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A Revision of the Two-step Flow of Communications Hypothesis*

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Summary

Some unpredicted findings have been discovered in a study on voting habits made twenty years ago by a group of research workers of Columbia University who formulated their discovery thus: 'Ideas often flow *from* radio and print *to* the opinion leaders and *from* them to the less active sections of the population.' This statement, known as the two-step flow of communications hypothesis, has attracted wide attention in communication literature. At present, however, most research workers agree that the situation in real life is more complicated than this hypothesis suggests. Research on the diffusion of new ideas, techniques, etc., and especially a recent study on the diffusion of new farming methods in the Netherlands, shows that both opinion leaders and their followers are influenced by mass media as well as by personal influence. Farmers usually hear for the first time of the existence of a new method through the mass media, but the decision to adopt an innovation is mainly influenced by personal contacts. However, the kinds of mass media influencing opinion leaders and the kinds of personal contacts influencing them differ from those which influence their followers.

The conclusions drawn from various studies of communication processes differ with regard to the question whether people are mainly influenced by persons of a higher social status or by persons of the class they themselves belong to. The Dutch study suggests that this depends upon the need people feel for new information. If they are badly in need of information, they will

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turn to well informed persons who often belong to a higher social status, but they are likely to receive most information on new ideas they do not very badly want to know about through casual conversations with people of their own status group.

Review of Literature

Few findings in communications research have aroused so much interest as the 'two-step flow of communications hypothesis'. This hypothesis originated from an analysis of the 1940 presidential election campaign in the United States which unexpectedly revealed that the majority of the voters were not only influenced by mass media, but that they were even more influenced by other people. These findings led to the hypothesis: 'Ideas often flow *from* radio and print *to* the opinion leaders and *from* them to the less active sections of the population.'[1] Later research showed that communication processes are often more complicated than this hypothesis indicates. In an up-to-date test of this hypothesis published in 1957,[2] Katz found that 'despite their greater exposure to the (mass) media, most opinion leaders are primarily affected not by the communication media but by still other people.' Katz mainly used the studies of the Bureau of Applied Social Research of Columbia University for his 'up-to-date test', but he did not give much attention to the analyses made by rural sociologists of the adoption of new farming methods.

In the tradition of this rural sociological research, Ryan and Gross published their famous study on the adoption of hybrid seed corn already twenty years ago.[3] Subsequent research confirmed their findings that the adoption of new farming methods is usually a rather lengthy process during which people become aware of new ideas mainly through mass media, but where the decision to adopt the new idea is predominantly made as a result of personal influence.[4] It was also found that, as a rule, opinion leaders are better informed than their followers.[5] In the study which forms the subject of this article, we tried to combine these findings by analysing which sources of information were used by opinion leaders and which by their followers during the various stages of the adoption process.

A student of journalism, Mason, had made an attempt to study the same problem. He is rather critical of rural sociological research in this field, but in my opinion his study is only of limited value because of some weaknesses

[1] P. F. Lazarsfeld, B. Berelson and H. Gaudet, *The People's Choice*, 2nd ed. New York, Columbia University Press, 1948, p. 151.

[2] *Public Opinion Quarterly*, 21, pp. 61-78.

[3] B. Ryan and N. Gross, "The Diffusion of Hybrid Seed Corn in Two Iowa Communities," *Rural Sociology*, 8 (1943) pp. 15-24.

[4] This research is summarized in: E. M. Rogers, *The Diffusion of Innovations*, Free Press, New York, 1962, ch. IV.

