THE SOCIAL SUPPORT NETWORKS OF
BLIND AND VISUALLY IMPAIRED YOUNG ADULTS

Arthur Weiner

Submitted in partial fulfillment of the requirements
for the degree of Doctor of Social Welfare
in the School of Social Work

COLUMBIA UNIVERSITY
1991

D. S. W. converted to Ph. D. in 2011
ABSTRACT

The Social Support Networks of Blind &
Visually Impaired Young Adults

Arthur Weiner

This research was undertaken to analyze and to describe the social support networks of a non-random sample of 55 legally blind and visually impaired young adults, 20 to 50 years, inclusive. Modified versions of the Arizona Social Support Inventory Scale (Barrera, 1981, 1983), and the Network Analysis Profile (Cohen and Sokolovsky, 1978) were used to examine key aspects of network structure and to evaluate the attributes of network links.

The study centered around 11 hypotheses which explore the extent to which vision-related and socio-demographic variables such as: degree of visual impairment, age of onset of blindness, acceptance of blindness, level of self-sufficiency, type of school attended, cause of blindness, the presence of a secondary disability, age, gender, race, marital status, employment status and education influence network structure (viz.; network size, network composition, proximity), network attributes (e.g.; multiplexity, duration, intimacy, frequency of contact, dominant and relational content), and access to support.

Results from this study indicate that with the exception of network size, the level of visual impairment may have less impact on network structure than such factors as age of onset of blindness, type of school attended, acceptance of blindness, marital status, gender, and mastery.

Study findings also contribute some support for optimism with regard to the level of social integration achieved by study subjects. The majority of men and women in the sample showed evidence of access to all essential varieties of social support including: companionship, advice, material assistance, physical assistance, affirmation, and emotional support. A relatively small percentage
of the total sample lacked access to all six of the above listed dimensions of social support. Only two of fifty-five subjects had networks that contained fewer than five persons. The average network contained ten persons. Subjects with the smallest networks were prone to be less educated, unmarried/formerly married, and unemployed. Stepwise multiple regression procedures identified employment status, mastery, level of functional vision, and gender as significant predictors of expanded networks.

Young adult subjects clearly considered kin as their first line of social support. Kin supporters outnumbered nonkin supporters by close to two to one, however, nonkin proved to contribute a larger proportion of total support than did kin. Degree of visual impairment did not influence the observed pattern of support provision, nor did age. Subjects also demonstrated heavy reliance upon friends, spouses and siblings in the form of a high percentage of multidimensional ties.

Subjects identified their immediate social surroundings as the context most frequently associated with the origination of new friendships. However, organized programs sponsored and operated by agencies that serve blind and visually impaired persons were frequently associated with the origination of new nonkin ties. Significant relationships also linked residential school attendance to a number of psychosocial measures that indicate successful adjustment to blindness.
# TABLE OF CONTENTS

**LIST OF TABLES**

- iv

**LIST OF FIGURES**

- v

**CHAPTER ONE: INTRODUCTION**

- Description of the Study ........................................ 1
- Ecosystems and the "Life Model" .................................. 2
- Environments and Competence ...................................... 3
- Coping, Stress, and Social Support ................................ 5
- Social Support Networks for Populations At Risk ................ 6
- Social Support and the Blind and Visually Impaired ............ 9
- Study Objectives .................................................. 10
- Research Hypotheses .............................................. 10
- Organization of this Dissertation ................................ 11
- Endnotes ............................................................ 12

**CHAPTER TWO: REVIEW OF THE LITERATURE**

- Putting Blindness into Perspective .............................. 13
- The Prevalence of Blindness ....................................... 13
- Defining Blindness and Related Concepts ........................ 14
- The Developmental Life Cycle .................................... 16
- The Impact of Blindness on the Young Adult .................... 18
- Barriers to Employment ............................................ 19
- Barriers to Social Fulfillment .................................... 20
- Adjusting to Blindness in Young Adulthood ...................... 22
- Developing Competence ............................................ 23
- Cultivating Supportive Networks .................................. 24
- Social Support and Health ........................................ 26
- Major Issues in Definition & Measurement of Social Support . 26
- Conduits of Support: Social Networks ............................ 29
- Describing and Analyzing Social Networks ....................... 29
- Structural Criteria .................................................. 30
- Interactional Criteria .............................................. 32
- Network Boundary Specification ................................... 35
- Social Network Applications ...................................... 37
- Social Networks and Blindness ................................... 38
- Endnotes ............................................................ 45

**CHAPTER THREE: METHODS**

- Overview ........................................................... 48
- Conceptual Model ................................................... 48
- Research Questions ................................................ 49
- Research Hypotheses .............................................. 51
CHAPTER THREE: METHODS (continued)

Research Instrument .................................................. 53
Independent and Dependent Measures ............................... 55
Defining and Measuring Blindness ................................ 58
Conceptual and Operational Definitions ........................... 60
Description of the Study Location .................................. 68
Procedures and Sample Selection .................................. 69
Subject Recruitment .................................................. 70
Interviewer Selection and Training .................................. 73
Socio-demographic Characteristics of Study Sample ............ 75
  Age and Gender ................................................. 75
  Race ...................................................................... 75
  Education ......................................................... 75
  Self-sufficiency .................................................. 75
  Employment status ............................................. 75
  Length of Residence in the Community ......................... 76
Endnotes ..................................................................... 77

