The objective of this paper was to develop a broad, systematic conceptual framework for studying psychological and biological based disabilities of individual family members as attributes of the family unit and to direct attention to potentially useful research on the causes and social consequences of family disability. A research review demonstrated an eclectic array of studies that were conceptually deficient and difficult to integrate because of varying frameworks. Within this frame of reference an attempt was made to introduce conceptual specifications related to disability that would make it possible to move logically from research in disability at the biological and psychological levels to disability induced by these in the role-set of family actors and in the social structures of family units. Five suggestions for future research were presented. Two of these were: (1) systematic codification and synthesis of past research on family interdisciplinary potentials; and (2) descriptive research relative to incidence of disability of all types in families on various types to develop a capability for generalizations relative to the incidence and distribution of each. (FF)
DISABILITY AND FAMILY STRESS: CONCEPTUAL SPECIFICATION AND RESEARCH POSSIBILITIES

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INTRODUCTION

A lot has been written about a rather vague, heterogeneous category of families often labeled 'disadvantaged' or 'low-income.' We generally have in mind the economically poor when we use such labels (The Concept of Poverty, Gordon, 1965). Economic disadvantagement or "poverty," however, is only one way in which family units can be disadvantaged. There are forms of disability suffered by families that are not limited to the poverty class--although they are usually hypothesized to be more prevalent among the economically disadvantaged families than others. Social scientists need to begin making more precise distinctions between types of family disability if we are to clearly understand how the well-being of a family unit relates to other family attributes and potentials of its membership. The purpose of this paper is to make a start in this direction by looking conceptually at a form of family disadvantagement--membership disability--that has received little attention from researchers in the past.

Our first objective in this paper is to develop a conceptual framework capable of translating membership disability of biological or personality origins into an attribute of the family as a social unit. Secondly, we intend to make explicit connections between individual based disability and stress points within the family system and in its external social relations (Bredemeier and Stephenson, 1962: 47-59). Suggestions will be offered relative to directions for future research suggested by this framework.

WHAT THE PAST RESEARCH SHOWS

Little exists in the accumulated research of sociology relating to membership disability. This should not be too surprising since the field of medical and health studies has only begun to build steam in the last few years. It still represents a relatively minor problem area in terms of the attention we give it. Much of the existing accumulated literature is made up of relatively recent, scattered efforts showing a lack of any kind of clear conceptual or theoretical continuity. The review of literature we have done--and we think it is relatively comprehensive--demonstrates two different conceptual perspectives toward family disability--viewing it as an individual attribute and as a specialized role, "the sick role" (Hrubec, 1959: 271; Petroni, 1969: Geersten and Gray, 1970; Phillips, 1965; and Petroni, 1969).

With the exception of a study carried out by these authors (Byrd, Taft, Kuvlesky, 1972) no reports of research could be located which viewed disability as an attribute of the whole family conceived of as a whole social group.
The literature on social causes of disability is also very scant. Only two articles were found which, in a small part, relate directly to this issue. Hrubec (1959: 271) found, "The presence of a health problem in one of the family members is accompanied by the presence of health problems in the other family members." Surprisingly, Petroni (1969) found that SES was not related to the frequency of reported illnesses and that family size was inversely related to reported illnesses for the lower class but not for the middle class.

No firm conclusions can be drawn from the studies on perceived rights to the sick role as no evidence exists to establish the relation between the perception of the role and those who actually become disabled. It can be tentatively concluded, however, that family factors may be as important in determining disability in individuals as individual factors. Causes of individual and family disability may be different—future research should shed some light on this.

What about stress caused by disability? Again, few studies exist which shed light upon this question. Rosenstock and Kuther (1967) write that in a crisis a family generally experiences a change of role patterns, expectations, and a general disorganization which is followed by recovery and reorganization, or alienation and dissolution. More to the point, Hrubec (1959) found that both families with disabled members and the disabled people themselves had more social problems than others. Nagi and Clark (1964) discovered that among couples under 25, at the onset of a disability of one of the married partners were more likely to separate or divorce as a result of the stress caused by disability. Those who stayed together had higher occupational, income, and educational levels, more children under 10, and more owned their own houses. It appears that the resolution of stress caused by disability has a positive influence on family performance. Ludwig and Collette (1969) studied dependent (upon wife) and nondependent disabled husbands. They found that dependent husbands spent more time with their wives and less time with friends and relatives and were less likely to be involved in the decision-making process. Gibson and Ludwig (1968) studied social security disability applicants and found fewer disabled Blacks married. Deutsch and Coldston (1960) found that disabled husband-fathers seemed to have had the greatest impact of change or disorganization to deal with in their family roles. They concluded that few families can meet this kind of stress.

