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Linking Scientist And Farmer: Rethinking Extension's Role

By

J Lin Compton
Linking Scientist and Farmer: Rethinking Extension's Role
By J. Lin Compton

The small landholder farmer with limited resources will be around for as long as it is necessary for the rural sector in the developing countries to provide the primary employment base for people. Increasing agricultural production through large-scale, mechanized, and commercial farms only, while neglecting the productive potential of small farms, can be disruptive of the larger national economy and polity by creating extensive rural out-migration of displaced farm people to already overcrowded and burdened urban centers. Consequently, it is imperative that concern for increasing agricultural production be in balance with attention to the general welfare and quality of life of rural people.

In this context, extension services face a major task in assisting the world's multitude of small landholders in identifying, adopting, and adapting technology appropriate to location-specific soil, water, climate, labor, and economic conditions in order to make the small farm a viable economic unit. These economic and political concerns, combined with the general dynamics and persistence of the food and population crisis, call for a greater scope, intensity, and quality of effort by extension programs if farmers are to receive relevant and realistic assistance and advice on a firsthand and timely basis.

From this general background emerges the rationale for the major theme of this paper: the use of a systems perspective in the analysis, design, and operation of agricultural extension programs to assure coherence and efficiency of effort, and relevance and effectiveness of result. Various aspects of extension, such as the communication of innovations and the adoption behavior of farmers, have been studied and reported in great detail by others. The emphasis here will be on questions and issues concerning the interrelatedness of such units and dimensions of the overall system as research-extension-farmer linkages, training, social organization, and administra-
A Systems Perspective

It is now generally accepted that the conceptualization of extension as a service for communicating the results of scientific research to farmers neglects the importance of the problem-solving process of education and social organization in agricultural and rural community development. As a result of this realization, increasing attention is being given to three related questions: what is appropriate technology? How and by whom should appropriate technology for small farmers be determined? How can farmers be best helped to learn about and properly employ this technology? The nine-cell "systems" matrix (fig. 1) illustrates a set of relationships that will be discussed at greater length in pursuit of answers to these questions.

Figure 1.

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In figure 1, IOKS refers to the institutionally organized knowledge system that is based on scientist-derived knowledge. IKS refers to the indigenous knowledge or farmer-derived knowledge system and recognizes the gradual awareness by agricultural scientists, administrators, and recognizes the gradual awareness by agricultural scientists, administrators, and educators that such a knowledge system does exist. FSR refers to farming systems research, wherein an effort is made by multidisciplinary teams comprised of social scientists—anthropologists, sociologists, extension educators, nutritionists, communications media specialists, and economists—and technical agricultural scientists—plant pathologists, plant breeders, soil scientists, crop scientists, and entomologists—along with farmers, to identify and study "human-crop-animal-society-climate-soil-water" interactions that influence behavior and production. FSR^1 refers to an assessment by teams of scientists, extension workers, and farmers of the reflection of existing farming practices in what scientists recommend. FSR^2 refers to an assessment by such teams of the extent to which scientists' recommendations are reflected in what farmers do. The responses to these obverse situations have very different implications. Feed-in, feed-down, feed-up, and feed-back designate key points of interaction among scientists, extension staff, and farmers. As the title of this paper suggests, extension is juxtaposed between research and farmers as a linking force.

Structural Units and Functional Linkages

An analysis of agricultural systems in general would encompass scientific agriculture, indigenous knowledge, farming systems research, and extension education and their relationships to each other. These relationships could be studied by pursuing an answer to the question, Who does what for whom, why, how, how well, and
with what result? The following discussion centers on this question. The traditional top-down pattern (see boxes A, B, E, F, and I) will be discussed, followed by a description of an atypical bottom-up pattern (boxes 1, H, E, D, and A) and a discussion of the role of farming systems research in this new paradigm.

Agricultural research (Box A)

An analysis of the institutionally organized knowledge system (IOKS) itself would encompass the nature and extent of the interactions among the international agricultural research centers, national agricultural research centers, and such incountry, regionally based resource institutions as universities, agricultural colleges, and agricultural experiment stations (Moseman 1970). From an extension education viewpoint, a major concern is the extent to which two-way knowledge flows have been institutionalized within the IOKS sector so that discoveries reflect the results of research on relevant problems and are communicated quickly and fully to all interested scientists, extension personnel, and farmers.