CHAPTER FOUR: RESULTS

Overview ................................................................. 79
Characteristics of the Study Sample ................................. 80
  Functional Vision .................................................. 80
  Use of Low Vision Aids ......................................... 81
  Age of Onset of Blindness ....................................... 82
  Cause of Blindness ................................................ 82
  Progressive v. Non-progressive Etiology ....................... 83
  Chance of Vision Recovery ...................................... 84
  Ability to Read and Write Braille ............................... 84
  Level of Self-Sufficiency/Independence ......................... 85
  Mastery/Psychosocial Coping .................................... 85
  Level of Life Satisfaction ....................................... 86
Characteristics of the Social Support Networks of Subjects .... 87
  Network Composition ................................................ 87
    Kin/Non-kin .................................................... 87
    Age ..................................................................... 89
    Marital Status .................................................. 89
    Race .................................................................... 90
    Visual Characteristics ......................................... 90
  Source of Network Ties ............................................ 91
  Relational Content of Network Ties: Social Support ......... 93
    Dimensions of Social Support ................................ 93
    Sources of Social Support ..................................... 94
  Network Size ....................................................... 97
  Role Multiplexity .................................................. 98
  Duration of Network Links ....................................... 99
  Intensity of Ties ................................................... 100
  Proximity ............................................................ 101
Predicted Bivariate Relationships .................................. 103
CHAPTER FOUR: RESULTS (continued)

Discussion of Hypotheses Involving Vision-Related Variables...104
Hypotheses Involving Socio-demographic Variables...............108
Intercorrelations Between Independent Variables and Social Network Measures..............................................113
  Vision related Variables.....................................................114
  Psychosocial Variables.........................................................116
  Socio-demographic Variables..................................................118
Intercorrelations Among Independent Variables.....................119
Intercorrelations Among Social Network Variables................122
Multivariate Analysis.............................................................126
Stepwise Regression Analysis of Designated Vision-Related, Socio-demographic, Psychosocial and Network Variables on Life Satisfaction.................................................................126
Results of Regression Analysis on Life Satisfaction................129
Stepwise Regression Analysis of Designated Vision-Related, Demographic and Psychosocial Variables on Network Size............132
Results of Regression Analysis on Network Size.......................135
Endnotes.....................................................................................138

CHAPTER FIVE: DISCUSSION AND CONCLUSIONS

Chapter Overview.................................................................139
Demographics & Identified Needs of Visually Impaired Adults...140
Demographics & Identified Needs of Study Subjects.................144
Review and Discussion of Study Hypotheses..........................146
Availability, Mobilization and Utilization of Social Support...153
Network Size and Dimensionality..............................................156
Intimacy, Frequency of Contact, Proximity of Network Ties......160
Context of Network Ties and their Duration............................163
Chapter Summary.................................................................171
Limitations of this Study..........................................................176
Application of Study Findings................................................180
Endnotes.....................................................................................189

BIBLIOGRAPHY.................................................................192

APPENDIX A............................................................................209

APPENDIX B............................................................................233
<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Variable List</td>
<td>57</td>
</tr>
<tr>
<td>2 Reliability Coefficients</td>
<td>58</td>
</tr>
<tr>
<td>3 Functional Vision</td>
<td>81</td>
</tr>
<tr>
<td>4 Use of Low Vision Aids</td>
<td>81</td>
</tr>
<tr>
<td>5 Age of Onset of Blindness</td>
<td>82</td>
</tr>
<tr>
<td>6 Cause of Blindness</td>
<td>83</td>
</tr>
<tr>
<td>7 Chance of Recovering Vision</td>
<td>83</td>
</tr>
<tr>
<td>8 Acceptance of Blindness</td>
<td>84</td>
</tr>
<tr>
<td>9 Knowledge of Braille</td>
<td>84</td>
</tr>
<tr>
<td>10 Level of Self-sufficiency (ADL)</td>
<td>85</td>
</tr>
<tr>
<td>11 Psychosocial Coping</td>
<td>86</td>
</tr>
<tr>
<td>12 Level of Life Satisfaction</td>
<td>86</td>
</tr>
<tr>
<td>13 Network Composition</td>
<td>88</td>
</tr>
<tr>
<td>14 Age Distribution of Network Relations</td>
<td>89</td>
</tr>
<tr>
<td>15 Marital Status of Network Relations</td>
<td>90</td>
</tr>
<tr>
<td>16 Race of Network Relations</td>
<td>90</td>
</tr>
<tr>
<td>17 Sources Contributing to New Network Links</td>
<td>92</td>
</tr>
<tr>
<td>18 Origin of Network Ties</td>
<td>93</td>
</tr>
<tr>
<td>19 The Relational Content of Network Ties</td>
<td>94</td>
</tr>
<tr>
<td>20 The Dominant Source of Network Ties</td>
<td>95</td>
</tr>
<tr>
<td>21 Source of Support by Type of Support</td>
<td>96</td>
</tr>
<tr>
<td>22 Rank Ordering of Primary Social Contexts of Support</td>
<td>97</td>
</tr>
<tr>
<td>23 Network Size</td>
<td>97</td>
</tr>
<tr>
<td>24 Distribution of Proportion of Multiplex Ties in Sample</td>
<td>99</td>
</tr>
<tr>
<td>25 The Mean Duration of Network Links</td>
<td>100</td>
</tr>
<tr>
<td>26 Strength of Ties</td>
<td>101</td>
</tr>
<tr>
<td>27 Correlations for Hypotheses Involving Vision-Related Variables</td>
<td>108</td>
</tr>
<tr>
<td>28 Correlations for Hypotheses Involving Socio-demographic Variables</td>
<td>113</td>
</tr>
<tr>
<td>29 Dependent Variables Intercorrelated With Vision-Related Measures</td>
<td>116</td>
</tr>
<tr>
<td>30 Dependent Variables Intercorrelated With Psychosocial Variables</td>
<td>117</td>
</tr>
<tr>
<td>31 Dependent Variables Intercorrelated With Socio-demographic Variables</td>
<td>119</td>
</tr>
<tr>
<td>32 Intercorrelations Among 15 Independent Measures</td>
<td>120</td>
</tr>
<tr>
<td>33 Significant Relationships Among Independent Variables</td>
<td>121</td>
</tr>
<tr>
<td>34 Significant Relationships Among Dependent Measures</td>
<td>123</td>
</tr>
<tr>
<td>35 Intercorrelations Among 8 Dependent Measures</td>
<td>125</td>
</tr>
<tr>
<td>36 Correlation Matrix for 13 Exogenous Variables Used to Predict Life Satisfaction</td>
<td>128</td>
</tr>
<tr>
<td>37 Stepwise Regression of Designated Exogenous Variables On Life Satisfaction</td>
<td>132</td>
</tr>
<tr>
<td>38 Correlation Matrix for 10 Exogenous Variables Used to Predict Network Size</td>
<td>134</td>
</tr>
<tr>
<td>39 Stepwise Regression of Designated Exogenous Variables On Network Size</td>
<td>137</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>Hypothesized Bivariate Relationships With Predicted Direction of Relationship &amp; Values of Variables</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>102</td>
</tr>
<tr>
<td>Ego's Proximity to His/Her Identified Sources of Social Support</td>
<td></td>
</tr>
</tbody>
</table>
ACKNOWLEDGEMENTS

