

**Serving Stakeholders at a Land Grant University:
Forestry Professors Present Their View Ten Years after Boyer**

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Abstract

Faculty roles and responsibilities have shifted over the past three decades from the generalist scholar to the research professor. Generalist scholars were valued for their teaching expertise and ability to communicate research findings to a wide array of audiences. In contrast, research professors must hone their skills in the laboratory or field and are responsible for creating empirically based knowledge for society. Given this shift in role over time, it was imperative to ask the question regarding who is serving stakeholders (those who have a legitimate stake in the outcomes of a program) and how do research professors perceive their responsibility toward serving stakeholders at a land grant university? Findings indicated that faculty roles have indeed shifted within the career span of professors from teachers to researchers. Faculty perceived their role as those who generate knowledge and that it is the extension services' role to serve stakeholders. Faculty had difficulty identifying specific stakeholders of their research, and they collaborate most often with other faculty. The primary mode of communicating with stakeholders was via the peer-reviewed journal article. In its contract with the citizenry of this nation, the land grant university promised to provide teaching, research, and service to all its stakeholders. Research professors have redefined that contract through the evolving promotion and tenure structure, which primarily rewards research activities. If the land grant university is to continue to be the university for the people, then it needs to initiate a cultural revolution where service is truly valued equally with research, and where promotion and tenure committees have the courage to not count journal articles as the principal measure of scholarship.

Introduction

The long-established model of western European higher education implemented in the United States during the 18th and 19th centuries included teaching, research, and service where teaching was considered the most highly prized activity of the academic faculty. Promotion and tenure were based on a broad definition of scholarship, which included teaching and service to the community (Cardozier, 1991). This tradition persisted until the 1950s and 1960s when the expansionist era prevailed. The escalating economy called for academics to become empirical researchers who produced knowledge by collecting large data sets and reported results via journal articles (Lovett, 1986). The new research professor was socialized to become a member of a discipline-based guild, held his/her loyalty to the field of study, rather than the employing institution, and was encouraged to seek national and international recognition as a researcher to earn promotion and tenure.

By the end of the 1960s, the dominant social group on campus was unequivocally the research professor. Scholarship activities were narrowly redefined as systematic inquiry and were measured in terms of quantifiable products such as books, articles in professional journals, and papers presented at professional meetings (Blackburn, et al., 1991; Sundre, 1992). Because of the emphasis placed on research and subsequent peer-reviewed publications required for promotion and tenure, faculty came to view teaching as a competing factor for time with research activities, rather than as a natural outlet for research activities (Fox, 1992).

By the 1970s, larger universities had trouble retaining prized research professors unless they were promised few teaching hours, low numbers of advisees, graduate seminars, research assistants, and generous research and travel budgets (Lovett, 1986). By the 1980s critics of higher education condemned the practices of the research professor, citing that knowledge generated at the empirical level was not cost effective or relevant to the ordinary citizen who supported public universities. State legislatures have echoed public concerns of university irrelevancy by reducing institutional funding levels in order to send a message to the faculty to reexamine their mission and to place more emphasis on undergraduate education (Hunt, 1993). In order to compensate for the reduction in state funding to support research activities, faculty sought funding through external sources such as federal grants and contracts.

Under this pressure, academics began to respond to these circumstances. In 1990 Earnest Boyer, then president of the Carnegie Foundation for the Advancement of Teaching, published Scholarship Reconsidered: Priorities of the Professoriate giving rise to a decade of debate over faculty perceptions toward serving stakeholders in terms of planning and implementing a suitable research agenda, one that benefits the citizens who support the public university. Appropriate stakeholders were defined as those who (a) had

a legitimate stake in the outcome of a program, (b) had sufficient program knowledge to contribute to the process in meaningful ways, and (c) had a high self-defined stake in university research outcomes (Greene, 1988). Ideally, stakeholder representation should be based on relative stake in the outcome of a program.

