Community Adoption Patterns

Implications from Diffusion Research—Part II

Principles derived from diffusion research
should provide reasonably reliable
guidelines for promoting action programs

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THE CUMULATIVE manner in which individuals adopt new practices in a geographic area can be represented as an ideal adoption curve. Such a curve or pattern is not an ordinary adoption curve—it is derived from practices which have attained near complete adoption in communities where they have been introduced. If practices that fail after an initial trial are considered, many variations in the curve would be apparent. An innovation may be accepted by a few people and then suddenly rejected by most early users, including those originally trying it. Adoptions may start in a usual manner and maintain a constant level after a few have been adopted. In fact, erratic patterns of almost any kind may occur.

This article will consider an ideal adoption curve. Since such a pattern is a fair representation of what happens in many cases of successful adoption on a community-wide basis,[1] it can serve as

Examples of such curves are found in Herbert F. Lionberger, *Adoption of New Ideas and Practices* (Ames: Iowa State University Press, 1960); B. Ryan and Neal Gross, *Acceptance and Diffusion of Hybrid Seed Corn in Two Iowa Communities*, Iowa Agricultural Experiment Station Research Bulletin 372 (Ames: Iowa State University, January, 1950); E. A. Wilkening, *Adoption of Improved Farm Practices as Related to Family Factors*, Wisconsin Agricultural Experiment Station Research Bulletin 183 (Madison: University of Wisconsin, December, 1953); and S. C. Dodd, "Diffusion Is Predictable: Testing Probability Models for Laws of Interaction," *American Sociological Review*, XX (August, 1955), 392-401.

a model toward which change agents can realistically work. In addition to discussing generalizations derived from the cumulative manner in which individuals adopt new practices, implications for change agents will be identified based on research referred to in this article and in Part I which appeared in the Fall issue of the Journal.[2]

STAGES IN COMMUNITY ADOPTIONS

There are several features of the ideal adoption curve (see Figure 1). *First,* there is the very slow, gradual start which actually may be quite erratic. This is followed by acceptance at an increasing rate and finally, after most people have adopted, by acceptance at a declining rate. Divisions in this curve may be regarded as stages in the community diffusion process. The first may be thought of as a trial stage for the community. Early adopters who figure in this stage serve as catalysts to those who adopt later. However, successful trial by innovators (the earliest to adopt) may not be enough to convince most people to adopt, particularly in highly traditional communities—many may reason that even imprudent farmers can be successful sometimes.

[2] Factors involved in the acceptance of new ideas and practices by individuals were discussed in Part I. See Herbert F. Lionberger, "Individual Adoption Behavior," *Journal of Cooperative Extension,* I (Fall, 1963), 157-66.
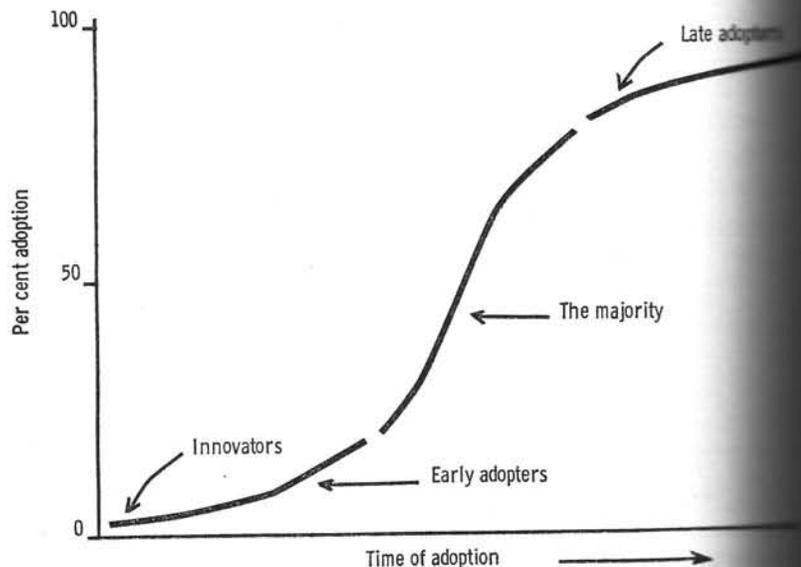

Figure 1. The community adoption curve.