I begin my acknowledgements with heartfelt thanks to my wife, Ruth E. Beltran, who has only known me as a doctoral candidate. I thank Ruth not only for her years of sacrifice, patience, encouragement, financial support and love, but I also acknowledge the professional contribution she made toward the study with respect to the role she played in training my very competent and dedicated research staff.

I also wish to express my gratitude to Professor Samuel O. Miller and to Professor Irving Lukoff for their help, dedication and skill in guiding me through this very rigorous process.

This study could not have been conducted were it not for the generous support provided by Mrs. Linda Lauria, Executive Director of the Delaware Association for the Blind, the Board of Directors of the Delaware Association for the Blind, and Mrs. Virginia Oettinger, Social Service Administrator, Delaware Division for the Blind and Visually Impaired.

I would probably still be hunting for subjects to complete my sample were it not for the tireless efforts of Ms. Millie Stokes.

The high quality of the data obtained is a direct reflection of the outstanding individuals who served as research assistants on this project. I want to acknowledge the hard work and dedication, as well as the skill of the following people: Mr. Kelvin Davis, Ms. Vernese Edgehill, Ms. Staci Emanuel, Mr. Jeff Furman, Mr. Neal Isaac, and Mr. Robert Gilchrist.

All of my efforts and those of everyone heretofore mentioned would have been meaningless without the cooperation of a special group of men and women. I am grateful to the fifty five men and women who volunteered their participation in this research. I will thank each of you more personally for your help and will
do my best to translate study results into some gain for you.

I also wish to acknowledge and express my thanks to the American Foundation for the Blind for providing partial funding for this research through their Thesis Incentive grant program, and for making their library facilities available to me.

Thanks are also due to Mr. Ed Stokes, to Mr. Jeff Funk and members of the Delaware Chapter of the Association of Blind Athletes (DABA), and to the membership of the Delaware Chapter of the National Federation for the Blind.

I also owe a great deal to several people who furnished additional technical assistance on this research. I wish to thank: Ms. Jerry Agate, Dr. Rafael Beltran, Dr. Chet Borucki, Mr. Carl Bryant, Mr. Barry Lustig, Mr. Mike Manhardt, Dr. Robert Remez, Dr. Jeanne Teresi, Dr. Virginia Vallian and, Dr. Barry Weiner. I could not have completed this project without the help of each of these people.

Several longtime friends were particularly supportive within the past five years. I wish to express my thanks and appreciation to my distinguished colleague and dear friend Dr. Jim McDonell for his help. I also wish to thank Sanford E. Balick, Esq. for his forbearance. Thanks to support group members Dr. Judith Meyerowitz, Ms. Margaret Fingerroth, and Ms. Carole Parisi. I also wish to thank Mrs. Linda Siegfeld, Assistant Principal, Lafayette High School, for her support and encouragement.

Finally, I wish to thank the members of my family, who, in addition to my wife, were always there to help when I needed their help. Without the financial support I received from my wife, my sister Karen Weiner-Escalera, and my parents, George and Gladys Weiner, I doubt I would have had the means to complete my dissertation. My thanks to my sister, Lois Weiner, to Michael Seitz, Alphonso Escalera, and my neighbor and friend, Minnie Sunfist, for never doubting that
I would finish. Thanks also go to Mrs. Ruth C. Beltran, Suzanne Beltran, Mary Beltran, and Robert and Sarah Patterson-Beltran for "hanging on there" with me.