[5] Summarized in Rogers, *op. cit.*, ch. VIII.

in his methodology.[6] Rural sociologists had asked farmers, subsequent to their having adopted a new idea, about their sources of information while they went through the various stages of the adoption process. Mason, however, asked the farmers at different stages of the adoption process questions such as: 'How much have you talked to someone at the State College about a community drainage project? A lot, quite a bit, a little, or not at all?' This method has two weaknesses. In the first place, in the case of those who had already adopted the new method, the replies related not merely to the sources of information which influenced them during the period which led to their final decision to adopt the new method, but also to the sources from which they got their initial information about this project. In the second place, the differences in the use of the sources of information found in the different stages of the adoption process are partly due to the well known fact that innovators use different sources of information than people do who lag behind in adopting anything new. In addition, it seems doubtful to me whether all those who said that they had used a certain source of information quite a bit, had actually made use of this source to the same extent.[7]

In a study of an election campaign in the United States, Deutschmann and Pinner found that over 80% of the informed people got their initial information on two major campaign events from mass media. Personal conversations usually take place subsequent to people having been informed by these media. Such conversations usually exert a greater influence on the intention how to vote than mass media do. However, a large number of people who were only influenced by mass media also changed their intention how to vote to some extent.[8] These findings confirm the two-step flow hypothesis. This is also true of the studies on the diffusion of the news of the death of Senator Taft[9] and on that of the assassination of President Kennedy.[10] In the case of the shooting of President Kennedy, it was found that over half the population had got their information from personal sources, but that they had usually turned to the mass media for confirmation and additional information. In the less sensational case of Senator Taft, far fewer people were found to have got their initial information from personal sources, but here too, many had

[6]R. Mason, *Information Source Use in the Adoption Process,* Ph. D. dissertation, Dept. of Communication, Stanford University, Stanford, Cal. R. Mason, "The Use of Information Sources by Influentials in the Adoption Process," *Public Opinion Quarterly,* 27 (Fall 1963), pp. 455-466, and R. Mason, "The Use of Information Sources in the Adoption Process," *Rural Sociology,* 29 (March 1964), pp. 40-52.

[7]Perhaps this is an indication of the rather weak interviewing techniques Mason has used throughout his study. Among other things he reports that out of 97 farmers who had not tested their soils, 38 incorrectly claimed that they had done so (Ph.D. dissertation, table 7, p. 59).

[8]J. Deutschmann and F. A. Pinner, *A Field Investigation of the Two-stage Flow of Communication,* paper read for the Association for Education in Journalism, mimeograph, Communication Research Center Michigan State University, East Lansing, 1960.

[9]O. N. Larsen and R. J. Hill, "Mass Media and Interpersonal Communication in the Diffusion of a News Event," *American Sociological Review,* 19 (1954), pp. 426-433.

[10]B. S. Greenberg, *Diffusion of News of the Kennedy Assassination,* mimeograph, Institute of Communications Research Stanford University, 1964.

turned to the mass media for additional information, although over half of the total sample were found not to have consulted any other medium for additional information.

These studies give one the impression that people usually get their news first from the mass media, except in cases of very important and unexpected events which cause a lot of excitement and comment. If they are interested in the event, they may consult mass media for additional factual information, but they are perhaps more inclined to listen to personal sources for interpretation and evaluation of these events. The correctness of the hypothesis that one group of people is informed through mass media, and another group through personal contacts, is, therefore, very doubtful.

Research Methods

In the case of our study in the Netherlands, interviews were conducted with all of the approximately one hundred farmers in each of three communities with widely different cultural patterns.[11] In order to establish opinion leadership, three sociometric questions were asked:

1) Which two farmers do you ask for advice when you are not sure of the merits of new farming methods?
2) Which two farmers do you consider to be good farmers?
3) Which two farmers do you talk to most frequently?

This method enabled us to count how often each farmer was mentioned in the replies to each of these questions. In addition, in each community, six or seven 'judges', mostly influential farmers, were asked to give each farmer a rating, ranging from a low zero to a high ten, according to the farmer's influence during discussions on farm management. These ratings were then averaged. A factor analysis showed that each of these four 'measures' mainly gave an indication of the same dimension: social status.