A Michigan State University study suggests that personal relationships among scientists stationed at various international centers are more of a determining factor in the establishment and maintenance of interactions and informal resource-sharing networks than is common interest in the research problems on which these scientists focus. A major set of questions, then, concerns the extent to which international center scientists actively solicit information or suggestions from country scientists, the extent to which they attempt to maintain contact with and encourage the work of country scientists, and the extent and value of more formal networks among scientists at all levels working on similar problems.

From a national agricultural research perspective, other questions important to farming and extension operations arise. Because the predominant pattern is for research to be a centrally controlled
program with major decisions on priorities, budgets, staffing, and the geographic location of activities being made at the national level (Ruttan 1982, p. 110), there is a need to be concerned about the selection of research problems and their short and long-range relevancy to local problems. Farmers and extension staff should be incorporated into the process of helping to determine research priorities, especially because extension is basically a decentralized provincial or state level affair and is, therefore, along with farmers, more aware of location-specific realities. Under present arrangements in most countries, they are seldom involved in such research decision making; this results in unnecessary social and communicative distances among scientists, educators, and farmers, and poor understanding by the latter two groups of the nature, purpose, and value of results of scientific research.

Research and extension linkages (Box B)

Various factors have a negative effect on the transmission of information between extension and research. Extension workers frequently may view researchers as being shut up in their laboratories, giving little attention to social and economic factors, using obtuse language, having no commitment to the formation of firm opinions about their research results, and carrying out research without any application in mind.

Research scientists, on the other hand, may see extension workers as being unwilling to trust or accept research findings, as being unwilling to ask research scientists for information when it is needed, as not helping to clarify the nature and extent of field problems that need research, and as demanding immediate answers to urgent problems that, in fact, call for longer periods of time to work out solutions.

Some countries have tried to reduce these tensions by housing research and extension within one institution, or by administratively
forcing integration of their functions in a very authoritarian but effective way, or by coordinating these different models through an overall council approach. Regardless of which approach is deemed most appropriate for any particular country's sociocultural and politicoeconomic conditions, the major questions remain as to how to interrelate (1) theory with practice, (2) basic research with applied or adaptive research, (3) the work of scientist with educator, and (4) concern for production with concern for equity.

Extension programming (Box E)

Extension is charged with the task of science simplification and transmission, of reworking research reports and preparing ways and means of presenting information to farmers. Such characteristics of innovations as soundness, rationality, complexity, divisibility (the extent to which an innovation may be tried on a limited basis, a little at a time or part by part), compatibility, relative advantage, and communicability should be taken into account. Strategies for message delivery should be chosen on the basis of considerations of available media, personnel, urgency, distance, and farmers' familiarity with different media and their preparedness to receive certain types or levels of information. In short, extension must help bridge the social, cognitive, and geographic distance between a small group of scientists and a large farming community by selecting or designing methods most appropriate for particular message content and the farmers' state of readiness.

Subject matter specialists (SMS) and training staff play critical roles in simplifying science and training extension field staff or farmer-leaders. Most countries are still struggling to generate a sufficient number of highly competent SMSs and trainers to staff field stations and provide input of high quality and intensity into the extension education process. Knowledge of training strategies and methods, for both clientele and staff
development purposes, has grown immensely in the past 10 years (e.g., see Lynton and Pareek 1967), but the number of those trained to implement this knowledge falls far short of the demand. University and college programs are growing quantitatively and qualitatively to meet this challenge; during the next 10 years considerable progress can be expected.

A major set of issues in extension programming revolves around decisions on whether to emphasize the training of selected farmers as educators of other farmers or to expand the number of village-level extension agents and place them on a rigid and intense schedule of visits to farmers, followed up by training seminars for these agents as provided by SMSs and training staff. The two separate models implied go beyond the immediate focus of this paper on the overall system of extension and the interrelatedness of its various structural units. Research and evaluation studies now being conducted by objective scholars should help resolve these issues within the next few years.

