignments of extension in order to save money in the face of declining budgets all across the country, are evidence of the stress in the face of change that the Extension system is experiencing. It is within the portion of the extension program serving farming and the agricultural economy that the change and stress are most evident because of the declining size of that audience and the pressures to change the way it is managed.

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I would prefer to make this a discussion of extension strategies and programs for rural communities. However, the commitment of resources to agricultural programs, the symbolic importance of agricultural programs to the extension model, and the changes taking place in the circumstances of American agriculture require that if I am to fulfill the objectives suggested in the assigned topic, there must be a major examination of agricultural extension programs. It is true that many of the points to be made about agricultural extension are equally applicable to the rest of the extension system.

I propose therefore to review the changes taking place in American agriculture, to review the traditional extension model, to compare that model with contemporary reality, and then to examine the implications of the dissonance between the two to the political economy of extension and our Land-Grant system.

Forces of Change in American Agriculture

At the 1992 AAEA meetings in Baltimore I suggested the following as among the significant changes or influences for change in the political economy of farming and the agricultural economy (McDowell, 1992):

1. The budgetary excesses (as much as \$50 billion in 1986) of the 1985 Farm Bill were such that agriculture and farmers will hence forth be viewed as "on the dole" and policies on their behalf will no longer be a sacred cow.
2. The demand for farm commodities is more income inelastic than is the demand for environmental quality. What this means is that as our economy improves and grows, farming will continue to be closely scrutinized on environmental grounds and farmers will consistently lose to environmentalists if they force a choice.
3. Agricultural and other food products are increasingly being linked to commodity attributes at the production level. Thus it is that many more farm product markets are beginning to look like markets for differentiated products. These changes

have a great deal to say about both the markets and the management of the firms within the markets. It may very well be that Demming's Total Quality Management (TQM) will be the new farm management and marketing of the future.

4. "Disintermediation", or the reduction in the numbers of transactions and actors in the production, processing and distribution of agricultural based commodities into retail products, is increasingly the rule in many commodity markets. Some of this is accomplished by the greater influence of vertical integration and/or vertical coordination through contracts and other coordination mechanisms. Though not unrelated to the greater differentiation in agricultural commodities markets, there appear to be other forces that are influencing that change.
5. The greater influence of international markets and the internationalization of domestic markets has resulted in an increasingly complex set of finance and marketing circumstances for many agricultural commodities.
6. The proposition of Castle, that farming may be an industry with a constantly declining or flat long-run average cost curve, appears to be increasingly in evidence. That is, economies of size appears to continue to hammer smaller producers with the result that fewer and fewer producers are producing the major portion of output. When coupled with the previous 5 propositions, agriculture is increasingly in the hands of the strong, and the strong are increasingly big.
7. Risk, and the varying perceptions and valuation of risk by consumers in the market place and with respect to the environment, are having a profound effect on both food production and processing. Included in this issue of consumer risk, is the greater awareness, and faddism, in dietary knowledge and its impact on consumer demand. There is greater consumer scrutiny and a commensurate

increase in demand for food and fibre attributes that sometimes include only methods of production, eg. organically produced products or animal products from humanely treated animals, independent of known evidence of product differences or effects.

Some producer groups have been slow to react to these signals from the marketplace. These shifts in demand, and the mysteries of consumer behavior, are likely to increasingly affect producers, and will likely continue to baffle, confound, and elude many producers groups for some time to come.

8. The growth in productivity of American agriculture is substantially a success story of the long term application of science to agriculture, and of the productivity of the agricultural science establishment. However, western society generally is increasingly skeptical of all science including agricultural science. There is a growing suspicion that all of the costs associated with past scientific advances were not fully accounted for, much less paid for, and there is much less willingness to believe the claims for new scientific solutions, and advances (Bromley and McGuire). While this is not unrelated to the risk issues in item 8 above, it is a different dimension and relates directly to the future role of the Land-Grant university.
9. The rural infrastructure serving both agriculture and rural communities is in disrepair. The current status of that infrastructure is, in many places, inadequate to serve either a modern agriculture or the present and future demands of many rural communities.

In the case of some of the commercial and business infrastructure serving agriculture, as the number of farms producing or using a particular commodity declines, the level of production is inadequate to support viable businesses dealing in that product. In such cases, as in farm machinery, the

numbers of dealers declines and the character of the remaining businesses change and diversify into other product lines. As with dairy in a number of places in Virginia, there are simply not enough dairy farms to support even liquid milk collection and bulking facilities.

After further contemplation, I would now add an additional item to those above for your consideration as significant changes in American agriculture that has implications for the political economy of Extension and the Land-Grant university.

