

Updating Adoption

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Abstract

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Ralph L. Hamilton

THE TASK OF UPDATING adoption is an overwhelming one. First, there is a wealth of information on the subject. Second, there is most likely an extremely wide range of knowledge on this subject among members of this audience. Third, I am not an authority on adoption, although I have been a close observer of developments and a user of the information.

This presentation could have turned into a book review entirely because there is an exhaustive treatment of adoption and diffusion in *Communication of Innovations* written by Everett M. Rogers with F. Floyd Shoemaker. I will refer to this 1971 book frequently.

The route I chose to take was to pick up diffusion-adoption about the time that AAACE members first became acquainted with this process and trace changes in the thinking about it up to the present.

I had just become a member of the staff of the Department of Information Services at Michigan State University when my co-workers came back from the 1955 AAACE Conference at Omaha talking about B and B and the long, long flannelboard. They were talking about Beal and Bohlen—George Beal and Joe Bohlen, who were rural sociologists at Iowa State University. These two highly-articulate, enthusiastic individuals had really caught the imagination of AAACE members in their presentation entitled “How People Adopt New Ideas.” Beal and Bohlen had both been active in research in this field and at that time Bohlen was chairman of a

This talk was presented by Dr. Hamilton at the 1973 AAACE meeting, Guelph, Ontario.

north central regional subcommittee for the study of diffusion of farm practices. That subcommittee issued a publication shortly after that Omaha AAACE meeting. It was designated as North Central Regional Publication Number 1, "How Farm People Accept New Ideas." Information in it was based upon a number of studies. I have drawn upon that publication in setting the stage about adoption and diffusion.

You will have noted that I have begun using the two terms, adoption and diffusion, together after a start with only one term, adoption. It is difficult to talk about adoption without bringing in diffusion.

Let's define these two terms according to that 1955 publication. *Adoption* or the acceptance of a new idea is a complex process involving a sequence of thoughts and actions by an individual. Adoption is an individual matter. *Diffusion* is the process by which a new idea moves from the source or creator of the idea through a social system until that idea is adopted by all the individuals in that system. Diffusion takes place between people.

This 1955 publication mentioned new ideas frequently but it focused on a behavior change, an overt action, in its discussion of adoption. The adoption process was presented as a five-stage process: awareness, interest, evaluation, trial and adoption.

At the awareness stage, the individual learns of the existence of the idea or practice but has little knowledge about it.

At the interest stage, the individual develops interest in the idea. He seeks more information about it and considers its general merits.

At the evaluation stage, the individual makes mental application of the idea and weighs its merits for his own situation. He obtains more information about the idea and decides whether to try it or not to try it.

At the trial stage, the individual actually applies the idea or practice, usually on a small scale. He is interested in how to apply the practice—in amounts, time and conditions for application.

At the adoption stage, he is actually using it and this stage of acceptance is one leading to continued use.

Of special interest to communicators was the information that

these studies turned up concerning the sources of information that individuals were using at each stage of the adoption process.

Here is what was reported.

Table 1. Channels of Communication (1955)

<i>Awareness</i>	<i>Interest</i>	<i>Evaluation</i>	<i>Trial</i>	<i>Adoption</i>
Mass media	Mass media	Neighbors and friends	Neighbors and friends	Own satisfaction
Agricultural agencies	Agricultural agencies	Agricultural agencies	Agricultural agencies	Neighbors and friends
Neighbors and friends	Neighbors and friends	Mass media	Salesmen	Agricultural agencies
Salesmen	Salesmen	Salesmen	Mass media	

You will note two general types of sources, impersonal and personal. Impersonal sources do not offer an opportunity for interaction or immediate exchange of information while personal sources do. As an individual moved from awareness to adoption, he shifted from one general type of source to the other.

Of nearly equal interest to communicators was the sequence of influences in the diffusion of new ideas throughout the social system.

Individuals could be classified into categories according to the sequence in which they adopted new ideas: first were the innovators, then a group called community adoption leaders who were followed by local adoption leaders and then later adopters to complete the diffusion process. Each of the groups appeared to have certain communication behavior patterns.

Innovators were independent thinkers who had a wide range of contacts, including college and other research sources. They were experimenters and people who were always trying out new things. They read technical publications. They were seldom named as persons to go to for advice about farming.