A related issue is the selection of training strategies; there are two major alternatives: (1) village-based training of farmers by extension staff and (2) the use of residential training centers to prepare farmer-leaders (Mamat 1982). Considerations of cost-effectiveness in relation to what many developing nations can afford are likely to remain important for some time to come. Farmers Training Centers with strong interdisciplinary staff, complemented by mobile staff for making follow-up field visits, can make a larger impact over a vast area than scattered and isolated field staff operating alone. Training can be given economically and, in many cases, can be enhanced by receiving psychological and financial support from locally organized farmers' groups. Such centers also provide a forum for generating new ideas and obtaining training inputs from agricultural colleges, universities, or research station scientists. This strategy can facilitate and articulation
of evaluation, planning, and training processes, especially if participatory approaches are used that involve combined groups of farmers, field agents, SMSs, trainers, administrators, and researchers sitting down collectively to analyze how well the system of services is operating and to identify ways and means for improvement. This strategy also makes it possible to shift the focus of effort from one area or group of villages to another as changing needs and priorities dictate.

Extension-farmer interface (Box F)

Analyses of the impact of the green revolution on farm production and rural welfare have revealed that positive results, however great, have been less than expected for two major reasons: the technology packages that were developed were ill-suited to the resource constraints faced by the poorer farmers, and strategies to diffuse the new technology tended to rely upon the more progressive farmers as models for emulation by the others. This "first the best" era has led us into a "now the rest" era with strategies emphasizing local social organization and interest-learning groups as means of assuring that the needs of the poorer farmers will be addressed.

There are at least three major focal points regarding farmer-extension interface: (1) the proper functional role and behavioral style of the field agent, (2) the more specific mode and pattern of agent interaction with individual farmers and farmers' groups, and (3) the proper balance and use of a variety of communication and teaching techniques so as to support and reinforce learning rather than to control or direct it. The typical field agent today in the developing countries is young and often lacks significant personal experience in farming. The typical agent may also have been the recipient of inappropriate or insufficient academic training to prepare him or her for effective interaction with older and more practically experienced farmers. The opportunities for learning
on the job should be great, however, as the number of technical specialists and competent training staff in creases, and staff development and field agent training become an integral part of a coherent systems operation.

The behavioral style of the field agent represents a topic of considerable discussion. Cultural broker, gatekeeper, activator, multipurpose worker, and many more terms have been used to describe the agent's role. One conceptualization suggests that in order for an agent to be allowed by farmers to serve as a mediator (one who encodes messages from one source and then decodes or translates them so that they can be understood by a target audience, usually in a two-way formulation), an agent must first be seen and accepted as a facilitator (one who has the best interests of the clientele in mind and who possesses interpersonal skills basic to encouraging clients toward selfimprovement) (Compton 1972). The characteristics and skills of a facilitator have been studied extensively (Etling 1975). Extension training staff may need to give as much attention to helping field agents acquire or develop these skills as they presently give to agents technical training.

In addition to behavioral style, there are concerns about the agent's choice of farmers with whom he or she will interact. If such decisions are left entirely to the agent's discretion, more bad than good may well result. Instead, there needs to be greater emphasis on the role of local farmer association, when these exist, in determining the nature and frequency of interaction with the agent. Earlier U.S. experience with local Farm Bureaus (which employed the extension agent and held him or her accountable for providing current and useful information to the farmers), combined with what we have learned about the effectiveness of Taiwan's farmer associations in assuring agent accountability, would suggest that farmer's collective voices in such matters are of critical importance. When such associations do not exist, an alternative might
be the formation of farmer learning groups based on common interests. The groups themselves would select various members for specific kinds of interaction with extension agents or trainers. The key principle here is to somehow guarantee that some farmers will not be excluded from the educational process because of low socioeconomic status.

