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EVALUATION OF SERVICE PROVISION TO RURAL
COMMUNITY GROUPS: IS THERE A SERVICE
DELIVERY PROBLEM AND HOW DO WE RESEARCH IT?

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ABSTRACT

The central thesis of this paper is that established criteria for evaluating rural services are not available and probably will never be established on a comprehensive basis. It is argued that adequacy of services is normative in nature and, therefore, service evaluation necessitates primary investigation on the local and regional level. Several alternative research designs and scale construction are discussed relative to rural service evaluation with primary emphasis placed upon quasi-experimental design. It is concluded that a closer association between research and development decision-making and implementation is essential to increase the probability of relevance of developmental programs on the local level.

EVALUATION OF SERVICE PROVISION TO RURAL COMMUNITY
GROUPS: IS THERE A SERVICE DELIVERY
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Ted L. Napier¹

In Quest of Social Indicators of Quality Service

Community development has received considerable attention in recent years as an important mechanism for the planned socio-economic maturation of non-metropolitan areas of the United States. The central thesis of community development is that effective implementation of planned change will rectify existing social problems among target populations assuming that the identified problems are amendable to correction. An assumption that must be made relative to planned change is that the group being "developed" places a high value upon progression toward a "higher scale"² social system since most definitions of societal progress are judged in terms of the characteristics associated with such forms of social organization. Another assumption that must be made relative to goal achievement in community development is that problems have been identified which impede achievement of quality of living and that the criteria used to determine what constitutes "quality living" have in turn been identified. What we most often use as our indicators of quality of living are those indicators we use for evaluating societal progress. Williams (Copp, 1964:3-38) eloquently noted in his discussion of societal trends that Americans are

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²Social scale refers to the complexity of social organization which is characterized by structural interdependence, commitment to technology, use of mass communications and so forth (see Godfrey and Monica Wilson, 1945; and Ted L. Napier, 1973).

committed to social change, bigness in organizations, interdependence of social structure and other characteristics that Greer (1962) would submit would be defined as high scale.

The logic that is used frequently in the literature relative to rural services³ is often almost circular and based upon assumptions which may or may not have empirical underpinnings. For example, the statement may be made, "rural communities need a medical professional within the boundaries of the community if they are to have quality of life and since many rural communities do not have resident medical doctors then we must, therefore, conclude that quality of life is less than adequate." The logic is closed if the initial assertion is accepted and the problem of generalizing from a class of cases (aggregation of communities) to individual cases (specific communities) is assumed away. The major flaw to the argument is that we do not have good criteria for determining what constitutes quality health care to establish the validity of the first assumption from which the hypothesis (in this case, an assertion) is derived. "Quality of life" as many other developmental concepts, is not only difficult to quantify but is probably also normative⁴ in nature. The contemporary struggle among social scientists to empirically measure, without much success, "quality of life" and "rurality" are indicative of the problem. The normative nature of quality of life may be illustrated by the statement that what may be quality living in a rural Iowa community may be something

³Rural services will be used to refer to the basic direct work functions of organizations (public and private) which were created to fulfill a specified need of a group (examples, police, fire, postal, and so forth).

⁴I will use "normative" to refer to the customary way of fulfilling functions in a group. Normative in this context is value free and a relative concept.

quite different for people living in rural Ohio or South Carolina. Intra-state variance among rural populations are also observable. I have attended several development conferences where participants have assumed that the concept of quality of life to be self-evident and proceed to say that quality living is the goal of development without providing some means of assessing the construct. Since little or no empirical means is offered to evaluate whether or not quality of life is achieved, one is left with the feeling that the papers are efforts in futility. J. Carroll Bottom (Brinkman, 1974:3-14) noted that the goal of community development is to increase "quality of living" but then observed quite correctly what symbolic interactionists have stated for years, that "quality of life is like beauty. . . it is in the eye of the beholder" (Brinkman:5). In those cases where development specialists have attempted to provide some empirical basis for the concept of quality of life their efforts have been at best marginal successes even though some of the research attempts were well conceived and the findings most interesting (Andrews, et.al., 1973).