The *second* or rapidly accelerating stage in the community diffusion pattern is also very important for the change agent—but for different reasons. Here diffusion of the legitimated idea is the main problem and is accomplished mainly by "trusted others." If adoptions in a community were the result of only influences operating outside of the social system, the adoption curve would likely approximate a gradually ascending straight line.[3]

Research findings show that the explanation is to be found in what people say and how they influence each other.[4] People may adopt in groups or singly upon the influence of another person. Either way the general pattern is much the same. Different people perform different functions. Some serve as communicators, some as advisers and demonstrators (legitimators), and some as innovators.[5]

Performance of the *communicative function* is based on the fact that people talk and listen to each other. A tendency toward concentration of the communicative function in a comparatively few farmers has been found in several studies.[6] To be sure, other persons, less sought for advice, function in the same role but not to the same degree or with the same effectiveness. Persons functioning in the communicative role have sometimes been referred to as "key communicators."

[3] For statement of hypotheses in regard to the kinds of adoption curves that can be expected under variant conditions see Dodd, *op. cit.*

[4] J. Coleman, *et al.*, "The Diffusion of an Innovation Among Physicians," *Sociometry*, XX (December, 1957), 253-70.

[5] Some references relating to different functions performed by different people in the diffusion process include Elihu Katz and Paul F. Lazarsfeld, *Personal Influence, The Part Played by People in the Flow of Communication* (Glencoe, Illinois: The Free Press, 1955); Lionberger, *op. cit.*; Robert K. Merton, "Patterns of Influence: A Study of Interpersonal Influence and Communications Behavior in a Local Community," in Paul F. Lazarsfeld and Frank N. Stanton (eds.), *Communications Research, 1948-1949* (New York: Harper and Brothers, 1949); Everett M. Rogers, "Opinion Leaders in the Communication of Agricultural Technology," paper presented at American Sociological Society Meeting, Seattle, Washington, 1958; and Herbert F. Lionberger, "Overlap-Dispersion of Selected Functions in Adoption Decisions of Farm Operators in Two Missouri Communities," paper read at the Annual Meeting of the Rural Sociological Society, Washington, D.C., August, 1962.

[6] Eugene A. Wilkening, "Informal Leaders and Innovators in Farm Practices," *Rural Sociology*, XVII (September, 1952), 272-75; Herbert F. Lionberger, "Some Characteristics of Farm Operators Sought as Sources of Farm Information in a Missouri Community," *Rural Sociology*, XVIII (December, 1953), 327-38; Herbert F. Lionberger, "Characteristics and Role of Local Influentials in the Diffusion Process," paper read at seminar of the Foundation for Research on Human Behavior on "Adoption of New Products: The Influence of Individuals and Groups" November and December, 1958). This is somewhat contrary to findings from urban studies where the exercise of influence seems to be more distributed among many people. See Katz and Lazarsfeld, *op. cit.*

Not every highly communicative person is listened to seriously. This may even be true of persons frequently sought as information sources. Aside from the communication of ideas, a somewhat similar function performed mainly by trusted other persons is *legitimation*. This refers to the process of becoming convinced that a new idea is all right and that it is good for one's self. Certain farmers are more frequently sought than others for this purpose. They are not always the ones sought for information.

The *third* stage in the community diffusion process is initiated by adoption at a decreasing rate. Often something new has been invented to replace the old by this time. Considering how county agents teach, they probably would already be stressing other programs or substitute practices by the time late adopters are making adoption decisions.[7] Knowledge of how late adopters learn and decide to adopt new practices strongly suggests that early emphasis on efforts to create awareness of new practices and teach early adopters about them is a judicious way to use limited resources. Under rapidly changing conditions, repeated cycles of individual adoption are expected and desired. However, if sustained use is the objective, reinforcement of decisions already made is important. Obviously, people who have a vested interest in the status quo are more concerned with sustained use than change agents associated with most action programs.

Speed of Adoption

Regularities in the community adoption pattern make it possible to accurately classify people according to their relative speed of adoption. This permits comparison of the characteristics of persons who are early or late to adopt one or several practices. Thus, it has been found that farmers who are early adopters have larger farms, broader social contacts, use more direct sources of farm information, are more inclined to take risks, and in general are more receptive to new ideas about farming than late adopters.

The earliest to adopt have been referred to as innovators.[8] Innovators and early adopters serve a risk-assuming, local-trial, legitimating function for late adopters.[9] They serve as consultants to others who are more resistant to change than themselves and who

[7] John T. Stone, *How County Agricultural Agents Teach* (East Lansing: Michigan State College Cooperative Extension Service, 1952).
[8] Everett M. Rogers, *Diffusion of Innovations* (New York: The Free Press of Glencoe, 1962), pp. 161-64.
[9] Lionberger, *Adoption of New Ideas and Practices, op. cit.,* pp. 54-55.

perhaps, are less capable of relating abstract ideas to their own situation.

Late adopters of farm practices tend to have mostly local social contacts. They have small farms, low incomes, and are reluctant to accept new ideas, particularly those introduced by "outsiders." They rely heavily on other farmers as sources of information and as consultants. Observation of the manner in which early and late adopters arrive at adoption decisions tends to support the "trickle-down diffusion process"—namely, that ideas and practices used by large and influential farmers are accepted later by others.