Given the historical context of the shift in faculty roles over time from generalist scholar to research professor, this study sought to capture faculty perceptions toward serving stakeholders at a land grant university in the year 2000. Faculty service in this context referred to the relationship between a faculty member's research agenda (only professors who were actively engaged in research activities were interviewed for this study) and how that research would benefit stakeholders, both directly and indirectly.

Theoretical Framework

The theoretical underpinning of this study rests in an expanded definition of scholarship, one that includes teaching and service as promotable activities and defines scholarship as a variety of creative works measured by the ability to *think, communicate, and learn* (Boyer, 1990). Boyer (1990) and Rice (1991) discussed scholarship as discovery (research), integration (connecting across disciplines), application (of knowledge to solving public problems), and teaching (bringing new knowledge to learners). Others, such as Pellino, Blackburn, and Bogerg (1984) also suggested six dimensions of scholarship to include professional activities, research and publication, artistic endeavors, community service, pedagogy, and engagement with the novel. Notably, Rice (1991, p. 1) made a compelling argument to “think more creatively about what it means to be a scholar in the contemporary context,” asking academics to lay aside the teaching-versus-research debate and redefine scholarship. Calls for a more inclusive definition of scholarship are reminiscent of the early professoriate, the generalist scholar, but more importantly, they signify recognition that not every professor is or should be a researcher (Boyer, 1987). More inclusive definitions of scholarship seek to value other forms of creative work that do not always lend themselves to a peer-reviewed journal article. The findings discuss how one faculty group views itself in terms of the movement away from the research professor to the generalist scholar and implications for colleges of agriculture.

Purpose

The purpose of this study was to discover how research professors perceive their role and responsibility toward serving stakeholders at a land grant university using a grounded theory approach (Strauss & Corbin, 1998). Specific objectives of this study were to establish:

1. How faculty roles and responsibilities have shifted over time.
2. How faculty perceive service toward stakeholders.

3. Whom faculty identify as their stakeholders.
4. Whom faculty collaborate with in research efforts.
5. How faculty communicate with stakeholders.

Research Design and Data Collection Methods

This study utilized qualitative case study methodology (Merriam, 1998) to develop grounded theories (Strauss & Corbin, 1998) surrounding faculty perceptions toward serving stakeholders at the land grant university. One of the most important uses of the case study is to "*explain* the casual links in real-life interventions that are too complex for the survey or experimental strategies" (Yin, 1984, p. 25, emphasis in original). Grounded theory is "derived from the data, systematically gathered and analyzed through the research process" (Strauss & Corbin, 1998, p. 12). Data collection, analysis, and eventual theory are intertwined activities as a result of using this methodology. Data are analyzed and hypotheses are drawn in the researcher's mind as participants are being interviewed. The researchers begin this study with the hope of better understanding faculty connections to their stakeholders. The interpretations and conclusions were derived from the reality of our participant's world, rather than another's conceptions of how things ought to work. When constructing grounded theory, the emphasis is on building rather than testing theory, which leads researchers to consider alternative meanings of phenomena in a systematic and creative process.

Data were collected from January to March 2000 from 12 professors who were actively engaged in research activities. Individual appointments were made and the participants were interviewed in their respective offices during the workday. The interviews lasted less than one-hour each, were audiotaped, and transcribed for verbatim accuracy. Copies of the printed transcripts were sent back to participants for verification of accuracy. Two transcripts were returned for grammatical corrections. All interviews adhered to a flexible interview schedule that was developed in conjunction with the purpose of the study: to better understand how research professors perceived their role and responsibility toward serving stakeholders at a land grant university. No two interviews were exactly alike, but the general line of questioning focused on the faculty's appointment, research agenda, identification of stakeholders, relationship between the research agenda and stakeholders, and communication patterns with stakeholders. The researchers engaged participants in probing questions, which evolved during the interview process to further explore emerging hypotheses.