Haller's (1971:3-8) macro-level quality of life definition provides further support to my position that the concept as many others is nearly impossible to operationalize in a useful research framework especially on the micro-level basis. In this regard, quality living as a concept becomes much less useful in policy related issues except on a very abstract level. Haller states that the major goals of people are subsumed under the following:

- (1) people want their children to grow up healthy and for them to be educated,
- (2) people desire to participate in decision making relative to their lives,
- (3) people wish to work to support themselves and
- (4) people

desire a social system that will distribute the product of the society in an equitable manner that is commensurate with the member's contribution to the system. While this type of definition is acceptable, it may be criticized on the basis of its lack of utility in field research. Given the infinite number of social situations that community groups encounter, the broad based definitions are probably not very useful. While we may agree that these are good societal goals, the mechanisms for achieving the goals may vary from group to group. What constitutes a healthy, happy child or what is equitable distribution of production may vary greatly from group to group.

Quality of Life and Community Services

While I tend to question the utility of grossly macro-level definitions, I also tend to question indicators of quality of life which are broken-down into specific service areas (police, fire, etc.). From a service perspective one could argue that the absence of such service elements as resident physicians, central water and sewage systems, local control agencies, and so forth are strongly suggestive of inferior quality of life⁵ due to inadequacy of service provision. Such an assertion in the absence of valid and reliable criteria of quality of life is not only illogical but could lead to major policy errors if carried to the implementation stage at the community level. Capitalization in central sewage treatment may be unnecessary given a certain population concentration and

⁵It is agreed that services must be available to community groups but there are several alternative means of providing services to local people. Water wells may be as adequate as central water systems. In essence, the service need must be fulfilled but the need may be satisfied in several ways.

soil type in an area combined with existing individual septic tank technologies. This assumes that no great influx of new population will occur (soils could not sustain septic systems beyond some capacity).

The specific service type of research emphasis may be noted within such works as The Quality of Rural Living. The contributors to this work proceed to supposedly prove that quality of living relative to services provided in rural areas is quite poor. Inspection of the data used to support the various writers conclusions, however, would tend to bring into question certain interpretations. A case in point is Hassinger and McNamara's article (1971:8-22) on rural health where the authors used aggregate data (often national health data) which gave the impression that the differences between rural and urban in some way make health care in rural areas less accessible since resident health professionals are often lacking. Do we establish policy on national surveys or should we become more localistic? How do we know that the existing delivery system is not an efficient and adequate system given certain parameters such as limited local resources (both economic and human) if we do not have good criteria for evaluation?

Another service area discussed in The Quality of Rural Living is education (Isenberg, 1971:77-81). The case is made that facilities, academic programs and educational credentials of teachers in rural areas are less adequate than urban school systems. Had student-teacher ratios been used as the criteria for evaluation then rural schools would probably have been judged differently. Again the criteria selected for evaluation had an effect upon the classification relative to the qualitative aspects of the schools.

Ellenbogen (Whiting, 1974:82-90) in a very interesting paper fell prey to the use of aggregated data to draw conclusions about services in

small towns. He used research reports which employed aggregate data with simplistic statistical analysis (descriptive) over time to argue that small towns were not being adequately served by medical doctors. He observed that only three percent of towns of less than 1,000 people had medical doctors. What he failed to note was that research has shown that a population base of at least 2,000 people is needed to effectively sustain a medical doctor in general practice (Medical Economics, 1967:2).

Ellenbogen's comparison of towns in 1912 and 1962 relative to service delivery is presented in such a way as to suggest that the function of health care is not being provided but it should be observed that transportation systems have improved and the diffusion of the automobile may have served to erode the necessity for medical doctors to be located in every village.

The Obvious Is Overlooked?

Contributors such as those noted above to the field of service evaluation have overlooked the obvious, in my opinion, by not asking the question of what constitutes quality service provision? Without consensus on the criteria to be used in the evaluation of services, one professional could conclude that the services are not adequate while another researcher investigating the same services within the same group but using different standards for evaluation would conclude that they were not adequate. The basic question in the provision of community services is what criteria do we use to determine whether or not a particular service is adequate for the needs of the people being served. If such criteria can be established, developmental implementors and planners will be in a much better position to ascertain service needs of specific groups. If service standards

could be established which were valid and reliable measures of service adequacy, then comparisons could be made with the norm by local people or designated community development professional. In the absence of standard criteria for evaluating service adequacy, single case studies of local services are not very useful since standard criteria does not exist to which the local situation may be compared.