Knowledge of the speed and pattern of adoption makes it possible to evaluate, more realistically, teaching and Extension efforts. It provides a basis for understanding why first adoptions are so hard to get and why accelerated rates often occur with so little effort. Knowledge of the ideal adoption pattern also makes it possible to project acceptance targets more realistically. Thus changes expected in the initial years would be less than later when the multiplying influence of people-on-people reaches its peak. Also, near the end of the projected period when most potential adopters have already adopted the idea or practice, a realistic target would again be lower. In this connection it is significant to note that the ideal adoption pattern tends to be much the same for practices adopted by complex groups or institutions (e.g., school systems and municipalities) as for practices adopted by individuals.[10]

In experiments to measure the success of promotional programs, consideration of the nature of the prior adoption pattern in the control and experimental groups is quite necessary. If previous change patterns have not been similar, differential adoption rates can be expected quite apart from the expended effort by change agents. In areas which are approaching a rapid change status, acceptance may be expected to occur at an increasing rate with perhaps no outside promotion at all. In an area of relative prior quiescence, no such change would be expected without considerable promotional effort.

IMPLICATIONS FOR CHANGE AGENTS

Some action implications for change agents may be inferred from research findings cited in this article and a previous one about adop-

[10] F. Stuart Chapin, *Culture Change* (New York: Century, E. S., 1928); and P. R. Mort and F. G. Cornell, *American Schools in Transition (How Our Schools Adapt Their Practices to Changing Needs—A Study of Pennyslvania)* (New York: Columbia University Teachers College, 1941).

tion behavior.[11] These implications provide tentative guidelines for promoting the acceptance of new ideas and practices even though they have not been empirically validated in operational situations. The following appear to be sufficiently valid to warrant the thoughtful consideration of change agents.

1. *Use mass media to inform people about new ideas and practices and, perhaps, to create an interest in them.* This is particularly important in the first phases of the community adoption process when there is a need for creating mass awareness. The mass media should not be sold short because only a few people have access to them or can use them—persons most exposed to these media are often situated in the interpersonal communicative and influence structure so that they can pass on what they learn to others.[12] Also, such people are frequently those to whom others look for information and advice.

2. *Facilitate communicative exchange among people about innovations and new developments.* This is mainly what accounts for the rapidly accelerated portion of the community adoption curve. An important consideration here is that some people are more important as communicators than others and some have disproportionate amounts of influence. The frequent reliance on significant other persons for information and advice (in decisions requiring thought and deliberation) and the frequency with which individuals proceed through the individual adoption process strongly suggest the need for facilitating interpersonal communicative and influence networks as a necessary feature of accelerating adoption rates.

3. *Select communicators who are personally acceptable to the local clientele.* In some cases personal acceptability is virtually an absolute requirement for accepting advice of any kind from an individual. Special effort and keen insight may be required to determine what the requirements are. For many people, age and experience seem to be important in accepting advice from other persons. In other situations different characteristics may be more important. Irrespective of what they are, it is essential to identify them and assess their importance.

4. *Insofar as possible, plan and conduct special promotional programs for special functionaries, namely innovators and influ-*

[11] Lionberger, "Individual Adoption Behavior," *op. cit.*
[12] Elihu Katz, "The Two Step Flow of Communication: An Up-to-Date Report on an Hypothesis," *The Public Opinion Quarterly*, XXI (Spring, 1957), 78; and Herbert F. Lionberger and Rex R. Campbell, *The Potential of Interpersonal Networks for Message Transfer from Outside Information Sources: A Study of Two Missouri Communities*, Missouri Agricultural Experiment Station Research Bulletin 842 (Columbia: University of Missouri, September, 1963).

vials. A prior question is whether innovators and influentials are one and the same persons. The likely answer is that, except for highly innovative communities where a premium is placed on very quick adoption of new practices, they are likely to be different. Where this is true, different approaches will be needed for each. Innovators are easy to convince. They often learn about new practices before change agents do. In many cases they will have already decided to try an innovation before they communicate directly with a change agent. In such cases, all they may need is information on how to use the innovation and an opportunity to try it. Influentials or legitimators who are likely not to be so receptive to change will probably require some convincing before they will try an innovation. However, they must be convinced in a relatively inconspicuous manner—special, favorable treatment may destroy their influence.

Even when influentials and key communicators cannot be individually identified, they likely can be reached by aiming mass media messages at an intellectual level somewhat above the average. Also they are more likely to attend meetings where new ideas and practices are discussed, either as a part of a planned program or incidentally in association with others. This tends to be true in both progressive and relatively "backward" communities.