In order to measure the information sources used, each farmer was given a card with seven different sources: mass media; meetings and lectures; excursions, demonstrations and experimental plots; the local agricultural advisory officer (in the U.S.: county agent of the extension service); other farmers; salesmen; personal experience.[12] They were then asked which of these sources was usually the most important to them with regard to learning for the first time about a new farming method. The next question was: 'Many farmers await the effect of a new method before deciding whether to apply it themselves. If you make such a decision, which of the information sources on this card is usually the most important to you?' The replies showed that some farmers chose one of the mass media and said that to them the radio or their

[11]Except 2% refusals and not-at-homes.

[12]T.V. has not been included, because television is not (yet) used by the agricultural advisory service in the Netherlands. Dutch television programmes only give an agricultural programme for people living in towns; half an hour a month. There are no commercials on the Dutch T.V.

farming paper was the most important. These replies were also coded. The main reason why these questions were not asked with regard to specific methods was that it would then have been difficult to get any idea about the information sources influencing the late-comers who usually follow in the wake of the opinion leaders.

In addition to the questions on the importance farmers attached to the different information media, questions were also asked about the extent to which farmers used the major information sources.[13]

Information Sources Used by Leaders and Followers

According to the two-step flow hypothesis one would expect lead-

Table 22-1. The average 'judge's' rating of the influence of farmers using information media to various extents—scale: 0–10

Information Media Used	*Average Influence Rating*		
	Noord-Beveland[1]	*Milheeze*[2]	*Dwingeloo*[3]
Number of farming papers			
None		[4]	6.0
1	5.5		6.3
2	6.0		7.6
3 or more	7.0		7.6
Listening to radio farming programmes			
Never	5.8	5.8	6.5
Sometimes	5.9	5.9	6.8
Nearly always	6.4	5.7	6.3
Number of agricultural meetings attended			
None	5.1	4.9	6.1
1–5	5.8	5.1	6.7
6 or more	6.8	6.6	7.2
Number of farm visits by agricultural advisory officer last year			
None	5.3	5.0	5.4
1–3	6.1	6.0	6.6
4 or more	6.5	7.1	6.8
Demonstrations attended			
None	5.6	5.3	6.5
Some	6.3	6.2	6.6

[1] *A community with modern farm management and many contacts with urban culture.*
[2] *A community with modern farm management and few contacts with urban culture.*
[3] *A community with traditional farm management and few contacts with urban culture.*
[4] *All farmers in this community receive a farming paper, but only 7% more than one.*

[13] A more complete discussion of these research methods and of the research findings is given in A. W. van den Ban, *Boer en Landbouwvoorlichting; De Communicatie van Nieuwe landbouwmethoden* (The Communication of New Farm Practices in the Netherlands, English summary), Assen. Netherlands, Van Gorcum, 1963.

ers to make more use of mass media than their followers. Table 22-1 shows that this is true with regard to the number of farming papers received by the farmers, but not with regard to listening to farming programmes on the radio, with the exception—to some extent—in the Noord Beveland community. The other information media too, including personal contacts with the local advisory officer, were used more frequently by the opinion leaders than by their followers.

Stages in the Adoption Process

A second reason to revise the two-step flow of communications hypothesis is based on the results of Table 22-2, showing the sources of information used during the different stages of the adoption process.

For initial information about new methods 75% of the farmers men-

Table 22-2. The percentage of farmers considering various sources of information to be the most important

Source of Information	*To Learn*[1]	*To Decide*[2]
Farming papers	16	1
Radio	13	0
Mass Media in general	41	3
Mass Media plus some other source	5	[3]
Demonstrations, meetings, etc.	6	12
Advisory officer	3	20
Other farmers	11	43
Other farmers plus some other source	[3]	8
Salesmen	3	4
Personal experience	0	3
Other combination of sources	2	3
No answer	0	4

[1] *Initial information about new farming methods.*
[2] *On the adoption of those methods.*
[3] *Coded as other combination.*

tioned mass media as their most important source of information, but these media have hardly any importance when it comes to decide to adopt the new method. During the decision stage of the adoption process, personal contacts with other farmers, advisory officers and salesmen were mentioned as the major information sources by 75% of the respondents. Under these conditions it is hardly possible for opinion leaders to have been exclusively influenced by mass media, or for their followers to have been influenced only by personal contacts.