The data were analyzed following Miles and Huberman's (1994) memoing and matrix techniques and Strauss and Corbin's (1998) methods for developing grounded theory. Fifty-four codes (units of meaning) were developed from the interview data using the qualitative data analysis software program ATLAS.ti (available at www.atlasti.de).

The coded data were then isolated, reviewed, and interpreted by the research team to draw conclusions, which were discussed and negotiated among the research team and with two members of the Forestry Department to increase overall trustworthiness of the conclusions drawn. The process of member checking resulted in several changes in the manuscript that more accurately reflected participant's perceptions.

Because of their focus on a particular situation, case studies are limited in their ability to generalize to a greater population (Yin, 1984). It is appropriate to generalize the results of this study to other academic departments at land grant universities only to the extent that other academic departments resemble this case (Merriam, 1998).

Findings

The sample for this study was drawn from a population of research professors who work for a college of agriculture at a land grant university. All research professors within an academic department (N=12) agreed to participate in the study. One faculty member had a 100% teaching appointment and was not interviewed as this study sought to determine research professors' perceptions. All participants had an earned doctorate in their content areas. Eleven of the twelve were actively engaged in research projects, where the Extension Specialist participated indirectly in research activities with other faculty members (Table 1). Ten faculty members received federal funding for research activities under the McIntire-Stennis Act. All of the participants were male. The average length of service for faculty was 12 years and ranged from 1 month to over 24 years. In order to protect participant confidentiality pseudonyms were used when quoting individuals.

Table 1. *Faculty Rank, Academic Appointment, Years of Service, Research Area, and Reported Stakeholders*

Rank	Research/ Teaching/ Extension	Years of Service	Research Area	<i>Reported Stakeholders</i>
Prof.	100/0/0	3	Wildlife ecology	NIPF ¹ , Ranchers, biologists, hunters, Audubon Society
Prof.	75/25/0	24	Eco- physiology	City tree board, forest mgt., NIPF, Urban Community Forest Council, professional societies
Assoc. Prof.	75/25/0	14	Forest regeneration	Nurseries (state & private), other academics
Assoc. Prof.	70/30/0	18	Forest biometrics	Forest mgt., industry, students, govt. agencies
Assoc. Prof.	70/30/0	18	Silviculture	Forest mgt., govt. agencies, consultants, NIPF, industry
Assoc. Prof.	67/33/0	11	Forest hydrology	Forest mgt., other academics
Prof.	65/35/0	24	Forest genetics	Christmas tree growers, govt. agencies, other academics, industry
Assoc. Prof.	50/50/0	18	Forest economics	Other academics, industry, NIPF, students, govt. and international organizations
Asst. Prof.	40/60/0	1	Forest resources mgt.	NIPF, industry
Assoc. Prof.	25/0/75	9	Wildlife habitat	Ranchers, other academics, wildlife mgt., wildlife biologists, conservationists, govt. and private organizations
Asst. Prof.	0/57/43	0.8	Wood products	Industry
Ext. Sp.	0/0/100	2	Diverse projects	NIPF, youth, private organizations

¹ Nonindustrial Private Forest Landowner

Shift in Faculty Role Over Time

The longer research professors held their faculty positions the more they emphasized research activities over teaching or extension. Table 1 details the academic appointments and research areas of each faculty member who participated in the study. Seven of the nine senior faculty appointments consisted primarily of research responsibilities. The three junior faculty positions were primarily composed of teaching and extension appointments. To confirm the shift in faculty roles over time, we interviewed the department head. He stated, "Junior faculty generally tend to have heavier teaching appointments. Senior faculty often wish to lighten their teaching load to focus on research, writing, and with seniority are more able to effect that transition. The option to create new teaching positions to take the load off senior professors is sometimes

employed to avoid overburdening younger faculty; however, restricted budgets often preclude this approach. Those with higher teaching and extension appointments have historically found it more difficult to show recognized scholarship. Thus, the concept of scholarship is in the process of change, which ultimately will result in a broader definition.” (K. Smith, personal communication, August 10, 2000).