Farmers typically differentiate and acknowledge which ones among them are particularly skillful or successful with specific crops, animals, or farming practices. This fact should be capitalized upon by extension, not for the purpose of helping the successful simply to become more successful, but in order to mobilize and utilize such indigenous talent to benefit the group or community as a whole. This strategy has been successfully employed and in such a way that various interest-learning group members are selected by their peers to receive training related to some specific aspect of the group's topic. For instance, a member of a group on field crops is selected to receive training in seed selection, while another member receives training in insect control and another in disease control. To reap the ultimate benefit of each other's learning, they are compelled by necessity and peer pressure to share what they learned through their separate training sessions.

The role of communications media in such a scheme as the one just described must become a supporting role, not one aimed at initiating or catalyzing farmers' thinking. Why? The answer involves factors of power and manipulation on the one hand and sound learning theory and practice on the other. It is now generally accepted that for learning and behavioral change to take place effectively and in directions conducive to the common good, adult learners must play an active role in defining the nature of their own reality and in determining the steps they should take to deal with it. This internalization process results in the motivations that are so necessary to sustain human reflection and action upon a "problem" or need. This process is best promoted through dialogue.
Unfortunately, most extension work in the past and even today tends to employ communication approaches that inhibit dialogue and critical thinking.

Sociologists have pointed out the critical role played by those persons who occupy positions in which decisions are made about what information is to be transmitted to whom, when, and in what manner. Power to manipulate and control the flow of information is power to strongly influence, if not control, the development of knowledge itself. Communication strategies and methods that promote dialogue and provide positive responsive support to decisions reached through dialogue need to be used. Extension as an educational process must have two-way communication or dialogue as its central thesis (see Freire's treatise "Extension vs. Communication"—an unfortunately misleading title because it suggests that extension personnel do not allow dialogue or two-way communication to take place when, in fact, those who see themselves as extension "educators" do this, and information specialists do not. Fortunately, the message contained in the text itself exonerates extension educators who do not fall into the semantic trap of simply extending information).

Indigenous knowledge systems (Box I)

Decisions to adopt or reject a new agricultural innovation are strongly influenced by, among other things, the knowledge, skills, values, and belief systems of the farmers. Farmers typically back away from interaction with outside change agents and discuss an innovation among themselves before adopting or rejecting it. Such farmers have communication networks among themselves that are based on interpersonal relationships and that become relatively stable and predictive of behavior (Rogers and Kincaid 1981). The fact that farmers have an indigenous knowledge system and communicative structures through which it is tested, developed, and spread suggests
that extension workers might do well to learn about, from, and through such systems and structures, both for the inherent value in such knowledge itself and because mutual awareness of it by agent and farmer can promote meaningful dialogue.

Along with emerging awareness and appreciation of the existence of indigenous knowledge systems have come questions of what can be learned from the farmer, how it can be learned, and how this can be used in agricultural development programs (Brokensha, Warren, and Werner 1980). An increasing number of studies have documented farmer knowledge of such ecological and environmental factors as microclimate conditions, rainfall patterns, water levels, water retention capabilities of soils, what plants will grow in which soil, and soil responsiveness to fertilizers and manure. Farmer classification systems for soils and plants have been found to be comprehensive, logical, and useful. Farmer knowledge of such matters as mixed cropping patterns, the best times to plant, and ways of controlling or eliminating plant and animal diseases has been incorporated by scientists into their own work. It has even been suggested that both farmers and scientists be seen as professionals and encouraged to learn from each other (Chambers 1980).

Learning from the farmer (Box H)

Extension field staff—numberous, widespread across the countryside, and in daily contact with farmers—are in an ideal position to monitor and access indigenous knowledge. Unfortunately, few agents receive training that would prepare them with the proper set of skills and attitudes for learning from the farmers. Warren (1979, p.117) has stated the challenge well:

A humanistically oriented applied anthropology must be based on a knowledge of indigenous epistemological systems and social or-
ganization, a conscious effort to define problems from the indigenous viewpoint and hence the establishment of local involvement in change programs from their onset. It must also be concerned both with the ethics and values of the local population and with those upon which the external change agent operates in attempting to design a program of implemented change. This approach involves the role of the change agent as a communications facilitator between local populations and national and international agencies and provides the local population with an opportunity to increase the available options for change, thus enhancing its freedom of choice.