I have some severe reservations about the establishment of standards for service evaluation which would suggest that research design will become more significant in assessing the relative service status of community groups. Less emphasis should be placed upon case studies and more upon comparison of service delivery mechanisms of similar community groups.

The Utility of Attitudinal Measures In Assessing Service Adequacy

An area that should be given more consideration in evaluating service adequacy are attitudes of local people but caution must be exercised in the interpretation of findings. While it is an acceptable proposition that people tend to be in consonance (Festinger, 1957) in terms of beliefs and behavior, attitudinal measures are often quite localistic in nature (relative to the local situation) and may not focus attention upon some secondary impacts associated with service provision. Externalities in the form of water pollution, for example may not be measurable in terms of attitudes held by local people since they may perceive their sewage treatment facilities to be quite adequate and ignore or be unaware of water pollution. Individuals who live downstream may have an entirely different perspective. Such situations will probably require involvement of some development agent or political entity external to the local group to focus attention upon

the "hidden" externalities or coerce the group into correcting the situation. If no externalities nor health hazards are discovered, then the values expressed by the group subject to the development survey should be accepted even though external evaluation (different value structure) may dictate some corrective action would be desirable.

Even though there are limitations to the use of attitudinal measures of community services, such methodological tools have extensive utility if well constructed and combined with good research design and statistical analysis. Caution should be exercised, however, by researchers untrained in the creation of attitudinal measures since scale construction is very time consuming and necessitates extensive theory formation prior to the construction of items. Scales which are created must be pretested and the data generated from the pretest must be subjected to extensive statistical analysis to ensure reliability (data gathered in the final data collection period should also be subjected to the same type of careful evaluation). A useful statistical device for determining scale consistency is factor analysis to sort out uncorrelated or useless items thus reducing the amount of information required to evaluate the attitude in question. Researchers who have "thrown together" items and have used them as a total scale supposedly measuring some nominally defined construct without subjecting the measuring device to theoretical and statistical testing will probably find the scales to be relatively worthless when the instruments are subject to close inspection. Experience that I have had with scaling attitudes toward services has demonstrated that questions which on the "surface" should discriminate persons of high and low satisfaction in reality did not and had to be eliminated. Items oriented toward

services in general or specific services do not necessarily constitute a scale. A major task of the community development researcher is to empirically demonstrate the validity and reliability of the measuring devices but unfortunately this has been lacking in the past.

Attitudinal research findings derived from scales which have been well constructed should prove invaluable to community development researchers and developmental implementors since attitudes reflect individual and collective (grouped data) perceptions of reality to which people respond in terms of behavior. For example, residents of a community which believe that their sewage treatment mechanism to be quite adequate for their needs would probably resist central sewage treatment systems being imposed upon them even if externalities of water pollution were involved. Development groups and policy makers must be made aware of these attitudes and employ such knowledge in the decision making process. Attitudinal measures would provide insight into strength of commitments to existing practices and satisfaction with existing services so that potential resistance areas to planned development would be identified. If one discovered no externalities in sewage disposal and the local people believed that the existing system is quite adequate, what criteria should be employed to determine adequacy? In this situation, it should probably be the determination of the people in terms of attitudes that evaluates the service in question.

Some Services May Be Amendable to Standardization

While I am very pessimistic about comprehensive criteria of adequate services, I believe that some services are amendable to the establishment of limited criteria of adequacy but in a very narrow perspective. Local decision-making relative to services should be curtailed when externalities

become dysfunctional for another group and this evaluation constitutes the major parameter of service adequacy. The services that I feel to be subject to minimum criteria formation in terms of adequacy are such services as water, sewage disposal and solid waste disposal (garbage). Minimum standards of individual and public health and safety may be established to ensure that health standards and socio-economic externalities are not operating. Externalities of solid waste disposal of one group may be quite dysfunctional for another group in terms of littering or health hazards associated with improper disposal of garbage. I note that only minimum health and safety standards may be established since the absence of harmful biological organism in water does not necessitate a central water system nor does "adequate" sewage disposal preclude a system of septic tanks and leach fields. Physical scientists should prove useful in the establishment of the minimum standards for services which lend themselves to such criteria formation. I would note, however, that once the standards of health and safety and inter-group symbiotic associations (externalities) are satisfied, the mechanisms for providing the service function are extremely varied.