Faculty research focus shifted over time from applied to basic research. Davis and Irons discussed their personal shift in focus from applied to basic research during the course of their careers. Davis spoke of this trend as a function of the availability of research funding. As he explained it, external funding to do applied research is limited. In time, faculty members learn where the better sources of funding are and then change their research focus to take advantage of more lucrative funding sources. “Some of the work I did when I first came here was directly applicable almost immediately. Now it is more basic, much more long term. There is not much money available to do research at the really applied level. If you want to get the kind of money that I think a big risk program needs, and we're talking about \$25-50,000 a year in outside support, you have to go after money that comes from federal agencies.” Irons described his shift in more geographic terms. As a new faculty member, his research focused on narrowly defined local issues. As time passed, he became involved with more sophisticated and theoretical research that could be applied nationally and internationally. Irons stated that his work on local issues gave him a general sense of what stakeholder needs were; however, they were difficult to refine into researchable, and eventually publishable problems.

Faculty Perceptions Toward Serving Stakeholders

Faculty perceived a need to serve stakeholders, but cited several barriers to doing so. In discussing service to stakeholders it should be noted that both direct and indirect service activities are included. For example, an indirect service activity may be publishing the applied results of a field trial in a nontechnical magazine; whereas, direct service may include giving a workshop at a growers meeting on best management practices. Jackson, Evans, Foster, Davis, Irons, and Carter made direct reference to their perceptions regarding serving stakeholders and indicated a need to serve both directly and indirectly on some level, but cited several barriers to doing so. Davis reminded us “that an attitude towards service goes along with the land grant institutions.” However, the need to publish unique and interesting research results in peer-reviewed journals overshadowed this service attitude for Bailey, Irons, and Kelley.

Faculty perceived applied research as more responsive to stakeholder needs, but identified basic research as more valuable in terms of publishing, and ultimately promotion and tenure decisions. Bailey, Irons, and Kelley discussed basic versus applied research agendas. The chief barrier to directly serving stakeholders was the current promotion and tenure system used by American universities. The heavy weight placed on the number of peer-reviewed publications as a benchmark of efficacy and scholarship left little time for faculty to engage in directly serving stakeholders’ needs. Faculty identified

applied research as most helpful in addressing nonacademic stakeholder needs, yet expressed concern that papers written on applied research results would not be publishable in the most prestigious venues. This perceived fact has effectively acted as a disincentive to fully serving stakeholders in the applied and basic research domains because spending time on applied stakeholder issues takes time away from basic research activities.

Kelley asserted that his research had served stakeholders as his work involved land management impacts on wildlife, particularly various species of birds that are useful and available to his stakeholders, whom he identified as nature conservation organizations and environmental watchdog groups. In contrast, Irons and Bailey felt that their research was more basic and that they were not as responsive to a particular set of stakeholders (nonacademics). Bailey stated that his career was going to finish up on an issue that would not be popular with stakeholders, yet stressed that this line of inquiry was necessary at the more basic level to gain a deeper understanding of his content domain. Irons noted that the kind of applied research that most directly served stakeholders was not valued under the current promotion and tenure system. “The kinds of things that get published in your journal articles, the highly valued journals in your field, are a long way from what the practice is and there is a big gulf there. So if we are to do research that’s closely linked to the needs of the patrons of the university, it would be a different kind of research than we do to get published in refereed journals.”

Faculty perceived that being accountable to stakeholders in terms of setting a research agenda would stifle academic freedom. Another barrier to serving stakeholders was the perception that the current trend to increase responsiveness to stakeholders stifles academic freedom. Davis stated that university faculty should be shielded from stakeholders so that they can follow science unfettered by political whims. In contrast, Irons expressed concerns that universities are failing in their role as public servants because researchers have been too protected from the public. Bailey expressed his concern about collecting stakeholder input for determining research agendas and its potential impact on research and the function of the university. “I just want to go on record as saying this is a hideous thing for the government to do (asking faculty to collect stakeholder input for determining the direction of their research agenda) with respect to science. It’s like saying science ought to go where the wind blows.”