I conclude my acknowledgements and list of thank you's with a special acknowledgement of the person who inspired this study; my twin sister, Jane R. Weiner. Jane provided me with insights on blindness that helped lead me to my dissertation topic. Thank you, Jane. I dedicate this research to you.

Arthur Weiner
Brooklyn, New York
February, 1991
CHAPTER ONE

INTRODUCTION

Description of the Study

This dissertation was undertaken to analyze and to describe the social support networks of legally blind and visually impaired young adults. It contains an account of the dynamics of exchange between young adults with visual disabilities and their kin and non-kin; and an examination of the social support networks of a sample of 55 men and women from 20 to 50 years, inclusive.

This retrospective study attempts to address such broad questions as: (1) how young adults with severe visual impairments construct their social support networks, and (2) which socio-demographic variables relate to network formation. The research also examines (3) the degree to which functional vision relates to a select group of social network and social support variables. They are: network size, role multiplexity, proximity, duration, intimacy, frequency, dominant source, relational content, and network composition. The relationship between the severity of visual impairment and demonstrated access to different types of social support is also explored.

An improved understanding of the structure and function of the personal networks of blind young adults should help to determine whether young people with significant visual impairments constitute a population "at-risk" as certain sources now imply. Examination of the content of network ties will lead to greater knowledge of the specific types of exchange that transpire among young adults with visual impairments, and also establish whether there are specific dimensions of social support that legally blind and visually impaired young adults, as a group, have difficulty obtaining. This information should enable caseworkers and program and service planners to devise interventions that
correspond with the ecological and developmental needs of this specific age group.

Similarly, the caseworker reading this study may find the network analytic procedures used in this study to be valuable tools for assessing client access to each of the social support dimensions discussed in this report.

In his classic study of young men blinded during the Second World War, Gowman (1957) characterizes blindness as "more than an index to a residual category". Of blindness, Gowman writes:

... as a physical disability it is overshadowed by the fact that it is also a social handicap. The impairment in its' character of decreasing competence, when coupled with the overlay of social attitudes, signifies a basic restriction in the range and depth of human intercourse" (p.3).

Gowman's notions are common but have yet to be put to empirical test; this study should help to distinguish between certain social effects of visual impairment and the condition itself.

**Ecosystems and "The Life Model"**

Within the past decade, social work theorists have blended ecological and social systems concepts into an orientation that is transforming the contour of social work practice (Meyer, 1983, 1976). Unlike more dated practice orientations, the eco-systems framework directs practitioners "to improve the transactions between people and environments for all who function within them" (Germain, 1979; p.18).

Current social work practice models like [The Life Model of Social Work Practice](Germain and Gitterman, 1980) are rooted in an ecological paradigm which seeks to understand the reciprocal relations between the person and his environment through the human life course. They are predicated upon the biological conception of [species] adaptation and to the related ecological
concept of "goodness of fit".

Germain and Gitterman's ecological formulations depict human experience as a continuous series of changes in response to environmental imperatives, to maturation, to life transitions, to crises, and to an endless constellation of life events that cover the range of the human life cycle.

In the "Life Model", Germain and Gitterman assert that life transitions, environmental pressures and interpersonal processes provide opportunities for growth and for human dysfunction. Upsets in the usual adaptive balance or "goodness-of-fit" between a person and his situation are understood to create "stress", to which the individual must bring to bear the cognitive skills and the instrumental and social resources that help to diminish stress and bring about successful adaptation.

In discussing life transitions, which they define as "changes that occur developmentally..., changes that occur in status and role..., and changes brought about by crisis" (Germain et al.; p.7), Germain and Gitterman accentuate the potential impact of the environment in supporting or obstructing human adaptation and/or growth. Germain et al. consequently subdivide the natural environment into two broad categories, distinguishing between physical dimensions of the natural environment and the social environment.

Environments and Competence

Within the domain of the physical environment, the authors include "the natural world of animals, plants, landforms, and the built world of structures and objects constructed by human beings" (Germain, et al.; p.137). Within the domain of the social environment they include "human beings organized into dyadic relations, social networks, bureaucratic institutions and other social systems such as the neighborhood, community, and finally, society itself" (Germain et
To achieve the objective of improved transactions between the person and his/her environment, Germain et al. offer three potential interventive orientations. They propose potential professional action directed toward the person; action directed toward the environment, or action aimed at the interface of person-environment.

Action directed to the person can entail measures that increase self-esteem, reduce psychic discomfort, strengthen adaptive patterns, teach coping skills, or provide information. Environmental interventions, on the other hand, may include procedures intended to mobilize and support mutual aid systems within social networks, or assist clients to extricate themselves from non-nurturing family or peer networks. Environmental interventions can also be geared to connecting isolated persons to existing or created networks (Gottlieb, 1988; Froland et al., 1981).

In his discussion of adaptation, Maluccio (1981) develops the notion of competence. Maluccio designates a series of components of ecological competence that facilitate the adaptive process. These include: (1) capacities and skills, (2) motivational aspects, and (3) environmental qualities.