This modest number of studies—scattered in place, time, and focus—has done little more than document the fact that internal and external family stresses can be produced by disability. Some of this research does establish an empirical link between disability of an organic and personality nature with stress at the social system level, the family unit.
As an aside, taking a bare-faced empirical-descriptive point of view for a moment, not much exists even on the distribution of individual disability in a gross sense among different social types of family units. An earlier paper by these authors has demonstrated that disability viewed as a family attribute occurs much more frequently than when it is viewed as an individual attribute (Byrd, Taft, Kuvlesky, 1972). Almost one-fourth of all families in a sample of metropolitan and nonmetropolitan blacks were found to be disabled in this study.

Perhaps one good explanation for the lack of more research in this problem area and the conceptually barren and eclectic nature of that which does exist has been the lack of a systematic, broad, guiding frame of reference. The remainder of the paper will be given to an attempt to make a start at formulating such an inclusive conceptual scheme based on an equilibrium-stress model of interpenetrating levels of behavior organization (Parsons, 1951).

TOWARD A GENERAL FRAMEWORK: THE CONTEXT OF FAMILY BEHAVIOR

One attempt to marshal ideas relative to building a broad general framework for the study of the family as a whole unit operating within the context of a psychological interior environment and external social environment exists in a recent book of essays by Gerald Handel (1967) entitled, The Psychosocial Interior of the Family. Even here, in a collection of 23 separate pieces, only two articles relate to the development of a broad, contextual framework for viewing family disability at several system levels: articles by Hell and Handel (10-24) and by Handel (517-550). While both are useful, neither goes beyond a simple suggestion of the system levels of operation that need to be considered in a structural review of relevant research. Neither accomplishes the broad framework for analysis promised in the title of the book.

A broad and inclusive frame of reference that can handle the diversity of cultural and social system variations existing in our complex society, and one which also can handle the problem of interpenetrating levels of human reality is needed for a comprehensive, in-depth analysis of family disability. It is our judgment that Talcott Parsons' (1951) schema of system levels for action provides the basis for such a framework. Parsons views human reality as structured in four separate but interpenetrating levels of organization: cultural, social, psychological, and biological (Black, 1960: 29-38). His assertion of interpenetration holds that each of these levels impacts on each of the others, but in varying degrees. If this is a valid assertion—and we think it is—the causes of family disability might evolve from any of these system levels. Likewise, disability of members at the biological and personality levels must impact on the family, and then through it to the larger social and cultural universe of which it is a part. In Figure 1 we attempt to show how these ideas of Parsons
Figure 1: System Levels of Human Organization: Ethnic Variation in Family Modes of Adjustment.

Culture
The General Culture: Trait Configurations - Family, Food, Health, Medicine, Social Partic.

Ethnic-Class Subcultures:
- Lower Class
  - Mexican American
  - Black
  - Anglo
  - Other

Local-family Subcultures:
- Rural
- Small City
- Metropolitan

Social System Community:
- Neighborhoods
  - Medical, Health, Public Service
  - Other Systems

Family:
- Family Unit
  - Parental Roles
  - Children
  - Other

Personality:
- Person

Biological:
- Homo Sapien

Household Environment
can be used to provide a broad, comprehensive framework to analyze family units in reciprocal interaction with elements in their interior and exterior environment. We have introduced several complicating dimensions of variability (i.e., class, ethnicity, and place of residence) to demonstrate the potential for comparative analysis inherent in the schema.

It should be obvious to the reader that one clear advantage to the use of this framework, or some similarly broad one, is that it does facilitate interdisciplinary thinking about research problems and point to areas of potential interdisciplinary investigation. Of course, this may also be viewed as a limitation. If one were to try and carry out all potential dimensions of investigation at one time, you would need a large and diverse team of researchers. Fortunately, it is not necessary to do this---even the lone, single-discipline researcher can be aided in gaining direction from such a broad perspective.

It goes without saying, that this schema needs to be tested in research to assess its utility for analysis. One way of doing this is to attempt to use it to organize and integrate the past research on family disability alluded to before. It is not our intention to do this here, but it does point to an immediate research need for the future.