Faculty members did not want to be held accountable to stakeholders. While all of the faculty members felt a need to serve their stakeholders to varying degrees, the idea of accountability to stakeholders was met with open hostility. The general perception was that accountability reduces academic freedom and interferes with the scientific process. The statements made by two faculty members, Davis and Irons, indicated that justifying their work to nonacademics was not productive and their work should be judged solely on its scientific merit without regard to stakeholders who may or may not exist.

The faculty did not all agree about the role of stakeholder needs in setting a research agenda, but there was agreement that it was not entirely their responsibility to gather and distill stakeholder input into researchable problems. Further, it was felt that documentation on stakeholder input, currently utilized for some research funding, was not taken seriously by the administrators who approved Hatch and McIntire-Stennis proposals at both the university and the funding agency.

In general, faculty research agenda decisions were based largely on content specialty and were made independently of stakeholder input. It has been demonstrated that the majority of the faculty who participated in this study valued research over teaching and service activities. Thus, they made a loose connection between their research agendas and serving stakeholders. All faculty members discussed the focus and future direction of their research activities, but only Jackson placed an emphasis on directly soliciting stakeholder input for setting his research agenda. Others discussed potential benefits of their research to stakeholders, but research activities were not driven by the explicitly stated needs of stakeholders. All felt that their work was beneficial to the community, but faculty were not always able to link their research findings to a specific stakeholder group.

Faculty Identification of Stakeholders

The faculty identified nine categories of individuals or organizations that held a legitimate stake in their research and were the focus of faculty service activities. These categories included nonindustrial private forest landowners, government organizations such as the state and federal forest service, private organizations that serve the forest industry, tree farmers, forest managers, other academics, those involved in urban forestry, wildlife conservationists, and students. Subsets of these nine categories of stakeholders included Native Americans, the underserved, and youth.

Nonindustrial private forest landowners (NIPF) emerged as the focus of service for faculty members. A common misconception surrounding the forest industry is that most of the land is owned, operated, or both by mega-corporations, when in fact NIPF own over 70% of the privately held forest lands in the United States. Bailey, Jackson, Foster, Irons, Kelley, Carter, and Martin identified nine types of information required by NIPF. They were wildlife management, hardwood forest management, long-range planning, development of organizations for representation, sustainable management initiatives, general forest management, low-cost regeneration methods, timber marketing, and student service projects. Lee pointed out that most of the private forestry organizations for NIPF began recently, indicating a new focus on this important stakeholder group by the faculty. Before the emergence of NIPF as the dominant group, other researchers held the top position among stakeholders.

Faculty viewed other researchers as an important stakeholder group. Bailey, Evans, Irons, Kelley, and Hunger referred to academic stakeholders both directly and indirectly. Three mentioned the journal audiences in which they publish as users of their research. One researcher indicated that the current system for rewarding scholarship resulted in other academics holding a foremost place among stakeholders. Nine faculty members reported collaborative relationships with other faculty members where faculty shared expertise, equipment, or both. Faculty-to-faculty collaboration was by far the most common type of collaboration mentioned.

Forest managers are perceived as primary consumers of faculty research. Evans, Foster, Kelley, and Carter cited forest and wildlife managers as primary users of their research data. Evans worked primarily on forest growth modeling and indicated that managers used the information he provided. Another researcher indicated that forest landowners and managers, large and small, were beneficiaries of department research. A wildlife biologist identified wildlife managers as his primary audience.