Maluccio's competence model identifies abilities long considered "ego functions" as dimensions of capacity and skill. These include: cognition, intelligence, language and mental health; functions which "encompass a person's qualities in such areas as flexibility, tolerance for diversity, initiative or self-direction, reality, judgement and tolerance for anxiety", etc. (Maluccio; p.8).

The competence model identifies interests, hopes and aspirations as the basic motivational aspects of competence. Maluccio defines motivational aspects
as "the set of drives or energies variously described as effectance motivation or competence motivation, intrinsic motivation, the search for meaning or self-actualization" (Maluccio; p.8).

Maluccio, much like Germain and Gitterman, emphasizes the dynamic transactional nature of life in a constantly changing environment in his competence based model of practice. In his treatment of the environment, Maluccio elucidates the supportive, change precipitating qualities of environments. His discussion of environment reflects a view which acknowledges that the environment, broadly conceived, embodies factors that "impinge on a person's functioning at any given point [in time]" (Maluccio; p.8). His eco-systemic view of the environment similarly holds that environmental qualities can contribute to organismic upset or imbalance thereby jeopardizing "goodness-of-fit", or alternately, contribute to the achievement of a dynamic equilibrium. Maluccio's environmental qualities include such natural and man-made creations as environmental resources, institutions, organizations and social networks.

In taking his notions one step further, Maluccio draws upon a quote by Mechanic which holds that peoples' abilities to "maintain psychological comfort...depends not only on their intra-psychic resources but also, and perhaps more importantly, on the social supports available, or absent in the community" (Maluccio; p.8).

Coping, Stress and Social Support

An expanding corpus of books and articles; a literature too copious and complex to review here, contains explanations and critiques of the multi-faceted relationship now known to exist between social supports and physical health, and the sense of psychological well-being (Ell, 1984; Mueller, 1980; Kaplan, Cassel, and Gore, 1977). Much of this literature addresses questions related to the
manner in which social supports vitiate, buffer, or mediate chronic and/or acute stress arising from differential crises, life events, and/or life transitions (Lin, Dean & Ensel, 1986; Dohrenwend and Dohrenwend, 1981).

The thesis linking social support to mental and physical illness holds that "the greater social support an individual receives in the form of closer relationships with family members, kin, friends, acquaintances, co-workers, and the larger community, the less likely that the individual will experience illness" (Lin, Ensel, Simeone, and Kuo, 1979; p.109).

Although there is general consensus that social support moderates stress and/or its' health consequences, there seems to be considerable disagreement concerning what constitutes social support, including how the notion is defined and measured (Hammer, 1981; McFarlane, Neale, Norman, Roy, Streiner, 1981) and, how it works (Cohen and Syme, 1985). Researchers have also been slow to consider the timing (Jacobson, 1986), and the exchange of support both within specified developmental stages, and throughout the life cycle (Stueve and Gerson, 1977) - although there is evidence of increasing interest in these areas.

Social Support Networks for Populations At-Risk

Hammer (1981) and others have also written about the need for studies which examine the availability of social support for specified populations deemed at-risk. Kahn and Antonucci (1981) make a case for social network/social support studies of the elderly in the following paragraph.

The delineation of a population at-risk will be useful both for research and application. With specific reference to the aging population, "at-risk" convoy composition would earmark people for special attention or intervention, especially at times of major change in their lives. Similar applications would be possible for other groups. (Kahn & Antonucci, 1981; p.402)

The notion expressed above would seem to be particularly relevant and suited
to individuals with handicaps and disabilities whose opportunities for social interaction leading to exchange would appear to be somehow hampered or altogether obstructed.

In discussing developmentally disabled persons, Schilling and Schinke (1983) assert that "the essential elements of the social support network—familiarity and close relationships" of family and friends, are of particular importance to handicapped men, women and children. They contend, moreover, that handicapped children and adults grow and prosper across the life span as a consequence of the shared efforts of family, professionals, and institutional services.

While they note that support functions are shared by natural and by professional helpers, Schilling et al. also acknowledge the burden of support assumed by natural helpers:

The essential elements of the social support network—familiarity and close relationships of the people involved, its ongoing nature, the emphasis on the small tasks and interchanges of daily life—are of particular importance to people who are developmentally disabled. The responsibility for their well-being falls first on their family and friends, despite wide acceptance of the idea of professional help (Schilling & Schinke, 1983; p.384).

Schilling et al. further note that disabilities create dependencies that either deplete or place into jeopardy the individual or collective resources/capacities of family members. In their natural helping paradigm, Schilling et al. suggest that the need/demand for material aid, behavioral assistance, intimate interaction, guidance, feedback, and/or positive interaction can create resentments, induce guilt or anger, or precipitate or exacerbate stress that can impair family functioning. Chronic or protracted need/demand for support in lieu of more balanced exchange can strip available supplies of support and subject the disabled person and/or his related caregivers to an increased state of psychological/physiological vulnerability.
In their brief discussion of social support networks for the developmentally disabled, Schilling and Schinke articulate a series of supportive interventions that address imbalances in exchange of support due to the losses associated with disabling conditions. Their strategies for improving coping within the families of disabled persons include cognitive interventions such as personal messages, safety valves and cognitive reframing. Schilling et al. also recommend the use of differential interventions which involve the identification and appropriation of supports that reduce tension, stress, and/or anxiety, or which alternately increase access to vital sources of support. New sources of support can include individuals, organizations, or informal networks consisting of kin and non-kin.