10. The character of the scientific advances being applied to agriculture are different than in the past. Increasingly, the value of agricultural based products is in the value added after the farm gate. This is clearly related to the trend toward greater differentiation of agricultural based products identified above. It seems evident that this value added and differentiation is based on science and technology applied after the farm gate. Much of that science is driven by consumer demand in the final marketplace and much is private, proprietary research.

While there is still production enhancing and/or cost-of- production reducing research being carried out, much of the research directed at on-the-farm systems is aimed at assisting farmers to comply with safety or environmental requirements. Swiger estimates that between one third to one half of the agricultural production oriented research is so directed. While these technological changes may be fundamental to the survival of farming, many farmers view the regulations that make these practices necessary as intrusions by ignorant do-gooders who do not understand the implications of what they are requiring.

Why The Traditional Extension Model Doesn't Fit Agricultural Extension So Well Anymore

The importance of the images of extension that come from the experiences of 75 years of

agricultural extension cannot be ignored, particularly when there is dissonance between those images and contemporary reality in extension. Norman Rockwell, preeminent 20th century illustrator of life in America, captured the traditional image of extension in his illustration, "The Work of the County Agent."

A shovel full of soil is exposed from under the sod in a field not far from the barns and silo. While three generations of men from the farm family look on, the county agent tests the soil using the vials and solutions he has brought with him in his "science kit." The application of science to farming is direct, personal, and unambiguous. That the agent and his work are much respected and appreciated is clear in the faces of the farmers.

This image perfectly fits the conditions that are necessary in order for an extension program to be able to earn and collect credit from the clientele it serves. The following is a brief summary of those conditions: (For more detail see McDowell, 1985).

1. **Positive Net Benefit Condition:**
The program must generate a positive net benefit - the total benefits of the education or information must be more than what it costs individual in the audience to get it, including time and travel.
2. **Attribution Condition:**
Most of the net benefits, regardless of magnitude, must be attributed to Extension.
3. **The Solicitation Condition:**
The collection of political capital usually involves a separate transaction. The clients must be identifiable and thus susceptible to being solicited for support.
4. **The Political Action Condition:**
Acting politically for Extension must cost the clients less than their past and anticipated future benefits. As with all agencies in the public sector, Extension does a variety of things to reduce the costs to clients of political action on Extension's behalf.

Difficulty in meeting one or all of these conditions does not mean that an extension program should not be undertaken. It means that the agent, specialist, or program may wish to modify the design and/or method of program delivery in order to better fulfill the conditions.

The changes that have and are taking place in American agriculture make for some dissonance between the past ideal model as represented Norman Rockwell and the present reality. I now propose to develop and consider some of the implications of the changes in American agriculture in the light of the conditions necessary for Extension to earn and collect political support from its programs.

Increasing or maintaining profitability in farming has always been a primary objective of agricultural extension programs. Indeed, profitability in farming even become codified into the preeminent issue for agricultural extension, under "issues programming" promulgated by Extension Service/USDA. With profitability in farming as our major focus, our agricultural economics department extension faculty made a presentation to the Virginia extension leadership about the character of the agricultural extension program and the agricultural economics contribution to it. Being cognizant of the changes taking place in agriculture as described in the previous section, we suggested that the following were significant influences on farm profitability in Virginia:

1. the performance of national and international commodity markets;
2. state, national, and international policies affecting agriculture;
3. the performance of the firms and institutions serving and regulating farming and agricultural markets -- both public and private, both inputs and commodities; and
4. on-the-farm agricultural production technology and its management.

A major focus of my 1993 paper was the relative allocation of resources within the Land-Grant research and extension systems between these respective influences on farm profitability.

I suggested that a fundamental technological bias within the system results in gross under-investment in the off-the-farm areas (items 1, 2 and 3) which are primarily the domain of the social sciences. One manifestation of that bias and mis-allocation is the character of the National Research Initiative under CSRS.

In this discussion, however, I draw your attention to the character of the information, the way it is used, and the educational requirements of informing farmers and others about the off-the-farm issues affecting farm profitability.

First, as has already been asserted, much of the scholarship necessary to inform understanding about the various aspects of off-the-farm issues is in the domain of agricultural economists. Much, if not most of the information that must be developed and provided looks much more like public policy education rather than like farm management or technical agricultural information. That is, many of the insights that must be developed and conveyed to farmers and others in the food system to enable their informed decisions, will be with respect to their part in collective or strategic action. That creates a substantially different relationship between the extension educator and client/audience than does information that if adopted will directly shift production or cost functions.

I tell our farm management agents in the peanut growing area of Virginia that they need to learn some new words and to teach those words to their farmers. One of those words is "groundnuts." What we call "peanuts" virtually everyone else in the world calls "groundnuts." When, and if, farmers learn what groundnuts are and why it is an important word to them, it will mean that they have a new awareness of the possible implications of the GATT to them. They may even wish to begin to make strategic adjustments in their farm businesses. I'm not sure what those adjustments might be but that might be a reasonable topic for some scholarship.