Much of the research generated within the department serves stakeholders that cross state boundaries. Many stakeholders of this department resided outside the state. Rationale was given that forests know no boundaries, and that this state's forest resources overlap two neighboring states. Gray identified a stakeholder group that he was currently serving by providing plant material outside of the state. Four faculty identified government and nonstate agencies in neighboring states as being their primary stakeholders. Another faculty identified regional agencies as his primary stakeholder group. Irons referred to the state's forestry community in general as a stakeholder and specifically identified the Environmental Protection Agency.

In some cases faculty did not clearly articulate who their stakeholders were or whom they should be serving. Two faculty members indicated that they would like to develop relationships with industry (the term "industry" typically refers to mega-corporations). However, Jackson informed us that larger companies "traditionally house their own researchers and there has not been a lot of money available from them." They do not typically collaborate with university faculty. Three faculty either talked of clients that no longer existed or were overly general in identifying stakeholders.

Faculty were not accustomed to identifying who their stakeholders were and cited examples that represented limited interactions with stakeholders. In attempting to tell us about potential stakeholders, one researcher pointed to an isolated contact with an individual and his successful contribution to the development of the stakeholder's consulting business. Six faculty cited private organizations, clubs, and societies that they had served in the past as stakeholders, including organizations that directly related to their area of expertise.

Faculty Collaboration with Stakeholder Groups

Faculty reported that in addition to serving stakeholders through research findings, they had also partnered in significant ways with stakeholder groups, both governmental and private organizations. Evans, Davis, Kelley, and Carter identified the United States Forest Service as a partner in their research activities by providing funding, personnel, resources, and expertise to faculty, thus making significant contributions to faculty research. Three faculty members reported having, or seeking, a partnership with industry and identified various groups as research partners and consumers of research. Lee stated that relationships with industry should be improved as such relationships benefit all parties involved with shared resources.

Faculty Communication Patterns with Stakeholders

Faculty communicated with stakeholders in a variety of ways. Bailey, Lee, Foster, Carter, Martin, and Hunger spoke about communicating with stakeholders. They cited books, newsletters, newspaper articles, attendance at meetings and conferences, visits to industrial plants, and extension offices as avenues for communication. These faculty were most reliant on the printed word to report their work, and assumed that extension educators would interpret and disseminate the outcomes of their research activities for the general public. Carter commented that he tries to write two papers in his head, one he writes for the research audience, the other for the lay audience. In fact, the lay audience paper never actually gets written, but he tries to keep extension specialists informed on what research he is conducting and the implications of his findings.

The principal outlets for research results were peer-reviewed journal articles. By far, the most common approach to reporting the results of research was the peer-reviewed journal article. Time and again, faculty indicated that journal articles were written by scientists for other scientists. As a result, much of the information generated at the university never reaches the majority of stakeholder groups who might benefit from the research.

Formal extension programs aid the faculty in transmitting information to stakeholders. One faculty member discussed directly participating in formal extension programs, and others mentioned that they had participated in extension activities. Faculty reported that extension was the key avenue for satisfying stakeholder needs. For example, the forestry extension specialist developed a Master Woodland Program to train the trainer in best management practices. Kelley reported speaking at one of the sessions and taking participants on a tour of demonstration areas.

Faculty interact directly with nonacademic stakeholders on a limited basis. Bailey and Lee indicated that they had participated in forestry-related symposia and meetings. Bailey, Kelley, and Carter discussed speaking at various functions. In most cases faculty addressed groups that were interested in the faculty's specialty area, such as ranchers who assembled to learn about game bird research and best management strategies for bird populations.