In accordance with the two-step flow hypothesis we found that those

farmers who usually first hear from other farmers about new methods, exert very little influence themselves. However, there are so few of these farmers—only 33 out of 303 respondents—that this can hardly be considered sufficient evidence for the correctness of the hypothesis. Furthermore, the eleven farmers who mentioned mass media as their major source of information in the decision stage of the adoption process were not exceptionally influential.

We may therefore conclude that opinion leaders as well as their followers are influenced both by mass media and by other people, but during different stages of the adoption process.

Who Influences Whom?

According to the original two-step flow hypothesis there is one group of opinion leaders who influence all others. Later research has shown, however, that there may actually be a hierarchy of leaders. How this process works is not quite clear from previous research. Some authors say that 'opinion leaders and the people whom they influence are very much alike and typically belong to the same primary groups.'[14] But other studies showed that 'farmers were generally inclined to look up the status scale for advice on matters related to farming.'[15]

The replies to our three sociometric questions enable us to analyze how this process worked within one community. We do not possess any information on the farmers outside this community who may influence farmers within, or vice versa.[16] In order to analyze who influences whom within a community, the farmers were first divided into four groups ('quartiles') according to the scores showing their contacts with the advisory service.[17] It was then possible to calculate how many choices had been made for farmers in the same quartile according to their contact with 1, 2 or 3 quartiles more or less contact and, also, how many choices would have been made if each farmer had chosen two other farmers at random. By dividing these two sets of figures we obtained Table 22-3.

The last line of this table shows that not all farmers made the two choices they were requested to make; if they had done so, all the figures on this line would have been 100. More interesting are the columns showing that there is a tendency to choose as friends, farmers with a little more contact

[14]Katz, *op. cit.*

[15]H. F. Lionberger, *Adoption of New Ideas and Practices*, Iowa State University Press, 1960, p. 86.

[16]Rogers found that the innovators, that is the first 2.5% to adopt new methods, have many contacts with colleagues outside their community. E. M. Rogers, "Characteristics of Innovators and Other Adopter Categories," *Ohio Agr. Exp. Station, Research Bull.* 882. Columbus, 1961.

[17]These scores included not only the personal contacts with the local advisory officer, but also the readership of farming papers and publications of the advisory service, visits to farm demonstrations and meetings, etc.

Table 22-3. The number of sociometric choices made according to the difference in scores for contact with the advisory service between the chooser and the farmers chosen, in percentages of the number of choices which would have been made if every farmer had made two choices at random

Number of Quartile Differences	*Adviser*			*Good Farmer*			*Friend*		
	N. Bev.[1]	*Mlh.*[2]	*Dw.*[3]	*N. Bev.*	*Mlh.*	*Dw.*	*N. Bev.*	*Mlh.*	*Dw.*
− 3 Farmer chosen, far less contact	0	17	0	0	9	9	9	43	17
− 2	8	21	26	31	13	37	42	73	59
− 1	41	27	42	62	27	35	77	60	66
0 as much contact	61	84	47	90	100	69	74	98	79
+ 1	94	87	75	108	108	97	113	90	87
+ 2	111	111	66	138	158	117	126	94	80
+ 3 Farmer chosen, much more contact	112	69	43	197	248	103	84	69	52
Total	62	64	49	87	88	69	82	80	71

[1] = *Noord-Beveland* [2] = *Milheeze* [3] = *Dwingeloo*

with the advisory service than the respondents maintain themselves; but to choose as 'good farmers', farmers who maintain much more contact, whereas the choice for the advisor lies between the two others. The reason for this difference between the people chosen in reply to the three sociometric questions probably is, that the contact with the advisory service is correlated with social status, especially in the communities with modern farm management. It is a well known fact that people tend to spend their leisure with people belonging more or less to the same social status, but that people prefer to work together with group members of higher social status.[18] If this is the case here too, we should find this tendency more clearly expressed by dividing the farmers, not according to their contact with the advisory service, but according to their social status. For this reason a table, similar to Table 22-3, was made for the "judges" rating of the farmers' influence.[19]

For the communities with modern farm management—Noord-Beveland and Milheeze—this table shows a strong tendency to select as 'good farmers', farmers with much more influence than the respondents exerted themselves.