Extension agents should be taught the skills of active listening and observation, how to conduct guided interviews, how to keep journals and diaries, how to make use of games, pictures, and contrived devices for stimulating exchange and eliciting information and perspective from farmers, and the tactic of engaging in joint agronomic ventures with farmers in order to learn on the job.

Accumulating, processing, and articulating farmer knowledge (Box E)

Ideally, extension field staff reports of farmer innovations and knowledge would be followed up by a subject matter specialist for IKS. Such an SMS, specializing in the methodology of eliciting IKS and charged with responsibility for cataloging and storing it and preparing it for communication to relevant research scientists, would be stationed within each province, state, or training center. This accumulated, documented knowledge could also be made use of during training seminars. Scientists, trainers, SMSes, and field agents could learn from this store of farmer knowledge, and farmers could learn from the experience of other farmers living, for example, on the other side of a province.
Sharing IKS with scientists (Box D)

In the conceptualization of a bottom-up pattern described thus, far, new and projected interactions are being suggested. The suggestion that scientists can and should be helped by extension personnel to learn and appreciate farmer knowledge may sound strange and foreign. But the reality of scientist/extension staff ratios dictates that scientists be made aware of knowledge and insights gained by extension personnel through their daily contact with farmers, a luxury that any country’s handful of scientists does not have. Existing status differentials and bureaucratic separation of scientists and extension workers, however, serve to block significant interaction of the type and for the purpose being depicted. This, in effect, represents a major programming hurdle to be overcome in the years ahead.

Rethinking research priorities (Box A)

Scientist awareness of IKS and their understanding of traditional practices of farmers should be seen as a prerequisite to decision making regarding the priorities of research to be conducted by the scientists. The knowledge gains to be made and the human relationships to be strengthened by dialoguing with experienced extension field staff and SMSs about IKS far outweigh the effort that might initially have to be expended to establish such dialogue. This is not to deny the need for basic agricultural research, but simply to draw attention to previously overlooked or underemphasized applied research needs.

A mutual learning transaction (Boxes C and G)

Scientists need to spend a certain amount of time in direct interaction with farmers and farming systems situations. Because
of the complex, multifaceted nature of many farming situations, there is a need for teams of scientists representing different disciplines to cooperatively study, analyze, and reach conclusions about ways of helping small farmers better cope with the existing constraints to production (Gilbert, Norman, and Winch 1980). Obviously, farmers and selected extension staff should be part of such teams—farmers because of their potential for contributing to the team's understanding of a problem, and extension because of the desire to assure a speedy and effective dissemination and utilization of resulting knowledge gains to benefit other farmers.

As a summary to the broad outline that has been sketched thus far in this paper, we can expand the initial nine-cell matrix to encompass the important aspects of the preceding detailed discussion (fig. 2).

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Figure 2. A systems matrix for the analysis of the role of extension education in agricultural development. A structural-functional analysis based on the question, Who does what for whom, why, how, and how well?

RRI: Regional Resource Inst. (Univ. & Exp. Stations)
(R)TC: (Residential) Trng. Ctr.
SMS: Subject Matter Spec.
Dr.: District Administrator
VEW: Village Ext. Worker
LL: Local Leaders (Community & Farmer Associations)

Discussion Questions

1. Who are better teachers of farmers, extension agents or other farmers?
2. What is an indigenous knowledge system (IKS)? What are the sources of IKS? Of what value is outsider awareness of indigenous knowledge in the design of development projects and educational programs? How can IKS best be studied, processed, and utilized to promote development?
3. What are the advantages and disadvantages of residential training centers and village-based training schemes?
4. How can existing gaps between research and extension be bridged?
5. How would you respond to the statement "Extension has nothing to extend?" What is the true nature and purpose of extension education in development?
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AN EXPLORATORY INVESTIGATION OF CHILDREN’S SELECTION AND USES OF TELEVISION PROGRAMS: A DEVELOPMENTAL APPROACH

Waithira L. Gikonyo, M.A.
University of Wisconsin, 1981
Adviser: Rober Hawkins

The application of the uses and gratification approach in trying to explain audiences use of the media has become popular in recent years. However, it has dealt mainly with the adult audience and has largely ignored the child audience.