Community adoption leaders were not the first to try out new ideas but were among the first. Among other characteristics, they had a higher level of education and read more bulletins, magazines and newspapers than average.

Local adoption leaders were termed the people to whom the majority look for information and ideas in their farming opera-

tions. They had information contacts with agricultural agencies and farmers outside their own localities. Their leadership position was based on being sound in their judgment.

Later adopters were considered as the majority of the people in the community who adopt new ideas. They depended mostly on the local adoption leader for information and ideas, had less education and participated less in community affairs. They had some contacts with agricultural agencies and became aware of new ideas through mass media.

Beal and Bohlen became major spokesmen for the "diffusion" of information about adoption and diffusion. They were effective communicators and their presentation was a part of every basic communication training session presented by the National Project for Agricultural Communications. Of course, they were not the only researchers in the field. It was becoming perhaps the major focus of rural sociology research during that time. One of their students was Everett Rogers, whose book I mentioned earlier.

After his graduation from Iowa State, Rogers moved to Ohio State University where he quickly established a national reputation as a researcher in the field of adoption and diffusion and a reputation as a good communicator about it. Rogers appeared on the AAACE Conference program at Columbus in 1962, delivering a presentation entitled "Communication Behavior of Adopter Categories."

A few months earlier *ACE* had published an article by him entitled "Communication Behavior of Innovators and Other Adopter Categories." In this article, he suggested five categories of adopters: innovators, early adopters, early majority, late majority and laggards. Note that there were some changes in terminology from 1955.

He said that innovators sought information from scientists and the mass media, particularly research bulletins, and that early adopters had less direct contact with scientists than innovators. Later categories, Rogers wrote, were more inclined to seek personal information rather than mass media information and they required a local application of the idea in order to be convinced.

He concluded, "This should provide agricultural communicators with one method of audience delineation in the farm population."

About that same time (October, 1961) the North Central Regional Subcommittee for the study of diffusion of farm practices issued another publication, "Adopters of New Farm Ideas: Characteristics and Communications Behavior." Members of that committee included Bohlen, Rogers, Lionberger of Missouri, Moe of Michigan and Coughenour of Kentucky. They called attention to the great amount of research on this subject and mentioned a bibliography that listed 135 studies.

Adoption stages were somewhat similar to those suggested in the 1955 publication: awareness, interest-information, evaluation-application-decision, trial and adoption. Note that two stages were expanded in scope.

The categories of adopters were only slightly different than those suggested by Rogers in the *ACE* article: innovators, early adopters, early majority, late majority and later adopters.

Sources of information used at the various stages of adoption were only slightly different from those suggested in 1955. Friends and neighbors seemed to have edged ahead of government agencies at the awareness and interest stages while dealers and salesmen were a trifle higher on the ladder at the evaluation and trial stages than they had been earlier. The publication stressed that personal experience is the most important factor in the continued use of an idea.

Factors affecting adoption were more clearly defined, including characteristics of the innovation itself. Personal characteristics of adopters were more clearly defined too, with suggestions about attitudes, values, abilities, group memberships, social status and farm business characteristics.

The typical innovator used more types of information and was more likely to get information sooner and from more technically accurate sources. He subscribed to more farm magazines. The mass media of information of all kinds was said to be important to farmers in every adopter category. Laggards were reached more

frequently through mass media than personal contact with change agents.

Mass media sources of information may make a farmer more aware of a new practice but they are seldom effective in convincing him to adopt it, the publication stated.

Rogers' first book, *The Diffusion of Innovations*, appeared shortly after that 1962 AAACE meeting and served to stimulate even more interest in the field. One of the significant things about that book, in my own mind, was the effort to bring in theories and studies from fields other than rural sociology. There were examples in that book from the fields of medicine, education and industry. Rogers also brought in work done by communications researchers such as Katz and Lazarsfeld, Hovland and Klapper. He said that his generalizations concerning diffusion and adoption were based on over 500 studies dealing with those subjects.

Evidently, Rogers became more interested in the communications aspects of this work because he moved from Ohio State University to Michigan State University where he joined the staff of the Department of Communication.