Figure 1 demonstrates quite clearly the potential complexity of dealing adequately in research of even relatively "simple" social issues such as disability. The lines in the diagram indicate the reciprocal interpenetrations among different levels of behavioral organization and among units at the same levels that should have meaning for family disability. Those appearing as arrows indicate sources of prime causal factors related to the incidence of family disability. While this model needs extensive elaboration and specification—not to mention testing in research—even in this rough shape it can provide a broad orienting framework for more specific efforts aimed at conceptual specification of internal family elements and processes. Figure 2 demonstrates this shift in cognitive focus toward a narrower spectrum of conceptual operations centering on the family as a unit and family disability as the focal attribute of that unit.
Figure 2. A Conceptual Model of Family Stress Introduced by Member Disability: Possible Sources and Impacts

A COMMUNITY

Health, Medical, and Public Service System

RESOURCE

ALTERNATIVES

FAMILY DISABILITY

A PERSONALITY SYSTEM

A BIOLOGICAL SYSTEM

Causes of Individual Disability:
Individual Disability Causing Family Disability:
Other Causes of Family Disability:
FAMILY DISABILITY AND STRESS: BASIC CONCEPTIONS

Overview of Conceptual Needs

Any abnormality of personality or biological structure or process that produces stress for the individual in his adjustment to himself or his external environment can be labeled an individual disability. It is problematic whether or not disability of this kind will influence operations of his family roles, reactions of other family members toward him, or the operations of the family viewed as a whole unit. In Figure 2 we have depicted some of the causal flows of disability at the level of individual action (solid arrows) and then the lines of potential stress causing disability for the family as a unit (broken arrows), including the source which is our dominant concern here—the individual (double solid arrows). This provides a pictorial view or map of the conceptual distinctions to follow.

When individual disability of a member of a family introduces role stress to the extent that the performances of the member's internal family role relations (role-set) are influenced negatively, a state of membership disability is considered to exist. In turn, when the state of membership disability produces problems requiring adjustment of family structures, family stress exists. As an aside, it should be pointed out that family stress can evolve from other sources, Figure 2. When the family stress is such that it impedes the maintenance of integration in the family system and/or negatively influences the unit's capability for adaptation to the total environment—including the social—and this condition becomes patterned, these patterns are labeled family disabilities.

While the sequence of assertions given above does include a description of the meanings of the basic conceptions we are concerned with here—individual disability, membership disability, family stress, and family disability—each requires some additional specification, elaboration, and demonstration of utility for analysis. It should be obvious to the reader that we remain consistent with our broad Parsonian framework in our conceptions here—they presume a system normally striving for equilibrium and are defined in functional terms (Bredemeier and Stephenson, 1962: Chpt. 2).

Individual Disability

The disability of individual members of the group, when considered as individual human beings and defined in biological or psychological terms, is here termed "individual disability." Because the biological and psychological attributes of individuals are basic resources or, in Loomis's (1960) terminology, facilities for operation of the family system, the quality of these should be expected to have some impact on the social system level of operations. Of course, this impact will vary depending on at least several considerations at both the individual
and social system level: nature and degree of individual disability, positional location of the disabled person, and level of economic resources available.

It must be emphasized that individual disabilities need not translate directly into membership disability; at least, it is problematic whether they will or not. Individuals may suffer biological or psychological weaknesses, faults, abnormalities, or illnesses that create serious problems of adjustment for them as individuals without this condition necessarily having an important impact on their family role performances and requirements. Admittedly this is more a possibility than a probability form our point-of-view. Still, it provides sufficient reason to conceptually distinguish between the disability of the individual and the consequences of this for role performance and for the family as a social unit.

We have asserted earlier that type and degree of individual disability are two factors that will influence the nature of its impact on the system. The logical, general types of individual disability in this regard are outlined in Figure 3.

**Figure 3. General Types of Individual Disability. Based on Personality and Biological Malattributes**

<table>
<thead>
<tr>
<th></th>
<th>Nondisabled</th>
<th>Disabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biological</td>
<td>Normal</td>
<td>Abnormal</td>
</tr>
<tr>
<td>Psychological</td>
<td>Normal</td>
<td>Abnormal</td>
</tr>
</tbody>
</table>

**Membership Disability**

We have no interest in considering further individual disability that has minimal or no impact on the family system. From the system point of view, the individual member is not disabled relative to its requirements under such circumstances. However, if individual disability impedes a family member's role performance it has social significance for the family and becomes labeled membership disability. Obviously, we are using a functional criterion to distinguish individual and membership disabilities, Figure 4.
Figure 4. Conceptual Distinction Between Individual and Membership Disability Among Family Members.

