

Differential Acceptance of Change:
Implications For Rural Development

T. L. Napier, Assistant Professor

C. J. Wright, Research Assistant

Department of Agricultural Economics and Rural Sociology
The Ohio Agricultural Research and Development Center
and The Ohio State University
Columbus, Ohio
2120 Fyffe Road
Columbus, Ohio 43210

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By

T. L. Napier* and C. J. Wright**

Introduction

The purpose of this article is to discuss the differential acceptance rates of technological and social change. A theoretical perspective will be offered and subjected to empirical test among rural residents in the State of Ohio.

Theory

Social and technological changes are inevitable but the rapidity with which human beings adopt specific types of changes is clearly differential in nature. Numerous social scientists have observed that all people do not accept change at the same time and that some types of changes are more strongly resisted than others. William F. Ogburn provided an excellent discussion of the impact of differential acceptance of change in his classic work entitled Social Change in 1922. His thesis was that different rates of change among the various component parts of a social system could result in dislocation or disequilibrium among the components of the system. Ogburn and Meyer Nimkoff² expanded Ogburn's

*T. L. Napier is an Assistant Professor, Department of Agricultural Economics and Rural Sociology, The Ohio Agricultural Research and Development Center and The Ohio State University.

**C. J. Wright is a research assistant, Department of Agricultural Economics and Rural Sociology, The Ohio Agricultural Research and Development Center and The Ohio State University.

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²Ogburn, William F., and Meyer F. Nimkoff, Sociology, The Riverside Press, Cambridge, Massachusetts, 1958, pp. 708-712.

original theoretical model to include technological change. This expanded theory basically supported the position that technology is often more rapidly accepted than sociological change which could also lead to disequilibrium within the social system. The disequilibrium means that one or more components of the social system is being modified at such a rapid rate when compared with other components that the system is in a state of imbalance.

Everett Rogers and Rabel Burdge³ recognized that acceptance of change was differential in nature and provide insight into the causal factors of the acceptance or resistance to change. These researchers noted that people evaluate new technological and social innovations from five different perspectives. The five major tests by which a change may be evaluated are:

1. Whether or not the people perceive the change as being "better" than the existing practices,
2. Whether or not the proposed change will be "compatible" with existing culture,
3. Whether or not the proposed change is too complex to implement effectively,
4. Whether or not the proposed change can be subjected to experimentation, and
5. Whether or not the results of the change can be observed by the adopters.

The review of the literature clearly demonstrated that all changes are not adopted by people at the same rate and the research and theory suggest that technological changes are probably more readily accepted than social change. In the context of the tests suggested by Rogers and Burdge, technological changes

³Rogers, Everett, and Rabel Burdge, Social Change in Rural Societies, Appleton-Century-Crofts, New York, pp. 349-375, 1971.

more quickly satisfy the basic requirements for adoption. The results of technological adoption are quickly observed by the adopters, the value structure of American society tends to be supportive of technological change which increases productive output, a major component of technological advancement appears to be simplifying the complexity of the machinery, and technology is easily pre-tested. It is argued that sociological changes do not so easily satisfy the same basic tests, therefore, people will tend to resist social change. Consistent with this theoretical position the hypothesis for testing was studied as follows: Individuals will exhibit more positive attitudes about accepting technological change than sociological change.

Methodology

The hypothesis was subjected to empirical test among a group of rural residents in a small community in West North Central Ohio. A systematic sample was taken from the community group using a schedule which was designed to be self-administrable. A total of sixty-nine people from a population base of approximately 600 composed the respondent group. The characteristics of the sample were: lower-middle socio-economic class, long-term residents (the mean length of residence was about 29 years), middle age (the mean age was approximately 50 years), the people were home owners, and were from a farm or rural non-farm background. The primary economic activity of the area was production agriculture.

Thirty-seven of the respondents were contacted by research personnel while the remaining thirty-two were contacted by mail. Since the measuring devices were designed to be self-explanatory and could be validly completed without the aid of an interviewer, it is argued that the differential method of data collection is of no consequence.

Five general categories of technological change and eight general sociological changes were selected to evaluate how people would respond to different types of proposed changes. The respondents were asked to note how they would react to each of the proposed changes assuming that suddenly they were asked to make a decision about accepting or rejecting the changes. The type of responses which could be utilized in reacting to each proposed change were: readily accept, accept, neither accept nor resist, resist, and strongly resist. The five technological changes included in the research schedule were: a new pesticide, a new variety of seed, a new type of heating and/or cooking source (solar power, nuclear power, etc.), new machinery for farm operation, and a new type of herbicide. The sociological changes to which the respondents were asked to react were: church consolidation, new occupation (selling farm or business and working for wages), new recreational activities, busing and consolidation of schools, guaranteed income for everyone, new form of county government, new type of school system (no fixed curricula, and housing developments in the community).