This increasing interest in communication and its applications to diffusion and adoption was quite obvious when he and Floyd Shoemaker published the revised edition of Rogers' first book. The revision was titled *Communication of Innovations* instead of *The Diffusion of Innovations*. Not all sociologists feel as strongly about the communication saliency in this field, however, and I suggest that you read extensive reviews of this book by Coughenour and Jones in the Spring, 1973 issue of the *Journal of Rural Sociology*.

Again, let me point out that Rogers is not the only researcher in the field of adoption and diffusion. There are a great many others and he acknowledges them in his book. What he did was to pull these studies together to form theories and to suggest generalizations. He refers to more than 1,500 studies in the 1971 book.

There are a few ideas presented in the 1962 Rogers' book that I want to call attention to. Components of the diffusion process are: (1) the innovation; (2) communication of it from one individual to another; (3) in a social system; and, (4) over time. There

also seemed to Hamilton. Updating Adoption differentiated from other types of information or knowledge such as a news event or advice about some day-to-day marketing decision.

Rogers also called attention to communicability as an important characteristic of an innovation affecting rate of its adoption. Communicability was defined as the degree to which the results of an innovation may be diffused to others. Results of some ideas are easily observed and communicated while some innovations are difficult to describe to others.

The essence of the diffusion process, Rogers wrote, is the human interaction in which one person communicates a new idea to another person. "The underlying assumption was always that informal communication among adopters was the key to diffusion."

Noted in this 1962 Rogers' book was a concern for the problem of discontinuance of the innovation after it had once been adopted.

Let's look now at what was written in Rogers' 1971 book and at some other information concerning diffusion and adoption. Rogers suggests that there is a strong case for *four* stages in the adoption process: knowledge, persuasion, decision and confirmation.

At the knowledge stage, the individual is exposed to the existence of the innovation and gains some understanding of how it functions.

At the persuasion stage, the individual forms a favorable or unfavorable attitude toward the innovation.

The decision stage occurs when the individual engages in activities which lead to a choice to adopt or to reject.

At the confirmation stage, the individual seeks reinforcement for the innovation decision he has made but may reverse his previous decision if exposed to conflicting messages.

Rogers also re-labels what he formerly called the adoption process as the *innovation-decision* process, defining it as the mental process through which an individual passes from first knowledge of an innovation to a decision to adopt or reject and to

confirmation of this decision. Note that this definition, compared to earlier ones, makes allowance for rejection as well as adoption.

Rogers suggests the same basic information sources at each stage in the process; mass media channels are more effective in creating knowledge of innovations whereas interpersonal channels are more effective in forming and changing attitudes toward the new idea.

Some attention should be called to the discontinuance problem mentioned only briefly earlier but which is now getting more attention in adoption-diffusion literature.

There are two types of discontinuances, Rogers suggests. One is a *replacement* discontinuance in which the individual discontinues because he has found a better idea to use.

Another is the *disenchantment* type in which the innovation is not appropriate for the individual and it does not result in perceived relative advantage. Or, the individual may have misused the innovation. Later adopters often have the problem of mentally generalizing an innovation to their full-scale farm operation.

Discontinuance seems to be a particular problem among later adopters, and with innovations that have a low rate of adoption.

Let me quote directly from the Rogers' book on one point dealing with strategy of communication or strategy of change. "One might appeal to innovators to adopt an innovation because it was soundly tested and developed by credible scientists but this approach would not be effective with laggards."

I want to go now to some information on diffusion-adoption that I gained from a presentation by George Beal and Joe Bohlen at the National Agricultural Advertising and Marketing Association seminar in Memphis in April, 1973. This information is not in published form but does offer some interesting developments.

Beal and Bohlen stressed the increasing importance of *credibility* of sources of information during the decision-making process. They suggested that it may be the most important single factor related to the source of information used, using such words as *expertness* and *trustworthiness* in talking about credibility.

Here is the relative importance of the four types of informa-

tion sources as I recall them being presented. Incidentally, these are the same four used in the 1955 reports.

Table 2. Channels of Communication (1973)

<i>Awareness</i>	<i>Information</i>	<i>Evaluation</i>	<i>Trial</i>	<i>Adoption</i>
Mass media	Commercial	Commercial	Commercial	Commercial
Commercial	Mass media	Neighbors and friends	Neighbors and friends	Neighbors and friends
Government agencies	Neighbors and friends	Government agencies	Government agencies	Mass media
Neighbors and friends	Government agencies	Mass media	Mass media	Government agencies

Note that commercial sources are becoming more credible and have moved up in the standings.