For their purposes of analysis, Schilling and Schinke define social support as "individuals, groups or institutions that provide assistance of varying sorts and degrees to help another individual combat stress". They define a social network as "a set of interconnected relationships that endures across many forms and which provides daily, mutual reinforcement" (Schilling and Schinke, 1983; p.383).

While Schilling and Schinke make general statements that describe the supportive networks of developmentally disabled persons, ultimately concluding that the social support networks of developmentally disabled persons are "not unlike those of non-disabled persons" (Schilling and Schinke, 1983; p.388), they fall short of describing in precise fashion the characteristics of the social support networks that developmentally disabled men, women and children construct for themselves. Such network specification is now possible given the use of social network analysis, which consists of research methods which "identify the actual set of links within which a person, or persons may be embedded" (Hurd, Llamas, Patterson, 1980).
In the same article reviewed above, Schilling and Schinke (1983) acknowledge the need for more information about developmentally disabled client's existing supports. Moreover, they conclude that "original research should correlate the adaptive social networks of the families of developmentally disabled people with their unique norms and interchanges" (p.403).

**Social Support and the Blind and Visually Impaired**

Deep gaps in knowledge and understanding of the supportive networks of handicapped persons extend to the literature on the blind and visually impaired. As a group, blind and visually impaired young adults in particular, have been characterized in studies as resourceful, ambitious, and highly successful (Resnick, 1983). They have also been implicated as a group "at-risk", victimized by high unemployment and prone to social exclusion and isolation (Pfouts and Nixon, 1982).

Studies by Scott (1981), Lukoff and Whiteman (1970), Josephson (1968), Resnick, and others, suggest that rich, satisfying social opportunities and social relationships await young men and women who make successful, appropriate psychological and social adjustments to visual impairment.

A competing set of data suggest that stigmas attached to blindness effectively prohibit full integration of visually impaired adults into the social mainstream. Employment statistics (Johnson and Hafer, 1985; Kirchner, 1979, 1975) and needs assessments (Weiner, 1984; Delaney, 1978), identify chronic unemployment, and widespread isolation among a discernable number of blind men and women in their twenties, thirties, and forties. These studies implicate many to be "at-risk" of poverty and loneliness, a group that Kahn and Antonucci (1981) might consider vulnerable.

Given all available anecdotal, developmental and empirical data, it is
difficult to assess the psycho-social status of young adult men and women with visual disabilities. Current information and past studies give little factual information about important social supports that are vital to growth and to successful adaptation.

With the exception of two studies by Winer (1982, 1977), which describe self-help groups for adults experiencing sight-loss, and a pioneering network study of a cross section of blind adults of all ages (Pfouts and Nixon, 1982), which tests the association of various socio-demographic variables to a select group of social network dimensions, the literature on blindness contains very little material pertinent to the description, developmental formation, or operation of support networks of visually impaired young adults. This study is an empirically-based attempt to increase knowledge of the exchange networks of visually impaired adults, which applies the methods particular to social network analysis to gain a better understanding of the social support needs of the visually impaired.

Study Objectives

The specific objectives of this research are three-fold. They are:

(1) To systematically identify and describe selected structural and interactional characteristics of the social support networks of a sample of blind and visually impaired men and women 20 to 50 years of age.

(2) To specify the manifold social and physical contexts that are identified by blind and visually impaired young adults as the most common and accessible locations for making initial connections with others.

(3) To test a series of hypotheses which explore proposed relationships between designated social, psychological and physiological aspects of blindness and selected social network characteristics.

Research Hypotheses

Several research hypotheses explore the relationship between vision-related variables such as amount of useable vision, age of onset of blindness, attendance
at a residential school for the blind, acceptance of blindness and network composition and network size. Other hypotheses explore the association between socio-demographic and psychological variables and network composition/ network size. These hypotheses are given in Chapter Three.

Organization of this Dissertation

In the next chapter further discussion and elaboration of the concept of social support and review of relevant social network literature is presented. A basic review of developmental literature on young adulthood and social support is provided; the chapter ends with a review of the literature related to social networks, social support and blindness.

Chapter Three presents the research hypotheses along with an explanation of the research design and a description of the sample. This material is followed by a discussion of the research instrument. The chapter ends with a detailed description of data collection and interviewer training procedures.

Chapter Four reports all research findings. Chapter Five presents a discussion of significant findings and concludes with a discussion of the implications of the study to social workers and others who work with visually impaired young adults. Suggestions for future research are also presented.
ENDNOTES

1. The reader is directed to "Social Support through the Life Course" by Richard Schulz and Marie T. Rau; "Social Support, Family Relations and Children" by W. Thomas Boyce; "Social Support and Health in the Middle Years: Work and the Family" by Stanislav V. Kasi and James A. Wells; "Social Support and Health of the Elderly" by Meredith Minkler found in S. Cohen & S.L. Syme (Eds.), *Social Support and Health*, (pp.129-216). New York: Academic Press, 1985.
CHAPTER TWO
REVIEW OF THE LITERATURE

Putting Blindness into Perspective

Lukoff and Whiteman (1970) have noted that blindness attracts more public attention and organized support than any other type of sensory deficit or physical handicap despite the fact that other disabilities are both more prevalent, and are often more profoundly limiting. Lukoff and Whiteman characterize blindness as a condition that carries a set of restrictions that complicate regular patterns of psycho-social adjustment. They assert as others have that the most disabling aspects of blindness evolve from the feelings, attitudes and behaviors that blindness evokes in others.