This exploratory study combines the uses and gratification approach with Piaget's cognitive development theory in trying to find out if children are active in their viewing behavior.

It is hypothesized that children will get better at matching their program selection to their needs as they grow older. The hypothesis receives some weak support as the correlations between programs and needs gradually increase as a function of age.

The paper raises some questions about the dependence of the uses and gratifications approach on self-reported measures without using methods of trying to tap the actual behavior. The selectivity variable used in this investigation is behavioral and the results seem to suggest some discrepancy between the behavioral and the verbal components of this variable. The suggestion is that self-reports might not be very useful in the long run in explaining childrens’ media behavior.
Using the Washington State Bench-Bar-Press (B-B-P) Committee's "Guidelines for the Reporting of Criminal Proceedings" as the coding categories, a content analysis of pretrial crime reporting in 10 daily Washington newspapers was carried out.

The time period 1961 - 1965 (the B-B-P Guidelines were adopted in 1966) was compared to the last half of the 1970s (1975-1979) with the reporting of two major local crimes against persons coded for each time period for each newspaper (a total of 40 crimes). The study hypothesized that the categories of information which the B-B-P Guidelines identify as probably prejudicial to the criminal defendant would be reported less frequently in the time period 1975-1979 than in the time period 1961-1965.

In the main, the results of the research confirmed that prediction. Only the reporting of prior charges and convictions evidenced a major increase in the more recent time period. After evaluating possible explanations for the overall dramatic decline from 1961-1965 to 1975-1979 in the amount of prejudicial pretrial publicity in Washington State newspapers, it was concluded that the B-B-P Guidelines appear to have played the key role in bringing about this notable reduction.
PUBLIC RELATIONS AND ORGANIZATIONAL EFFECTIVENESS: AN OPEN SYSTEMS APPROACH

Christopher J. Hardwick, M.A.
University of Maryland, 1980
Adviser: James E. Grunig

This study addresses the problem of showing how public relations is beneficial to an organization. To address this problem, this researcher uses an open systems approach to: 1) provide a better understanding of why public relations is practiced differently in different organizations; and 2) to examine how public relations contributes to organizational effectiveness.

The following concepts were measured to determine the different kinds of organizations: organizational environment, organizational structure, competition and organizational goal. Public relations was measured by the frequency of conducting specific activities, the goal of the public relations programs and the amount and focus of research conducted by the public relations department. This researcher measured public relations contribution to organizational effectiveness as the amount of influence(control) the organization had on relevant publics, and how much the organization responded to those publics (adaptability). The organization's major decision-maker identified this control and adaptability based on the organization's three most recent major decisions.

This study integrated qualitative and quantitative methodologies in examining the public relations function in a purposively-selected sample of 15 different organizations.

Although methodological problems hampered some of the results,
in general this researcher found in these 15 organizations that profit-oriented organizations with a great deal of competition are: 1) most likely to have a public relations practitioner whose goal is to change attitudes and behavior of the organization's publics, and 2) most likely to have the greatest amount of perceived control and adaptability of employees, consumers and other similar organizations.

Society-oriented, non-competitive organizations are: 1) most likely to have a public relations practitioner whose goal is to communicate accurately with the organization's public or to get exposure for the organization, and 2) most likely to have the greatest amount of perceived control and adaptability with the government, financial community, the general public and the local community.

The results of the study did not solve the initial problem. However, research of this nature is a step in the right direction. This study generated new hypotheses that should be tested using larger samples and more precise measures, and demonstrated that open systems approach is useful for studying the relationship between public relations and organizational effectiveness.
A DESCRIPTIVE MODEL OF CREATIVE DECISION MAKING IN ADVERTISING AGENCIES

Marcia Mondroski, M.A.
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This study examined creative decision making in a medium-size advertising agency located in the Southeastern United States. The methodology made use of informal interview sessions with one account team within the agency. Each account team member was asked to describe his/her creative decision making activities during the entire development of a new advertising campaign. A logical flow chart was developed which depicted the creative decision making process as it occurred on this campaign.