This is a skip-around 18-year review of diffusion-adoption developments. Rogers gives more than 100 generalizations relating to this work in his 1971 book. I feel that all of them have relevance for agricultural communicators.

Here are some I have selected.

1. Earlier knowers of an innovation have more education than later knowers.
2. Earlier knowers of an innovation have greater exposure to mass media channels of communication than later adopters.
3. Earlier knowers of an innovation have greater exposure to interpersonal channels of communication than later adopters.
4. Earlier adopters have more years of education than do later adopters.
5. Earlier adopters have a greater ability to deal with abstractions than do later adopters.
6. Earlier adopters have greater exposure to mass media communication channels than later adopters.
7. Earlier adopters have greater exposure to interpersonal communication channels than later adopters.
8. Earlier adopters seek information about innovations more than later adopters.

9. Opinion leaders have greater exposure to mass media than their followers.
10. Mass media channels are relatively more important at the knowledge function and interpersonal channels are relatively more important at the persuasion function in the innovation-decision process.
11. Cosmopolite channels are relatively more important at the knowledge function and localite channels are relatively more important at the persuasion function in the innovation-decision process.
12. Mass media channels are relatively more important than interpersonal channels for earlier adopters than for later adopters.
13. Cosmopolite channels are relatively more important than localite channels for earlier adopters than for later adopters.

There are some comments that I would like to make concerning our own work and what this research tells us.

I have often wondered whether mass media are generally used only at the awareness or knowledge stage because the media have only been using that kind of information or giving information that kind of treatment.

Can we stretch out the use of the media to other stages of the process?

James Peters and Claron Burnett tried out an idea of this kind a few years ago in Wisconsin when they studied the feasibility of teaching the rather complicated subject of grain futures marketing by radio. They found that knowledge about futures marketing was increased by the radio programs. In my own work in Tennessee, small woodland owners increased their knowledge of woodland management practices as the result of a direct mail service sent to them. There are a number of instances where it has been demonstrated that knowledge can be increased by the mass media or by impersonal types of communication. The question is: Can the media be used in a more significant, effective way at the other stages of persuasion, decision and confirmation.

In the same vein, we know that for some innovations the

innovation-decision process is a simple one and that it takes place in a brief period of time. Perhaps we should aim at identifying those kinds of innovations and whenever possible attempt to bring the impersonal channels of communication into greater use.

It seems to me that we may have been overlooking the need to continue disseminating information about innovations that are supposedly all adopted. Discontinuance is a problem. Perhaps the mass media have a greater role to play here than we have been aware.

Agricultural and home economics communications have been seeking ways to make the mass media or impersonal channels more like personal channels. Attempts have been made to make source-receiver interaction possible. Telelectures (that's not an appropriate name for an interaction oriented teaching situation) are one example. Audience call-ins for TV programs—radio hot lines—are examples in the broadcast area. Take-home audio-visual teaching materials are another example.

Can we create new ways of bringing the mass media into use so that the receiver of the message can more realistically and effectively use the mass media in the later stages of his decision-making?

Now, having said that, I also believe that these adoption-diffusion studies should serve to remind us of the importance of interpersonal communication at the later stages of innovation-decision and that the mass media cannot do all things for all people in all circumstances.

Take low-income farmers, for instance, who have limited mathematical skills or lack rationality in their thinking process or who are unable to mentally generalize an innovation to their full scale farming operations. They may not read a newspaper or a magazine but only watch TV and they do that for entertainment. What can mass media do for them even in the awareness stage?

A good many of you no doubt are aware of the Expanded Food and Nutrition Education Program wherein an extension worker works only with a few dozen families and visits them regularly for months. Changes for these kinds of audiences come slowly—at first at least—and often face-to-face contact must be continued to

keep the problem of discontinuance from defeating the initial successful efforts.

How can the adoption-diffusion or innovation-decision research information be applied to these audiences? This is a large area of concern. I have only touched on it. Again I urge you to read more on it—and from the critical standpoint—as well as from the information standpoint. It will be worth your time.

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