The Prevalence of Blindness

Current statistics on blindness and visual impairment show a strong positive relationship between age and the prevalence of blindness.¹

Schulz (1980) has cited epidemiological evidence of a normal increase in the prevalence of blindness in middle age. Santrock (1983) and others (Chase, 1986) have attributed the increased prevalence of significant visual impairments in mid-life to the physiology of aging. Chase ascribes this trend to gradual reductions in the blood supply to the eye resulting in changes in the functioning of the retina.

Figures maintained by the National Society to Prevent Blindness (1980) show blindness to be a sensory impairment most common among persons 65 years and over. By contrast, blindness effects less than 10% of all children below 21 years of age (Schulz, 1980). Young adults falling between 20 and 44 years of age constitute approximately 16.6% of the legally blind population of this country (National Society to Prevent Blindness, 1980).
To the surprise of many, the incidence and prevalence of blindness has been found to vary by state and by setting. Recent national estimates of legal blindness by state show considerable variability in the reported rates of legal blindness. In 1980, the National Society to Prevent Blindness identified the District of Columbia as the locale with the highest rate of blindness. The District reported 370 cases of legal blindness per 100,000 persons. By contrast, Hawaii reported 139 cases of legal blindness per 100,000 persons. This statistic enabled Hawaii to claim the designation as the state with the lowest rate of blindness. In 1978, Delaware ranked fifth among the fifty states and the District of Columbia in the prevalence of blindness within the general population. High rates of blindness in certain states has been correlated with several factors including age (the older the person the greater the probability of being blind), race (blindness occurs much more frequently among nonwhites than whites), the extent of urbanization (rates vary between urban and rural areas), and the rate of population change (Schein and DeSantis, 1986).

Defining Blindness and Related Concepts

Researchers have developed for use a series of concepts which now differentiate between visual acuity and usable, or functional vision. Terms such as handicap, disorder, impairment, and disability now distinguish the social ramifications of blindness from physiological aspects of the condition (Peterson, Lowman and Kirchner, 1985).

By and large, the term found most widely in common usage and in the vernacular of the professions to describe the state of partial and total absence of vision has been unabashedly imprecise. The term "blindness" has been used as a form of shorthand to designate all degrees and forms of visual limitation. Since it's first use in 1934 by the American Medical Association, the notion of
legal blindness has been used as the standard for determining basic eligibility for various federal and state programs. The same definition is also used most often by federal, state and local governments to locate individuals with significant vision loss. Legal blindness is most often defined as:

Central visual acuity of 20/200 or less in the better eye with correcting lenses; or central visual acuity of more than 20/200 if there is a field defect in which the field has contracted to such an extent that the widest diameter of visual field represents an angular distance nor greater than 20 degrees (American Foundation for the Blind, 1967).

It is now increasingly common to find scholars using terms such as handicap, disorder, impairment and disability to refer to individuals with a visual loss requiring modification of life-style. Peterson, Lowman and Kirchner (1985) define a visual disorder as "a deviation from normality in the structure of the eye". They define a visual impairment as a "limitation in the overall function of the eye". Peterson et al. define a visual disability as a "limitation in the ability of an individual to perform specific tasks", and they define a visual handicap as a "limitation in the social functioning of an individual" (p.15).

The determination of blindness as a handicap or as a disability can be reached through an assessment of an individual's capacity to perform specified, objective behaviors or functions. Determinations of disability can also be highly subjective. Tuttle has noted that blindness can constitute a handicapping condition in either of two ways. Blindness can manifest itself as a handicap in the form of unrealistic goals, or in unrealistic restrictions that are ascribed to the condition.

Many who have discussed the complex topic of adjustment to blindness have subscribed to Lowenfeld's position that blindness imposes three basic limitations on human functioning. They are: (1) limitation in the range and variety of experiences, (2) the limitation in mobility, and (3) the limitation in the
control of the environment and the self in relation to it (Lowenfeld, 1964; p.90). These three limitations play a critical role in shaping the life experiences of blind and visually impaired men, women and children.

Lowenfeld (1981, 1964), Gowman (1957), Cutsforth (1951), Carroll (1961), and others who have written about the rehabilitation of blind persons have identified the many ways that visual impairment alters the routine and the tempo of one's life. The obstacles, restrictions, disappointments, and unending frustrations that occur from minute to minute, and day to day - episodes that help to define the shape and texture of the blind person's experience are well documented in the literature of blindness (Tuttle, 1984). However, only Carroll has meaningfully addressed the various impacts that occur concurrently with visual impairment throughout the full course of the human life cycle. Carroll alone details the adjustments and adaptations that begin with the onset of visual impairment and which extend on into time.

Carroll's life course perspective is stage-specific. He identifies major developmental tasks associated with infancy, childhood, adolescence, young adulthood and old age; furnishing commentary on the manner in which visual impairment influences the resolution of major developmental tasks. His discussion follows the general rule that the greater the visual loss, the more extensive and divergent are the coping techniques required for successful accommodation (Tuttle, 1984; p.20).