[18] G. C. Homans, *Social Behaviour; Its Elementary Forms*, New York, Burlingame, Harcourt, Brace and World, 1961, Ch. 15.

[19] The ratings 2, 3 and 4 and the ratings 8 and 9 have been combined, because few farmers received such an extreme rating. Otherwise, some percentages in Table 22-4 would have been calculated on the basis of very small numbers of observations.

In the community with traditional farm management this was shown to be true to a lesser extent. Moreover, the tendency to select as friends, farmers of about the same social status, is more pronounced in Table 22-4 than in Table 22-3.[20]

These findings show, in accordance with the opinion of Katz, that opinion leaders sometimes belong to the same primary groups as their followers, but that at other times people prefer to ask advice from others with a higher social status, and probably belonging to quite different primary groups, in accordance with Lionberger's findings. Katz is correct with regard to information gathered in casual conversation, probably on subjects like films one wants

Table 22-4. Number of sociometric choices made according to the difference in the 'judge's' rating of the influence exerted by the chooser and the farmers chosen, expressed in percentages of the number of choices which would have been made if every farmer had made two choices at random

Points Difference in 'Judge' Rating	*N. Bev.*	*Mlh.*	*Dw.*	*N. Bev.*	*Mlh.*	*Dw.*	*N. Bev.*	*Mlh.*	*Dw.*
− 4 Farmer chosen had far less influence	0	0	19	0	0	0	0	0	58
− 3	0	0	0	0	0	7	0	32	14
− 2	0	0	8	23	0	15	8	31	30
− 1	18	37	39	26	3	18	49	96	83
0 Farmer chosen had about as much influence	54	85	73	77	83	101	112	110	101
+ 1	120	93	49	109	120	72	148	102	60
+ 2	107	114	49	145	184	110	107	83	76
+ 3	157	150	107	278	221	165	100	79	79
+ 4 Farmer chosen had much more influence	98	0	96	343	407	154	74	41	115
Total	62	64	49	87	88	69	82	80	71

to see, or about the qualities of the different candidates in an election. Few people feel an urgent need for information on such subjects. On the other hand, for information on new farming methods—the problem studied by Lionberger—many farmers badly need this information because they know that this may have a considerable influence on their income. In the latter case, therefore, they will turn for advice to farmers they consider more competent than themselves, in spite of the fact that crossing such a social barrier may

[20]The exceptions in Dwingeloo, for farmers with 4 points more or less influence, are probably caused by chance because of the small number of observations in these cells.

further diminish the social status of the farmer asking for advice, as has been shown by Homans.[21]

This indicates that the question as to whether or not the diffusion of new ideas is a two-step process, does depend on the need for information people feel. When they urgently need information about a new idea, a two-step process within the community will occur most frequently. Certainly our data show that in these Dutch farming communities most farmers know which farmers are best informed about new methods. However, as long as people believe that they can get along quite well without specific information, as is often the case, new ideas have to pass along a rather long chain of people before they have moved from the top to the bottom of the social status scale.