In applying decision systems analysis to the creative decision making process of advertising, certain guidelines were established which, if exercised, may work toward gaining a higher level of creative output and more efficiency in the process of creative decision making in advertising agencies.

The study also provides the unformed reader with a detailed description of exactly how an advertising campaign is developed by an agency, beginning with product positioning and consumer research and continuing through actual placement of the advertisements in the media.
This study measured and compared the attitudes of public relations educators and practitioners toward public relations internships. Its purpose was to gather data to use in developing guidelines for creating and conducting public relations internships.

Two hundred practitioners and 150 educators, all of whom were selected randomly from the Public Relations Register, were surveyed. Responses were received from 240 of the 350 persons queried, for a total response rate of 69 percent.

To answer the three research questions which guided the study, responses of the following groups were compared: public relations educators, public relations practitioners who have supervised internships, and public relations practitioners who have not supervised internships.

The data supported the following guidelines for public relations internships:

1) Internships should be made available to all public relations students, if possible.

2) Internships should be developed by the public relations department of a school for the public relations student.

3) Potential employers for interns should be screened by the public relations department of a school through staff reviews and oral interviews. Proper training capabilities and positive practitioner attitudes should be required.
4) Public relations students should be screened for internships through interviews and the examination of academic records by both educators and practitioners. Interviews should be geared toward identifying the particular interests and needs, so that the internships can be structured accordingly.

5) Public relations students should pass the following prerequisite courses before enrolling for internships:


6) An internship contract should be developed and signed by the educator, the practitioner, and the student before the internship begins. This contract should stipulate the legal responsibilities of each party, compensation methods, and the duties of student, practitioner and educator.

7) An intern should work 100 hours per semester for each hour of academic credit.

8) Public relations interns should be compensated by some combination of academic credit and pay.

9) Grades for public relations interns should be determined by work samples and practitioner recommendations to the educator in equal proportion.

10) Educators should use student feedback from internship experiences to keep abreast of new trends in public relations.

It was concluded that internship potential is not being fulfilled at this time. This conclusion was based on the large number of public relations educators and practitioners who have not participated in a public relations internship but strongly support the concept.
MEDIA, MARKETING, AND COMMUNICATIONS: A BALANCED APPROACH TO ADVERTISING EVALUATIONS

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Using a case study and a critical analysis, the author advocates that communication techniques for advertising should be examined and tested by communication, marketing, and media methods together.

Evaluated in this thesis is a marketing study of advertising effectiveness that was conducted in 1971. The author maintains communication techniques must be used in the evaluation process of an advertising campaign.

The author cites pertinent communication studies which are used for background to discuss some aspects of the marketing study evaluated. The awareness of advertising, group influence, and sources of information are discussed and interpreted in the thesis. Also, the awareness by medium is discussed.

All the variables which could have influenced the campaign are not analyzed. The socioeconomic and environmental factors and implications are highlighted. Only salient areas of the marketing study were judged.
Mass Communication and Economic Nationalism in a Developing Urban Society

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This study investigates the relations of mass media explosion and economic nationalism—two new phenomena that emerged in many developing countries in the 1970's. Three basic research questions were developed: 1) Are there causal linkages between mass communication and economic nationalism? 2) How are these causal linkages established? 3) Can these linkages be differentiated?

Concepts comparable to economic nationalism (political orientation, political radicalism, and attitude toward foreign investment) in previous studies were directly related to sociodemographic variables (age, social status, and education). These studies also excluded mass communication and knowledge. But modernization and political development studies have shown that mass media constitute an agent for adult socialization in society. For this study, therefore, a path model was developed using economic nationalism as its dependent variable with eight predetermined variables, including four antecedent variables, of which two were sociodemographic variables common in political orientation studies (age and education) and the other two were media use predictors recently introduced to information seeking studies (intrapersonal and extrapersonal needs for information); two independent variables, including print news media and television exposure; and two intervening variables consisting of two consequent variables common in political development studies (policy knowledge and sense of political efficacy).