Of this I am quite sure, it will require considerably greater effort and program design to

assure that an extension program about groundnuts for the peanut farmers of southeast Virginia meets the conditions for an effective extension program listed above. Given all the discussion of the GATT in the media, and the lack of specificity with respect to the direct action that any farmer should take in response to that situation, it is uncertain that farmers will clearly attribute their insights on the subject to Extension or that they will view the adjustments they are forced to make as "positive net benefits". It is surely a more difficult situation for even Norman Rockwell to illustrate.

Now consider informing farmers about "disintermediation" in the food system, about TQM (total quality management), and about niche marketing. It is very difficult to get farm audiences, and even more difficult to get extension leadership, to recognize that working with the local baking industry or the local textile industry is indeed "wheat marketing" or "cotton marketing" (Jones). We already have great difficulty in generating farm audience support for public policy education when it is agricultural policy. What about farmer response to objective extension programs on environmental policy?

The point is not that extension programs directed to farm and agricultural sector audiences do not or should not do these program. It does them, and does some of them very well! The point is that because the relationship between these programs and the benefits to agricultural audiences is much less direct than most of the on-the-farm programs, there is the classical economic dilemma of investments in public goods. In terms of my conditions for generating support from extension programs, 'if you either: (1) don't see the benefit, or (2) don't attribute the benefits to my efforts, or (3) both; you are less likely to think that I'm doing much for you.'

Because of the character of the societal response to a variety of farming practices and on-the-farm technology issues, increasingly even the extension programs directed toward on-the-farm technology and its management are beginning to look a lot like public policy education programs. If nothing else, there is less of a smile of appreciation on the face of the farmer as he learns that he may have to invest in a manure storage tank or carry out a nutrient management plan.

So What?

While I decry the distortions in extension and research investments in programs directed at on-the-farm technology and its management, I begin to understand how it came about. The *quid pro quo* between farmers and extension is much clearer in the on-the-farm part of the program, regardless of whether or not it is the most valuable information that extension can deliver to farmers. Further, most of the programs of extension that are directed to non-agricultural audiences suffer from these same program attributes that I have argued are associated with much of our agricultural economics extension and that are emerging in the on-the-farm agricultural program.

I also decry and am dismayed at the failure of the Land-Grant system and its leadership to recognize these program distortions. However, when the models our leaders use in the development of programs are substantially a "squeaky wheel" political model and/or incremental adjustment to

historical budget priorities that are now decadent, even that is understandable. Without taking explicit account of the issue, there is little squeak from either the agricultural economics extension wheel or from the non-farm portions of the extension program, for the reasons here set forth.

Perhaps more important has been our failure as agricultural economists to adequately inform and instruct our leadership in some economic fundamentals. Markets fail! Presumably political markets fail as well, as this paper is seeking to argue. But need they fail?

It would be a tragic comment on our profession if all that we could offer our Land-Grant Extension system was insight in the form of an epitaph for extension and perhaps the Land-Grant university, "its demise was the result of market failure." That could indeed happen as a result our diffidence, and the dissonance between contemporary reality and a substantially decadent extension self-image and program.

References

- Bromley, Daniel, "Technology, Technical Change, and Public Policy: The Need for Collective Decisions." *CHOICES*, Second Quarter, 1991.
- Castle, Emery N., "Is Farming a Constant Cost Industry?" *Amer. J. Agr. Econ.*, Vol. 71, No. 3, August, 1989.
- Cooperative State Research Service, "Program Description, Guidelines for Proposal Preparation and Submission, National Research Initiative Competitive Grants Program," CSRS, USDA, 1992.
- Jones, Eluned, (Assistant Professor, Department of Agricultural Economics, Virginia Polytechnic Institute and State University.), Personal Conversation, January 4, 1993.
- McDowell, George, "The Political Economy of Extension Program Design: Institutional Maintenance Issues in the Organization and Delivery of Extension programs." *Amer. J. Agr. Econ.*, November, 1985.
- McDowell, George R. "The New Political Economy of Extension Education for Agriculture And Rural Communities." Invited Paper, 1992 AAEA Annual Meetings, Baltimore, MD., forthcoming, *Amer. J. Agr. Econ.*, 1993.
- McGuire, Richard, "Food, Energy, and Environmental Quality: The Necessity For Balance." *CHOICES*, Second Quarter, 1991.
- Rockwell, Norman, "The Work of the County Agent," Office of the Dean of the College of Food and Natural Resources, Stockbridge Hall, University of Massachusetts, Amherst, MA.

Swiger, L.A., Dean, College of Agriculture and Life Sciences, Virginia Polytechnic Institute and State University., Personal Communication, January 5, 1993.