Findings

The findings clearly support the theoretical position that technological change would be perceived more favorably than sociological change. The community group indicated that sociological change would be much more strongly resisted than technological change. The data presented in Table 1 provides a frequency distribution and a percentage of the total number of respondents in each category for the proposed technological changes. Table 1 also provides a summary total which demonstrates the summated frequencies in each category and the percentage of all possible responses for each of the categories. Table 2 provides the same information in the manner for the proposed sociological changes.

Tables 1 and 2 reveal that a much larger proportion of the respondent group would strongly resist the sociological changes compared with the technological changes. About 16 percent of the total number of possible responses were contained within the "strongly resist" category for the proposed sociological changes while the corresponding category for technological change contained only 4.1 percent of the total possible responses. The situation was similar in the "resist" category where the figures were 13.8 percent and 7.8 percent respectively.

The proposed technological changes were more favorably received as evidenced by the summary totals of the two tables. The "readily accept" category for the sociological changes contained 5.1 percent of the total possible response while the corresponding category for technological change was 6.7 percent. The "accept" category totals were considerably different as demonstrated by the values of 33.5 percent for sociological compared to 43.2 percent for the technological changes. The neutral category was also considerably different since the percent total were 31.5 percent and 38.3 percent respectively.

While the emphasis of this report is centered upon the negative response categories (resist and strongly resist), it should be recognized that the magnitude of the number of responses in the acceptance categories (readily accept and accept) is indicative of the fact that people are willing to consider accepting both types of changes.

The data suggest that even though the group would be more favorable to technological change a significant portion of the group would accept sociological changes. This finding is consistent with a recent Ohio Report article⁴ which

⁴Napier, Ted L., "Current Rural-Urban Attitudinal Differences," Ohio Report, 57 (1):6-7, January, February, 1972.

Table 1

Frequency Distribution and Percentages of Total Responses to the Technological Changes
(Percentages are enclosed within parenthesis)

Type of Change	Response Categories										Totals	
	Readily Accept	Accept	Neither Nor Resist	Accept Resist	Resist	Strongly Resist						
New Pesticide*	(5.8)	4	(30.4)	21	(44.9)	31	(8.7)	6	(10.1)	7	69	(100%)
New Variety of Seed	(7.2)	5	(63.8)	44	(29.0)	20	(0.0)	0	(0.0)	0	69	(100%)
New Type of Heating/Cook- ing Source (Solar Power, Nuclear Power, etc.)*	(10.1)	7	(36.2)	25	(34.8)	24	(14.5)	10	(4.3)	3	69	(100%)
New Machinery for Farm Operation*	(5.8)	4	(59.4)	41	(31.9)	22	(1.4)	1	(1.4)	1	69	(100%)
New Herbicide*	(4.3)	3	(26.1)	18	(50.7)	35	(14.5)	10	(4.3)	3	69	(100%)
Summary Total	(6.7)	23	(43.2)	149	(38.3)	132	(7.8)	27	(4.1)	14	345	(100%)

*Total percentage does not summate to 100.0% due to rounding.

Table 2

Frequency Distribution and Percentages of Total Responses to the Sociological Changes
(Percentages are enclosed in parenthesis)

Type of Change	Response Categories										
	Readily Accept	Accept	Neither Nor Resist	Resist	Strongly Resist	Totals					
Church Consolidation*	(5.8)	4	(39.1)	27	(23.2)	16	(15.9)	11	(15.9)	11	69 (100%)
New Occupation (Selling Farm and Working for Wages)*	(0.0)	0	(30.4)	21	(39.1)	27	(17.4)	12	(13.0)	9	69 (100%)
New Recreational Activities	(15.9)	11	(49.3)	34	(29.0)	20	(2.9)	2	(2.9)	2	69 (100%)
Busing and Consolida- tion of Schools*	(1.4)	1	(23.2)	16	(21.7)	15	(24.6)	17	(29.0)	20	69 (100%)
Guaranteed Income for Everyone*	(5.8)	4	(30.4)	21	(21.7)	15	(15.9)	11	(26.1)	18	69 (100%)
New Form of County Government*	(4.3)	3	(26.1)	18	(46.4)	32*	(7.2)	5	(15.9)	11	69 (100%)
New Type of School System (No Fixed Curricula)	(2.9)	2	(26.1)	18	(34.8)	24	(20.3)	14	(15.9)	11	69 (100%)
Housing Developments in Community*	(4.3)	3	(43.5)	30	(36.2)	25	(5.8)	4	(10.1)	7	69 (100%)
Summary Total	(5.1)	28	(33.5)	185	(31.5)	174	(13.8)	76	(16.1)	89	552 (100%)

*Total percentage does not summate to 100.0% due to rounding.

noted that other rural groups held favorable attitudes about community change.