<table>
<thead>
<tr>
<th>Type of Disability</th>
<th>Biological or Psychological Malattributes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Personal Stress</td>
</tr>
<tr>
<td>Individual</td>
<td>yes</td>
</tr>
<tr>
<td>Membership</td>
<td>yes</td>
</tr>
</tbody>
</table>

Obviously sub-types of membership disability should be specified, at least, in terms of type and degree of individual malattributes (see Figure 3). Also, it seems reasonable to think that a qualitative typology of kinds of disability might have explanatory utility at the social system level. However, we leave these problems to be developed through future efforts. Specification of such sub-types and resting their research utility should provide an immediate, priority research problem.

Membership disability, as discussed above, is grounded in individual disability and probably will influence processes of family integration or adaptation. Let us examine a few hypothetical examples of this complex intersystem interpenetration in terms of our earlier typology of individual disability (Figure 3). The person categorized as "Abnormal, Type I" is both psychologically and physically abnormal. Imagine a person inflicted with both ulcers and paranoia. He may have become thus in one of several ways. He could have started out with a psychological problem and allowed that to affect him physically. Or, he could have been a paranoiac which affected him physically in the form of an ulcer. On the other hand, this person may have been physically maladjusted and, in turn, became a paranoiac. Another possibility is that an individual experienced a single catastrophic event which left him both psychologically and physically injured. Finally, the person may have become psychologically and physically maladjusted as a result of entirely independent causes. Functioning—malfunctioning may be seen as a continuum. The major concern here however, is the degree to which role behavior of an actor in a social system is affected by personality and biological system malattributes, regardless of the degree of malfunction (Gross, et al., 1958: Chpt. 4; Deasy, 1969: Chpt. 6). Presume the individual described above is a father in a small family: his ulcer, regardless of how bad it is, will not likely impact on his family role-set to the extent that his paranoia will, regardless of how mild it is. His probable patterned tendency to be suspect of motives of behavior of other family members toward him will undoubtedly cause stress, role conflict, in the family relations. The degree of stress may vary by a number of considerations: in this case, how well the other family members understand his illness and its behavioral consequences.
Family Stress

As mentioned earlier, family stress is simply viewed as a state of disequilibrium of maladjustment of the family social system: for instance, conflict between marital partners over whether or not children should have a regular weekly allowance or not. Economically disadvantaged families, including ethnic minorities, can be expected to be less flexible in their ability to tolerate such stress than others. Affluence provides opportunity for more alternative adjustments to such situations than does poverty.

Family stress results from impediments to performance of family roles or functions that disrupt or have a high probability of disrupting family maintenance, cohesion, intramural interactions, or external relations with other units. More specifically, the direct sources of stress may be in the individual's performance of internal roles, conflict between individuals in performance of roles, or extrarural role linkage. Membership disability can impact on these considerations, and thereby produce stress in such a way that it has potential negative influence for the family.

Types of family stress can be differentiated on the basis of the nature of the adjustment problem. Of course, a family in trouble can—and probably does more often than not—experience several different types of stress at one time. A simple typology could be based on general social and economic problems as shown in Figure 5. Obviously, each of these general types could be subdivided into significant subtypes through the addition of more specific considerations.

Figure 5. General Types of Family Stress: Social and Economic Problems.

<table>
<thead>
<tr>
<th>Internal</th>
<th>Low Cohesion</th>
<th>Poor Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>External</td>
<td>Interunit Conflict, Social Isolation</td>
<td>Inadequate Resources or Facilities</td>
</tr>
</tbody>
</table>

It should be made clear that what we are defining as family stress could evolve from any system level of human reality, including the social and cultural; however, for our purposes here it is only necessary for us to consider those evolving as a consequence of problems inherent in the biological and psychic statuses of individuals who are members of the family: in other words, from membership disability in terms of our prior definitions. Still, a research problem of a more general nature should be mentioned at this point: the need to develop good, generally valid indicators and measures of the functionally different types of stress mentioned in Figure 4 and others (i.e. value conflicts, negative social orientations of actors, lack of family identification,
poor boundary maintenance, and etc.