I would also submit that certain types of services tend to be much more normative in nature and more difficult if not impossible to formulate minimum standards relative to adequacy. Services such as police and fire protection, recreation facilities, education, shopping facilities, highways, telephone, and air transport, for example are much more normative in nature. The function is provided in practically every community but with different mechanisms of delivery. Some community groups have more sophisticated technology, more extensive social differentiation of structure

and higher degrees of specialization of task than others but questions regarding qualitative aspects of the service provision become value laden and often arbitrary in nature. The question then becomes who makes the value judgment? Do we use the most extensive and highly capitalized system of service provision as our model regardless of the varying degrees of service need of people? Do local people or change agents make the evaluation? I would submit that local people should have the major decision-making role.

Regionalism Versus Localism in Service Delivery

A key issue in the provision of community services is the question of physical proximity. Some service functions must be made accessible on a local level (water, sewage disposal) while others (shopping, police protection, fire protection, etc.) may be provided on a different administrative level. The question decision-makers must evaluate is the degree of necessity for local based services as opposed to regional services. Inefficient use of local service resources relative to human and economic costs would appear to be of critical concern rather than a localistic commitment to having every service provided in the local community.

Wilkinson (Whiting, 1974:43-53) provided a brief glimmer into the regional evaluation of services when he was discussing social differentiation within rural towns experiencing decline using the theoretical position initially offered by the Young's (1960). Wilkinson observed that small towns tend to specialize in trade function and that social organization concomitantly increased as trade function increased. The old central place models of years past are repeatedly rediscovered and shown to be quite useful in the analysis of services. Capener (Whiting, 1974:108-121) and

Fuguitt (1963) both observed that county seat towns were offering specialized functions for county residents. These observations about specialized function should provide some insight relative to other services. Few small town or open country residents would bemoan the fact that a diamond jeweler (shopping service) is not available in the local community since the people are aware that the need for such shopping service is small and a trip to nearby town or city will resolve the diamond service need. The same group, however, when exposed to the question of the need for a resident physician or local fire department will address the need question in terms of efficient utilization of the service resource from a different perspective. Are people so opposed to travel for services? Phillips (1970) would say no since he observed that often "localism" was left at the county line when people needed certain services.

Are There Methodologies We Can Effectively
Use To Resolve Some of the Proposed
Problems of Services Provision?

I believe that existing research methodologies are quite adequate for the purpose of addressing the research problems raised above. The methodological cautions in the use of cross-sectional design on a one-shot case study basis without adequate criteria for evaluation as well as the difficulties and strengths of attitudinal analyses have already been noted. The difficulties in the use of cross-sectional design do not, however, preclude the use of such research designs but does necessitate some control group to which comparisons may be made.

Since service evaluation is questionable using established criteria on a cross-sectional case study basis as noted above, then quasi-experimental and experimental research design (Campbell and Stanley, 1966; Napier, 1971;

Napier, 1972; Napier and Wright, 1974) should be given careful consideration.

Quasi-experimental design consists of cross-sectional analysis of two or more groups in which a stimulus has been applied to one group (experimental group) and has been withheld from the other (control group). Comparison of the groups would indicate whether or not some difference exists between the groups and what type of difference is identifiable. Research methodologies of data collection, sampling, instrument construction and so forth are assumed to be adequate. This type of research is costly and time consuming and exogenous variables which could contaminate results must be carefully evaluated in the interpretation of the findings. Most research budgets are not conducive to quasi-experimental research since several groups (both experimental and control) are usually involved. Considerable data must be collected and careful comparative analysis must be employed to effectively utilize the research findings. If the researcher concludes that attitudes must be measured, socioeconomic factors considered and numerous other data are needed to discover what the status of a particular community's services are relative to other community groups then primary data collection would be required and the cost would be quite high. Resorting to secondary data has its limits as noted by Phillips (Whiting, 1974:139) since aggregated secondary data tend to hide many problems.