Discussion and Recommendations

While the land grant university was founded on principles of scholarship, which include teaching, research, and service, many faculty have become research professors who are highly engaged in creating new knowledge. The implications of the research professor model are that faculty are focused on a commitment to the profession versus the institution, generating new knowledge regardless of the utilization of that knowledge, and publishing research results in peer-refereed journals. Negative outcomes on a national scale have included a decline in institutional commitment to undergraduate education, excessive specialization, and a proliferation of publications that may not be of much use to stakeholders (Lovett, 1986). One research professor interviewed for this study suggested “the administrators in the university should protect the people doing the basic research from that kind of criticism so that they can go to their lab and do their work without having to worry about the hassles of explaining it.” Unfortunately, this type of thinking may lead citizens to rebel against the university culture. If the land grant university is to continue to be the university for the people, then it needs to initiate a cultural revolution where service is truly valued equally with research.

The literature surrounding faculty roles and responsibilities toward serving stakeholders has demonstrated that there are no simple solutions to the acceptance of more inclusive definitions of scholarship. The problem lies in the current academic reward structure where faculty are evaluated on the number of journal articles published, the amount of external funding secured in the form of grants and contracts to support research, teaching activities in terms of load (not quality) and, to a very small extent, service to the community (Hunt, 1993). Even after a decade of debate to redefine scholarship, the results of this study revealed that faculty were not sufficiently motivated to shift from the role of research professor toward generalist scholar as was advocated by Boyer (1990) more than ten years ago. The peer-reviewed journal article remains the defining characteristic of a modern-day scholar. Consistent with their current job descriptions that emphasize research and teaching, faculty were reluctant to devote much time or effort to communicating research results to lay audiences and assumed that to be the role of the extension service.

If the cooperative extension service is to serve as the exclusive voice for interpreting and disseminating faculty research findings to the lay audience, than colleges of agriculture must support more extension personnel to fill the gap between the research professor and stakeholders. One can already hear the cries of the administration for more funding to support such an effort and the counter cries of taxpayers that they are not getting a sufficient return on their investment as it is. Given the fact that budgets must be a zero sum equation, should research professors be replaced by extension staff when attrition occurs? This issue must be seriously pondered by the professoriate, else colleges of agriculture may come to resemble the humanities division, where more than two-thirds of all published scholarship in peer refereed journals is never cited anywhere else (Scott,

1993) as faculty continue with research agendas that have little regard for stakeholders' needs. Boyer (1987, p. 11) has cautioned that public support for higher education is "linked to the tangible idea that the investment should pay off".

As the current trend in legislation has demonstrated, land grant universities must become more sensitive to gathering stakeholder input when setting research priorities. Public Law 105-185 (1998 Farm Bill) required that stakeholder input be collected when setting research priorities. Section 102, item c specifically stated: "Effective October 1, 1999, to obtain agricultural research, extension, or education formula funds from the Secretary, each 1862 Institution, 1890 Institution, and 1994 Institution shall establish and implement a process for obtaining input from persons who conduct or use agricultural research, extension, or education concerning the use of the funds" (Available: www.ree.usda.gov/part/areera/).

If faculty are to be held accountable for serving stakeholders, both directly and indirectly, then those activities should be valued equally in status to the peer-refereed journal article when administrators make decisions as to who stays and who goes. Credit should be given to faculty for not only creating new knowledge but for applying it to solving problems. The deeply imbedded culture of publish or perish is foremost on the minds of junior faculty (Hunt, 1993) and will require a great unearthing on the part of college leadership to transform an institution from one of research to one of education and service. The rhetoric is that faculty are to do both, but both are not valued equally.

T. S. Eliot (1939, p. 38) wittily expressed frustration with his colleagues inability to reach a diverse audience in the following statement: "We write for our friends, most of whom are writers, or for our pupils, most of whom are going to be writers; or we aim at a hypothetical popular audience which we do not know and which perhaps does not exist. The result in any case, is apt to be a refined provincial crudity." This sentiment strangely mirrors the findings of this study. Research professors at the land grant universities write for other academics, with the implied, however unrealized, hope that the extension specialist or county extension agent will interpret and disseminate these writings to a popular audience. The result, in this case, is that stakeholders, provincial and sophisticated alike, are still in many regards underserved.

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