Family Disability

Membership disability is transformed into family disability through the production of family stress. Family disability that results in this manner constitutes properties of the system or group and can be viewed from several different perspectives or "dimensions of family disability:" magnitude of collective disability, positional distribution of disability, and specialized roles (i.e. "the sick role").

Collective Disability

Collective disability simply refers to the amount of aggregate disability existing among the total number of individuals identified within the boundaries of a particular family unit (i.e., the collectivity or group). From a social system perspective this is the crudest way to view the disability of the unit: it does not really relate to properties of the social system per se. Still, even in this respect, family disability has been little investigated (Byrd, Taft, and Kuvlesky, 1972). This index is described in the APPENDIX of this paper.

The Sick Role

The concept of special roles evolving within the social unit to house a disabled member has been researched to a limited extent (Gordon, 1966: Chpt. 2). We still know little about the nature of the definition of these roles, how they are instigated or terminated, and how they influence the structures and operations of the larger family unit. Of course, the conception of a "legitimate" sick role is one way the family unit may attempt to adjust to membership disability with minimum stress. Whether or not this works as an adaptive mechanism under varying conditions is a live question deserving much future research.

One problem of particular interest to social scientists is how duration of existence of the sick role impacts on the ill member's family role and the family. There would appear to be at least three possible distinctly different variations in this respect: "temporary sick-role," "enduring sick-role," and "permanent sick-role." It would seem logical to expect that at least two variables would influence variation in patterned definitions of all or some of these sick-roles: SES and size of family. This suggests a line of research that should be attractive to some sociologists.
Positional Distribution

Perhaps, the dimension of family disability having the most research potential for sociologists is positional distribution of membership disability. As reported earlier, at least one study has shown that where disability occurs in the family, relative to functional status roles, it does make a difference in family disruptions (Deutsch and Goldston, 1960). An interesting question to explore evolves from Goldston's earlier finding that disability in the husband-father role seems to be more disruptive than disability housed in other family positions. Is this because the adult males were usually the main breadwinners in the families he studied? Would the same be found in cases where the husband was unemployed?

Family disability has different meanings for the family, dependent upon who is disabled—the father, the mother, or the child. The impact varies with differential location of the disabled member and conditional factors of family life (i.e. economic status, geographical isolation, and other similar factors).

As one explores this concept further, several pertinent considerations related to internal family processes enter the picture. These include degrees of commonality and/or difference in attitudes toward the disabled family member; perception of personality change; family decision-making; and the presence or absence of social solidarity.

The disabled father is most likely to be totally dependent upon the mother, relinquishing his traditional role as decision-maker; particularly if he cannot work. He may tend to isolate himself from persons other than the family group. The sick role is most likely assumed only when he is seriously disabled: the "sick role" is not "masculine." Permanently disabled fathers may frequently have sons with personality problems which are related to the absence of a strong father figure in the family setting.

The disabled mother probably assumes the sick role only when the level of cohesiveness in the family provides a nurturing environment. When a high level of marital integration exists, when children are responsive to her needs, and when medical attention is forthcoming, it is "safe" to assume the sick role. On the other hand, the mother who may, in reality, be disabled as an individual and need to assume the sick role, may resist doing so when a non-nurturant environment exists: the long-run dysfunctions of such behavior should be obvious. This places control of the situation by the mother. When the mother cannot control the situation, the father may assume both parental roles, insofar as possible—attempting to maintain the family unit with or without the assistance of the extended family and/or friends.
With regard to the disabled child, the mother is generally the decision-maker in day-to-day health matters. She decides whether or not the child stays home from school or should remain indoors and/or whether or not the child should be seen by a doctor. Decisions other than health, primarily economic in nature, appear to be the province of the father in families with fathers present. Of course, these two prime areas of decision making normally split by the marital pair overlap when medical attention is called for.

Though very little research is available, there is some evidence to indicate that when mothers tend to regard disabled children as dependent, increased adverse tensions occur among normal siblings (Bersch, 1963). Fathers may criticize the mother for neglecting the other children while being overindulgent toward the disabled child. Mothers accuse fathers of apathy. Both parents may reflect positive and negative changes. Marital friction is often suggested in the perceptual discrepancies of both fathers and mothers. Attitude change and the respective dual perceptions of these changes which exist in each parent present an area of significance for study.