A quasi-experimental design would require some type of matching (Yinger, Ikeda and Laycock; 1967) of groups and provision of a service type (stimulus) to one group and withholding from the other (hopefully several groups would be matched and treated in this manner). Observation of the changes in the

service provision within the experimental group as opposed to the control group would provide some insight into what impact alternative service delivery systems would have upon groups especially if the study groups consisted of several matched pairs.

The best research technique would be experimental design in which a randomly drawn group from a known universe would be selected to participate in the study. People would be randomly assigned to the control group or to the experimental group (differs from quasi-experimental in that subjects in the experimental design are all drawn from the same community). This technique would provide very good insight into what impact service change would have upon the experimental group assuming that differences were observed between the matched study groups (experimental and control).

Both quasi-experimental and experimental design are significant improvement upon general survey research techniques used frequently in the evaluation of service problems which tend to employ "quick and dirty" research methodology. Decisions would have to be postponed if the type of research mentioned above were conducted since research findings take time to generate but the decision once made which is based upon empirical research of the nature described should have a much higher probability of being correct and relevant than those based upon a cursory survey or use of community informants.

Either research design (quasi-experimental and experimental) would require no policy revisions in terms of using the methodologies but the ethical question of manipulating social conditions of people must be resolved. There are some parameters over which the researcher may not

go such as withholding needed services to people to measure their response and to observe how people subject to such action would resolve the problem.

To illustrate a quasi-experimental design assume that two communities with similar characteristics also have a similar system of delivery of services. If you desired to empirically test what would happen to such groups in terms of service modification you would do a pretest data collection in each community and then apply the stimulus (service change) into one and withhold from the second. At a later period after study stimulus has been applied a restudy of the two communities using the same instrumentation should be conducted. Inter-community analysis should be conducted on the data to determine if the groups differ. Assuming no exogenous variables were operating and other internal reliability factors were not operating, the differences would be attributable at least in part to the stimulus.

The situation may lend itself to use of one group in which a randomly drawn representative group could be selected from the same universe and individuals assigned to a control or an experimental group on a random basis. The experimental group would receive the stimulus of service change while the control group would not. Comparison of data from pretest-posttest for both groups would provide insight into the impact the service change would have upon the group.

Often it is not even necessary to be able to anticipate community action in terms of developmental change as would be assumed in pretest-posttest data collection using quasi-experimental design. If communities could be "matched" and the change in services was only operative in one group, comparison could still be made and probable outcomes from the

experimental group could be generated to similar situations within the groups.

Longitudinal Analysis

It should be noted that extensive research over a period of time would be necessary to evaluate secondary or latent functions (unanticipated consequences of some service change). Given the developmental impetus to get the job done and move on we do not often measure many of the secondary impacts of service development. Perhaps a developmental policy should be formulated that community development projects which place emphasis upon service provision should be evaluated on a longitudinal basis especially in areas of large capital investments. What may be a logical decision to consolidate schools based upon economic and academic programs may result in long-range disruption of the community cohesiveness and cooperation which may emerge long after the second data collection period (assuming pretest-posttest data collection systems) has been completed. Longitudinal analysis of study, restudy and subsequent restudies using the same methodologies used in the initial research effort would isolate what happens within a group or region when service provisions are modified.

An area of critical concern for service researchers, in my opinion, is empirical research comparing data from local communities' attempts at service provision to data collected on a regional basis. The development policy question of local versus regional developmental strategies needs to be put to much more empirical testing on a longitudinal basis. Is it feasible to have regional organizational structures to accomplish the goal of service provision and do they differ significantly from locally based provision of services and how do the two methods of provision differ?

Factors such as cost, efficiency, degree of use, satisfaction and so forth need to be included in the comparative analysis. Well designed research projects could answer the questions.

Summary

I will reiterate that given the lack of empirically determined criteria for evaluating services, decision-makers (local and nonlocal development leaders) must resort to research efforts to determine what type of development will be appropriate for particular community groups. It is the position of this author that local decision-making relative to the subject group's own perceived needs combined with critical analysis of externalities are the primary factors to consider. I also submit that quasi-experimental and experimental designs offer much to researchers interested in providing input into the developmental decision-making process.