The data from Tables 1 and 2 were combined into three categories to demonstrate the relative strength of the acceptance and resistance to the proposed changes. The three categories were: acceptance (readily accept and accept were combined), neutral (neither accept or resist) and resistance (resist and strongly resist were combined). Percentages of the total number of responses for the combined categories were computed and are presented in Tables 3 and 4.

Table 3

Percentage of Respondents by Acceptance, Neutral and Resistance Categories for Technological Changes

Type of Change	Response Categories		
	Acceptance	Neutral	Resistance
New Pesticide	36.3%	44.9%	18.8%
New Variety of Seed	71.0%	29.0%	0.0%
New Type of Heating/Cooking Source (Solar Power, Nuclear Power, etc.)	46.4%	34.8%	18.8%
New Machinery for Farm Operation	65.2%	31.9%	2.9%
New Herbicide*	30.4%	50.7%	18.8%

*The total summates to 99.9% due to rounding of percentages.

Tables 3 and 4 dramatically show that a much larger percentage of the respondents indicated they would resist the proposed sociological change compared to the technological changes. With the exception of new recreational activities and housing developments in the community, the sociological changes were much less acceptable to the group than the technological changes. It is

Table 4

Percentage of Respondents by Acceptance, Neutral and Resistance Categories For Sociological Changes

Type of Change	Response Categories		
	Acceptance	Neutral	Resistance
Church Consolidation	44.9%	23.2%	31.9%
New Occupation (Selling Farm and Working for Wages)	30.5%	39.1%	30.4%
New Recreational Activities	65.2%	29.0%	5.8%
Busing and Consolidation of Schools*	24.6%	21.7%	53.6%
Guaranteed Income for Everyone*	36.2%	21.7%	42.0%
New Form of County Government	30.4%	46.4%	23.2%
New Type of School System (No Fixed Curricula)	29.0%	34.8%	36.2%
Housing Developments in Community	47.8%	36.2%	16.0%

*The total summates to 99.9% due to rounding of percentages.

interesting to note that all of the technological changes were perceived quite favorably since relatively few people indicated that they would resist the proposed changes. These findings suggest that innovations in new farm machinery and new varieties of seed would be extremely favorably received by this particular group while sociological changes such as busing and school consolidation and guaranteed annual income for everyone would be received much less favorably.

Summary and Implications of Findings

The findings from this particular community basically supported the hypothesis that sociological changes would be more strongly resisted than technological

changes. Perhaps the sociological changes of the type used in this research were perceived as more of a threat than the technological changes or the possible effects of the sociological changes were not so clear. Technological changes are most often pre-tested through experimentation prior to wide distribution to the public and the potential adopter is aware of the benefits and risks associated with adoption of the technology. Sociological changes are not so easily subjected to pre-test and the uncertainty attached to acceptance is higher. The previously mentioned factors of adoption presented by Rogers and Burdge⁵ are probably more easily applied to technological change than to sociological change which results in lowering of the uncertainties attached to acceptance of technological innovations.

The implications of the research are quite significant for rural development. It is highly probable that technological changes of the type used in this research will be readily accepted (assuming the proposed change is perceived as an improvement over the existing technology) or at least not greatly resisted during the initial period of exposure to the new innovation. Community developers in rural communities similar to the respondent group who are attempting to promote sociological change may encounter considerable opposition among the client group due to the uncertainties attached to the outcomes. Such resistance will require considerable efforts on the part of the action agents to demonstrate to the client group the probable effects of the change. Once the client group is made aware of the probable effects of the proposed change, the uncertainties attached to acceptance will be reduced which should enhance the possibilities of acceptance. The change agent may also be required to modify the proposed change to be con-

⁵Rogers and Burdge, Social Change, pp. 352-354.

sistent with the desires of the group. For example a community may be willing to accept certain types of sociological change but not others or be willing to modify certain behavioral patterns but not radically change them.

Another implication for rural development is in respect to evaluation of change efforts. Since people will probably exhibit greater resistance to sociological change, social development should be evaluated in a different frame of reference in terms of time. Change agents may be required to spend considerable time in creating a situation within the group which is conducive to sociological development even before a program is implemented, therefore, evaluation of sociological change efforts should be longitudinal in nature.

In summary, the research findings support the theoretical position that change will be differentially accepted and that sociological change will be more strongly resisted than technological change. The uneven acceptance rates of technological and sociological change could result in a situation where the technological and sociological components of the cultural system are in disequilibrium. For example, rapid transportation systems (technological change) may make it feasible for extensive school consolidation (sociological change) but the people may elect to maintain smaller independent school units. The end result of the differential acceptance could be less than optimal utilization of the technology and the creation of socio-technological discrepancies within the total cultural system.