Though differential location has its concomitant set of consequences in each instance, there is a probability that regular contact within the family setting will tend to diminish the severity of the disability in the eyes of the other family members. Living with the problem over a long period softens the perception and may bring about a higher level of acceptance than at the onset of the disability. The stress is dissipated as attitudes and social structures adapt to the change. In such cases, those that have adapted to the problem, the family may be even in better shape socially after the introduction of membership disability than it was before. Nagi and Clark (1964) have reported findings in support of this proposition.

Of course, positions in the family unit can be differentiated and examined in other ways also; for example, status-rank and social power. We know of no research that has explicitly investigated disability in terms of differential location of members along these structural dimensions of the unit.

Another related aspect of structural family disability that should be mentioned is the vacancy of a position in the family that is considered normatively a part of the total unit. This certainly would lead to either internal or external adjustment problems and could be caused by a progressive type of individual disability that results in death or institutionalization of the disabled member. Both the trauma experienced by other members as a result of the loss and the need to adjust to an additional burden of sharing required functions of the unfitted status-role will present threatening adjustment problems.
Whether or not differential distribution of membership disability makes any difference or not remains to be researched. We speculate that such differential distribution of disability in the social fabric of the family unit will have important consequences for the family and its members. Perhaps a better question is, what kinds of differences result in the family as a result of differential location of disability?

SUMMARY OVERVIEW

Our objectives in this paper were to develop a broad, systematic conceptual framework to facilitate studying psychological and biological based disabilities of individual family members as attributes of the family unit and to direct attention to potentially useful research on the causes and social consequences of family disability. A review of the relevant past research demonstrated an eclectic array of studies that were generally conceptually deficient and difficult to integrate because of varying explicit or implicit conceptual framework was developed which focused on forces impinging upon the family unit relative to disabilities evolving from malattributes of individual members.

Within this frame of reference an attempt was made to introduce conceptual specifications related to disability that would make it possible to move logically form research in disability at the biological and psychological levels to disability induced by these in the role-set of family actors and in the social structures of family units. Consequently, disability was differentiated conceptually to exist at varying levels of human organization and labeled differently at each level: individual disability, membership disability, and family disability. Each of these level-types of disability related to the family were defined, subtypes developed, and illustrations offered relative to potential research utility. Particular attention was given to delineating structural dimensions of disability at the family system level—collective disability, special roles, positional location, and several others. Attention was also given to demonstrating potential research problems they directed attention to.

Throughout the paper care was given to point out suggestions for future research evident in our developments. While we are certain we did not do a perfectly complete job in this respect, a large number of priority potential research thrusts were identified. A few of the more important of these are as follows:

1. Systematic codification and synthesis of past research on family disability in terms of a comprehensive, coherent, conceptual scheme offering interdisciplinary potentials.
(2) Descriptive research relative to incidence of disability of all types in families on various types in order to develop a capability for generalizations relative to the incidence and distribution of each.

(3) Research oriented to specifying sub-types of each level-type of disability to facilitate causal analysis of its occurrence and its impacts on the social system of the family.

(4) Research aimed at testing relationships between environmental factors, including social structures outside the family, and frequency of occurrence of family disability. We have offered a number of specific suggestions in this regard.

(5) The impact of structural disability in the family system on other family structures and on members of the family collectivity. Again, we have offered a number of hypotheses that should prove fruitful for research.

In no respect do we consider this a definitive effort in meeting the need for comprehensive, highly specified, and empirically fruitful conceptual scheme relative to human disability and its impact on the family. This paper should be viewed as a first step to demonstrate the need and to offer an alternative path to filling the need. Obviously, much conceptual work still remains to be done and, hopefully, it will be done in conjunction with empirical research as we move forward from this point in time. We plan to continue refining our basic ideas described here as we test them in future research already on the drawing board. We would sincerely appreciate reactions of our colleagues to this effort. 1/

1/ Send critiques, remarks, or suggestions to the first author, Dr. William P. Kuvlesky, Department of Agricultural Economics and Rural Sociology, Texas A&M University, College Station, Texas  77843.
CITATIONS


APPENDIX

A Measure of Collective Disability in the Family

Earl Taft has developed a measure of aggregate membership disability in connection with an earlier analysis of a metropolitan-nonmetropolitan comparison of disability among Black families in East Texas (Byrd, Taft, Kuvlesky, 1972). We have abstracted his description of the procedures used in developing this index below.