Conceptually defined at the micro level of analysis, economic nationalism was "persons' positive attitude toward or support
for the government's economic policy that puts the country's interest above any interests of other nations." Being an attitude, economic nationalism was assumed to be related to policy knowledge. And policy information was assumed to be disseminated by mass media. Major hypotheses of this study, therefore, were: policy knowledge is directly related to mass media exposure; economic nationalism is directly related to policy knowledge; mass media exposure and policy knowledge significantly mediate the effects of education on support for economic nationalism. Furthermore, assuming that education was a component of socioeconomic status (SES) which discriminates differently at different levels of society and that SES was associated with access to information sources, other major hypotheses were also developed: relations of economic nationalism, policy knowledge, mass media exposure, and education are greater in the low SES group than in the high one.

Using a set of survey data (N = 636) from Barquisimeto, a provincial capital of Venezuela (1974), the above hypotheses were generally confirmed. Economic nationalism is best predicted by policy knowledge, which in turn is best predicted by education and print news media exposure. Moreover, the positive effects of education on economic nationalism are mediated by print news media exposure and policy knowledge.

The path model of this study is theoretically significant for future studies of the subject, because it shows that: 1) economic nationalism is too complex to be explained by sociodemographic variables; 2) policy knowledge is vital in the process of economic nationalism; 3) disseminating policy information in the society, print news media are essential for the economic nationalism formation; 4) differentiated by social stratification, the path model can explain economic nationalism in the low SES group better than in the high SES one; and 5) correction for attenuation is recommendable for a better understanding of the causal linkages.
MOTIVATION AND CHILDREN'S LEARNING FROM TELEVISION

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The purpose of this research was to replicate and extend developmental research on children's learning from the media and to validate the uses and gratifications approach to the study of media effects by manipulating motivations. Two kinds of learning were studied; central learning (plot-relevant information) and peripheral learning (plot-irrelevant information).

A field experiment was carried out. Two televised segments were shown to 343 children from the fourth, sixth, seventh, and eighth grades. The TV shows differed in their complexity (amount of information) which was varied by adding to the audio portion of the program "Wild Kingdom" information about the show's content (porpoises). This version constituted the high-complexity program. The low-complexity program did not contain this additional information.

Two levels of motivation were manipulated (surveillance and entertainment). A third condition received no motivation. In the surveillance condition, subjects were instructed to watch the program and learn all they could because they would have a quiz immediately after the program. In the entertainment condition, subjects were instructed to sit back and relax with their friends and have a good time while they watched the program. Control condition subjects received no instructions.

Central learning increased from fourth-to both sixth- and seventh-grade children. Peripheral learning increased from
fourth-to seventh-grade children while the decrease approached significance between seventh- and eight-grade children (p .059).

When interest in the TV show, sex of the subject and their perceptions of reality (for the program) were controlled, older children (sixth and seventh graders) learned more than younger children (fourth graders). Similarly, eight graders learned more than fourth graders. Controlling interest, sex and perceived reality revealed that peripheral learning increased from fourth to seventh graders while it decreased from seventh to eighth graders. However, when sixth and seventh graders were treated as a group, peripheral learning increased from fourth to sixth and seventh graders, while it decreased (though not significantly) from sixth and seventh graders to eighth graders.

These findings are important for two reasons. First, the peripheral learning findings were only significant when grade levels were not grouped. Second, interest and sex were significant predictors of learning. The more interested learned more than the less interested, and boys learned more than girls. With these factors statistically controlled, however, significant developmental differences in learning remained.

Children's perceptions of central and peripheral material were consistent across grade levels. However, children and adult judges differed in their perceptions of these materials.

Although children differed in the size of the groups in which they viewed the TV program, this factor was not important in influencing their learning of either central or peripheral material.

Control-group children learned more central material than either the surveillance or entertainment-group children. While this study manipulated motivations, children's self-report measures of why they watched the programs were also assessed. The high-measured-surveillance-motivated children learned significantly more
central and peripheral material than the low-measured-surveillance-motivated children. Both of the measured motivations (surveillance and entertainment) were positively related to both forms of learning. Only the relationship between entertainment and central learning remained significant after interest and sex were controlled statistically.