Characteristics of Opinion Leaders Depend upon the Progressiveness of Their Community

The analysis of three communities, differing in their willingness to adopt new ideas, enabled us to study the influence on opinion leadership of the community norms. In this study, community norms have not merely been inferred by means of the average adoption and contact-with-advisory-service scores, but also with the aid of the interview question: 'What is the general opinion in this village about farmers who are always among the first to try new methods?' Table 22-5 shows that the community norms are much less

Table 22-5. The general opinion in the village about farmers who are always among the first to try new methods, expressed in percentages of interviewees per community

Opinion	*Noord-Beveland*	*Milheeze*	*Dwingeloo*
Favourable	31	45	10
Favourable with qualifications	12	5	12
No general opinion	29	30	20
Unfavourable	26	14	49
No answer	3	5	8

favourable in the Dwingeloo area than in Noord-Beveland, and most favourable in the Milheeze area. The figures relating to the contact with the advisory officer and the adoption scores show about the same tendency.

While trying to formulate a general theory on opinion leadership, Homans presented the hypothesis that a person becomes an opinion leader by 'providing rare but valuable services to others.'[22] In progressive communities like Milheeze and Noord-Beveland, farmers are apt to put a much higher value on

[21] *Op. cit.*, p. 324.
[22] *Op. cit.*, p. 314.

information about new methods than farmers in traditional communities like Dwingeloo. We would, therefore, expect opinion leaders at Dwingeloo to be less well informed about new methods than in the other two communities. Tables 22-1 and 22-3 have already shown some indications that this is indeed the case. Table 22-1 shows that the difference in influence between the farmers who do and those who do not use various sources of information, often is smaller in the Dwingeloo area than in the other, more progressive communities. Similarly, Table 22-3 shows that Dwingeloo farmers are least inclined to select as good farmers or advisers, farmers who maintain a closer contact with the advisory service than they do themselves. These indications become clearer when we correlate the contact-with-advisory-service scores of Table 22-6 with the four different measures of opinion leadership.

Table 22-6. Correlation coefficient of contact with advisory service scores and four measures of opinion leadership

Measure of Opinion Leadership	*Noord-Beveland*	*Milheeze*	*Dwingeloo*
Number of times chosen as:			
adviser	0.480	0.506	0.371
good farmer	0.336	0.528	0.253
friend	0.394	0.355	0.218
Judges' rating of influence	0.482	0.707	0.280

This table shows indeed that the correlation coefficients between opinion leadership and contact with extension are higher in the Noord-Beveland and Milheeze communities, where more farmers are interested in information about new methods than in a traditional community like Dwingeloo.

Similar conclusions have been drawn from investigations on opinion leadership among farmers in Kentucky[23] and in another part of the Netherlands.[24]

Conclusions

On the basis of the research reported in this article, it seems necessary to replace the two-step flow of communications hypothesis by a more complicated set of hypotheses:

1. The adoption of a new idea usually takes quite a long time, cer-

[23]C. P. Marsh and A. L. Coleman, "Farmers' Practice-adoption Rates in Relation to the Adoption Rates of 'Leaders'," *Rural Sociology*, 19 (1954) pp. 180-181.

[24]A. W. van den Ban, *op. cit.*, p. 168.

tainly in the case of methods which imply many changes in related spheres.

2. Mass media are major agents in arousing the interest in new methods early in the adoption process, but during a later stage personal contacts are especially influential in the decision to adopt a new method. Basically, this process is the same for opinion leaders and for their followers.

3. The first persons to adopt a new idea make intensive use of all sources which can provide reliable information about the idea including mass media as well as personal contacts with qualified informants.

4. Often these innovators and early adopters are also the opinion leaders of their group, but the relationship between pioneering and opinion leadership is much closer in progressive than in traditional groups.

5. Problems, about which more information is badly needed, will often make people turn for advice to the best informed people in the community. These are usually people of a high social status.

6. On most new ideas, however, people will not feel an urgent need for information. In this case, people will get their information personally through casual conversations, mainly with people of about the same social status.

Considerable evidence for these hypotheses is found in a study on the diffusion of new farming methods in the Netherlands whereas the study of other innovations also offers some evidence, especially the study on new farming methods in the United States. There is no certainty, however, that these hypotheses will also be found to be true for different cultures and different new ideas. Further research will be needed to test the validity of these hypotheses, for instance with regard to ideas about political candidates in Latin America.