The stimulus question used in our study for disability was "Is anyone in this family sick all the time or disabled in anyway?" If the respondent said there was, she was asked to describe the seriousness of the disability along the following lines:

FOR EACH PRE-SCHOOLER ASK:
Which of the following best describes his (her) ability to play?
5. Not able to take part at all in ordinary play with other children.
4. Able to play with other children but limited in amount or kind of play.
2. Not limited in any of the preceding ways.

FOR EACH CHILD IN SCHOOL ASK:
Which of the following best describes his (her) ability in school and activities:
5. Not able to go to school at all.
4. Able to go to school but limited in certain types of schools or in school attendance.
3. Able to go to school but limited in other activities.
2. Not limited in any of the preceding ways.

FOR EACH OTHER FAMILY MEMBER ASK:
Which of the following best describes his (her) ability to work?
5. Not able to work (or keep house) at all.
4. Able to work (keep house) but limited in kind or amount of other activities.
2. Not limited in any of the preceding ways. (NC-90 Patterns of Family Living Questionnaire, 1970: 3).

The responses were coded "1" if the person was not disabled and "2" through "5" for the various degrees of disability indicated above. With "1" being the lowest degree of disability (none) and "5" being the highest (not able to work, et cetera), the distinctions in the instrument were kept for the measures in this analysis.

The family disability index to be utilized in the primary analysis is a composite index weighted for family size and degree of disability and converted to a zero to 99.9 scale. The family disability index was computed for each family by summing the recorded degrees of member
disability for all members in each family and dividing by the number of members in the family. This figure was then multiplied by 25 to convert it to a scale of 0.0 to 99.0 in order to increase the spread of measured differences and making the index scores easier to interpret.

To demonstrate the potential utility of the scale one table from the earlier report is included in Table 1 for the reader to inspect (Byrd, Taft, Kuvlesky, 1972: Table 8).

Table 1. Degree of collective Disability Among Texas Black Families by Education of Homemaker and Place of Residence.

<table>
<thead>
<tr>
<th>Educational Levels of Homemaker</th>
<th>Nonmetro* (N=257)</th>
<th>Metro** (N=281)</th>
<th>Differences: NM as compared to M</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family Disability</td>
<td>Index Means</td>
<td></td>
</tr>
<tr>
<td>Less than 8 grades</td>
<td>9.1</td>
<td>8.1</td>
<td>1.0</td>
</tr>
<tr>
<td>8 Grades</td>
<td>6.7</td>
<td>8.6</td>
<td>-1.9</td>
</tr>
<tr>
<td>9-11 Grades</td>
<td>3.2</td>
<td>5.6</td>
<td>-2.4</td>
</tr>
<tr>
<td>12 Grades</td>
<td>4.0</td>
<td>1.3</td>
<td>2.7</td>
</tr>
<tr>
<td>College or Graduate Study</td>
<td>7.0</td>
<td>4.6</td>
<td>5.4</td>
</tr>
<tr>
<td>All Levels</td>
<td>5.2</td>
<td>4.6</td>
<td>.6</td>
</tr>
</tbody>
</table>

*\( B_1 = -0.63 \) \( t=2.86 \) \( df=256 \) \( p .005 \)

**\( B_1 = -1.15 \) \( t=4.47 \) \( df=280 \) \( p .0005 \)

*Regression on NM with X = education levels (run on raw data with 20 levels of education possible) and Y = family disability index. \( B_1 \) = slope and t = effect of X on Y.

**Regression on M.

One can see from the data in Table 1 that collective disability varies dramatically by level of education for both types of place of residence and, in general, is particularly high in families having homemakers with eight grade education or less. Place of residence difference are generally less substantial and inconsistent.
Several apparent weaknesses or limitations of the disability measure and family disability index used here need to be considered. There is no objective criteria used to determine actual physical, mental or emotional problems but instead the homemaker's subjective evaluation of the member's ability to perform some function. The homemaker is probably the one who decides who is well enough to go out to play, go to school or work and probably exerts her influence and power to keep members home when she believes they are too ill, etc. An apparent weakness of the index is that a family with one member disabled out of four is given a higher score than a family with one member disabled out of seventeen. Because past research has demonstrated (Dow, 1965) that small families react more extremely than large families to disability in one child, we believe this trait of the index validly reflects reality and, therefore, is not a limitation. Obviously the limitations mentioned above should be considered in the development of instruments for future research.