5. *Insure successful trial of new products, practices, and ideas by innovators and early adopters.* By definition, innovators are the first to try new ideas and practices in a given locality. Where local norms dictate caution in accepting new ideas, innovators may be regarded as imprudent persons and therefore not trusted as persons from whom to obtain advice. Even so, they are likely to be watched. Thus, they have an important influence on introducing changes. This is particularly true since many people want to see something successfully tried locally before trying it themselves, even on a small scale. Therefore, failures made by innovators can be costly in terms of later adoptions.

6. *Use limited resources in helping people who are ready to try a new idea or practice and in making them successful demonstrators for others.* This is probably more economical than concentrating major attention on slow starters. Late adopters are likely to rely heavily on the advice and counsel of persons near at hand in arriving at adoption decisions—they may also obtain original information from them. To try to communicate with and convince them directly is almost certain to be time consuming and even may be highly ineffective. For this reason an indirect approach may be more effective and probably less costly. Often information obtained from trusted associates is accepted when the same information would

be rejected if communicated by change agents who are ordinarily viewed as "outsiders."

7. *Enlist the help of dealers in informing people about new developments in farming and for giving counsel and advice on such matters.* Dealers are often in a very strategic position to render helpful assistance to farmers. Research has shown that suppliers occasionally become extremely important as change agents in the adoption of new farm practices. A service orientation, the possession of reliable information, and the confidence of a clientele seem to be requirements for effective role performance as informant and consultant.

8. *Use existing decision-making processes.* There seems to be a series of requirements which ordinarily must be met before most people decide to make even limited trials of new practices. Effort to meet the conditions is more likely to be successful than the same amount of effort to short circuit the decision-making process.

9. *Pre-test educational materials before large scale production and use, particularly in cross-cultural situations.* Under such circumstances it is not safe to assume that a poster or a pamphlet will convey intended messages. Items of content, considered incidental by the producer, may be magnified to undue proportions, unintended interpretations may be made, or central ideas may be presented in such unintelligible ways that they fail to register. Pre-testing can suggest what is wrong and give clues as to why. Even when the communicator and the target individual or audience are of the same culture, intended messages may be distorted. Thus, pre-testing under such circumstances may also be desirable.

10. *Take account of the culture of the people in planning message content.* This includes (1) habitual ways of thinking, feeling and acting, (2) prevailing hopes and aspirations of the people, (3) the way they hope to achieve desired ends, (4) the rights, duties, and obligations of individuals to others within their families and to other groups with which they are associated, (5) the things and conditions considered important, (6) guiding life principles, and (7) existing ideas relative to change. This can result in more meaningful messages and fewer communicative mistakes. While this again is particularly applicable in cross-cultural situations, the same precautions are needed when professional educators from one type of background try to communicate their ideas to less educated persons who have quite different life experiences.

11. *Reinforce decisions already made to keep farmers and others who have made the right decision from changing their minds.* People may quit using a practice unless they are continually assured that

previous use-decisions are sound. Even though retention of old practices should not be encouraged where new and better alternatives are available, there are situations where practices of high utility have been abandoned for unsound reasons. In such cases, reinforcement of prior decisions seems appropriate.

12. *Set realistic targets for achievement.* If the objective of a promotional program is the adoption of specific changes, setting the stage for accelerated change or accelerated acceptance at a subsequent time may be much better in the long run than trying to achieve many early adoptions. Certainly it is more realistic. Setting a goal of early high adoption can be very disappointing; also failure to recognize the general nature of the "ideal" adoption pattern can result in later claims of success that are not due to change agent efforts. A realistic goal is to expect little change at first, accelerated change later (until half or more of the potential adoption units have accepted the change), then acceptance at a declining rate.

CONCLUSION

"Diffusion research" (which itself has diffused in accord with the "ideal" adoption curve) has yielded many findings that suggest action principles. Those listed in this article represent a few possible ones. Although most action principles have not been directly verified by research findings, they likely transcend the accumulated knowledge of skilled promoters of change. Even though some of them will doubtless be modified by subsequent experience and research, they should provide reasonably reliable guidelines for promoting action programs.

ONE afternoon the home agent and the assistant agents met to discuss various articles in the *Journal of Cooperative Extension.* One person would report on the articles she had read and the others would listen and ask questions or discuss the article. This method is very helpful in understanding the point in question brought out by the various authors.
—from JOYCE HARPER, Assistant Home Economics
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NO MAN needs sympathy because he has to work, because he has a burden to carry. Far and away the best prize that life has to offer is the chance to work hard at work worth doing.
—from THEODORE ROOSEVELT as quoted in *Forbes,* XCI (March 1, 1963), 46.