I will conclude with an observation made by a natural resource development decision-maker at a recent conference. The agency this person represented provides public goods to people financed from public revenues. His observation was that "any information is better than no information to be used for decision-making because decisions must be made in a short period of time." I responded that long-term commitments to development projects in the service areas necessitate empirically valid and reliable research findings upon which to base decisions and that some information is not necessarily better but often worse than nothing. Unfortunately I suspect we will continue to base development decisions which will affect community groups for many years (such as lake projects, capital investment in sewage systems, etc.) upon inadequate research findings when we could

achieve much better congruence between developmental decision-making and empirical fact by better and more comprehensive research efforts.

BIBLIOGRAPHY

- American Medical Association
1971 "The Distribution of Physicians In The U.S. 1971,"
Chicago: The American Medical Association.
- Andrews, Wade H., Rabel Burdge, Harold R. Capener, W. Keith Warner,
Kenneth P. Wilkinson (eds.)
"The Social Well-Being and Quality of Life Dimension
In Water Resources Planning and Development," Logan,
Utah: Utah State University Council on Water Resources.
- Brinkman, George (ed.)
1974 "The Development of Rural America," Lawrence, Kansas:
The University Press of Kansas.
- Campbell, Donald T. and Julian Stanley
1966 "Experimental and Quasi-Experimental Designs for Research,"
Chicago: Rand McNally and Company.
- Copp, James (ed.)
1964 "Our Changing Rural Society: Perspectives and Trends,"
Ames, Iowa: The Iowa State University Press.
- Festinger, Leon
1957 "A Theory of Cognitive Dissonance," Stanford, California:
The Stanford University Press.
- Fuguitt, Glen V.
1963 "City and Countyside," Rural Sociology, Vol. 28, pp. 246-261.
- Greer, Scott
1962 "The Emerging City," New York: The Free Press.
- Munch, Peter and Robert Campbell
1963 "Interaction and Collective Identification In A Rural
Locality," Rural Sociology, Vol. 28, pp. 18-34.
- Napier, Ted L.
1971 "The Impact of Water Resource Development Upon Local
Rural Communities: Adjustment Factors To Rapid Change,"
Ph.D. Dissertation, Department of Sociology, The Ohio
State University.
- Napier, Ted L.
1972 "Social-Psychological Response To Forced Relocation Due
To Watershed Development," Water Resources Bulletin,
Vol. 8, No. 4, pp. 784-794.
- Napier, Ted L.
1973 "Rural-Urban Differences: Myth or Reality," Ohio Agri-
cultural Research and Development Center, Research Bulletin
1063.

- Napier, Ted L.
1973 "The Correlates of Health Services In The State of Ohio," Economic and Sociology mimeograph, No. 493, Department of Agricultural Economics and Rural Sociology, The Ohio State University.
- Napier, Ted L. and Cathy J. Wright
1974 "Impact of Rural Development: Case Study of Forced Relocation," Journal of the Community Development Society, Vol. 5, No. 2, pp. 107-115.
- National Academy of Sciences
1971 "The Quality of Rural Living," Washington, D. C.: National Academy of Sciences.
- no author
1967 "1967 Specialism Survey---How Many People To Support A Specialist," Medical Economics, October, p. 67.
- Phillips, G. Howard
1970 "Delineation of Communities In The Appalachian Region of Ohio and Implications For Development Programs," paper presented at the 1970 Rural Sociological Society meetings.
- Whiting, Larry R. (ed.)
1974 "Communities Left Behind: Alternatives For Development," Ames, Iowa: The Iowa State University Press.
- Wilson, Godfrey and Monica Wilson
1945 "The Analysis of Social Change," London: Cambridge University Press.
- Yinger, J. Milton, Kujokhi Ikeda and Frank Laycock
1967 "Treating Matching As A Variable In A Sociological Experiment," American Sociological Review, Vol. 32, No. 5, pp. 801-812.
- Young, Frank W. and Ruth C. Young
1960 "Social Integration and Change In Twenty-Four Mexican Villages," Economic Development and Cultural Change, Vol. 8.