The Developmental Life Cycle

There is a well-developed literature that describes the process through which all people, blind and sighted, proceed through biologically induced life cycle changes. These maturational changes constitute the human life cycle. Erickson's (1963) life cycle formulations are probably the best known.
Erickson's eight stage epigenetic model covers the entire life span, centering around the salient and distinct emotional concerns that evolve from the clash of biological pressures with socio-cultural forces.

Each stage in Erickson's model requires changes and redefinitions in relations with others, negotiations with the external environment, and struggles with self-definitions and with self-identify. Successful mastery of the tasks inherent in each stage sets the foundation for successful mastery of tasks associated with subsequent stages (Gitterman and Shulman, 1986).

In Erickson's model, adulthood is anchored upon the establishment of a stable personal identity.

Erickson identifies the major conflicts of adult life as: "intimacy versus isolation", "generativity versus stagnation", and "ego integrity versus despair". Erickson's model of adult life divides the developmental epoch into three more or less distinct phases - they include early or young adulthood, middle adulthood, and late adulthood.

The most prominent adult developmentalists have created age groupings to describe changes that occur within adulthood (Van Hoose and Worth, 1982; pp.5-32). Offer and Sabshin (1984) have defined young adulthood as the period extending "from high school to the mid-twenties when one has achieved intimacy". They place middle adulthood from 25 to 45, and they define late adulthood as the period that follows thereafter.

In his research focusing on men in various phases of mid-life transition, psychologist Daniel J. Levinson (1978, 1977) identified a five year transition period separating early adulthood from middle age. Levinson set the lower limit of early adulthood at 17, while identifying age 40 as the upper edge of young adulthood. He described the term of time extending from 40 to 45 as the period
of mid-life transition. He characterized the ages of 40 to 60 as middle adulthood.

Feldman and Sears (1973) have defined the onset of adulthood as the point at which one is physically mature and ready to assume the responsibilities of work, marriage, parenthood and civic responsibility. Guntrip (1973) has stated that adulthood requires establishment of an identity that is separate and distinct from one's parents. His conception of adulthood also includes the dimensions of economic and domestic separation from one's parents.

By the time a young person achieves adult status, he or she is expected to have learned, and to have demonstrated a mastery of a sophisticated group of self-help, home management, educational, pre-vocational and social skills. He or she is further expected to possess the emotional maturity and the desire to develop close interpersonal relationships -- and to be prepared to select and enter a career or job that leads to independence from one's family (Santrock, 1983; Van Hoose and Worth, 1982). Health and hope for continued growth and well-being hinge upon the young adult's ability to locate resources that both nurture the soul and which provide the material necessities of life.

The potential danger threatening the young adult who fails to obtain intimacy is isolation. The failure to develop intimate relationships leads to self-absorption and superficial human interaction that may result in extreme isolation (Van Hoose and Worth, 1982).

The Impact of Blindness On The Young Adult

For young people in their late teens onward into the fourth decade of life, blindness creates a set of distinct issues and challenges that assume added meaning when considered in a developmental framework.

For a number of important reasons to be discussed here, the blind and/or
significantly visually impaired young adult can generally anticipate a unique set of barriers that complicate and which sometimes alter the pace of the developmental life cycle. Both the young adult experiencing significant vision loss as a child (congenital blindness) and the person losing eyesight in late life (the adventitiously blind) face particular barriers in striving to accomplish the two normative tasks associated with young adulthood; finding work and locating suitable companions who are able to satisfy vital social and intimacy needs. We will discuss the major tasks and barriers confronting the blind young adult in the next section.

**Barriers to Employment**

A variety of different source materials point to continued disproportionate levels of underemployment and unemployment among blind adults (Kirchner and Peterson, 1979; Lowenfeld, 1975; Josephson et al., 1963). Different reasons have been given to explain the failure of so many to make it into the workforce.

Rusalem (1972) has listed three common barriers to employment. They include: (1) "the lack of general readiness on the part of the blind person to use the tools and techniques that have been devised to overcome some of the effects of blindness. (2) The lack of creativity and imagination on the part of some rehabilitation workers who tend to cast blind workers into stereotyped vocational roles. And, (3) the lack of sufficient systematic occupational research to devise improved means of performing more jobs without sight" (p.22).

Megivern (1983), Lowenfeld (1975), and Lukoff and Cohen (1972) have attributed high levels of unemployment among the blind to prejudices and to misconceptions about the blind which result in a reluctance on the part of employers to hire blind persons.

Cutsforth and others have also blamed segregated schools for the blind as
well as other segregated training facilities for failing to adequately prepare blind school age children with the skills and talents that make it possible for them to successfully compete with sighted peers for jobs in the workplace.

Noted rehabilitation expert Charles Vander Kolk (1986) also points out that performance of particular types of work tasks that involve reading - or tasks requiring speed and dexterity also impact on the employment issue.

Communication barriers can also reduce employment possibilities for prospective blind workers. The basic inability to read print can obstruct academic achievement, restrict one's knowledge of the work environment, limit the range of potential contacts with co-workers, or otherwise reduce the blind person's chance of securing gainful employment. Visually impaired persons lacking a command of language arts or who lack the knowledge and skills necessary to use current sensory aid and computer technologies find themselves excluded from the expanding number of high technology jobs and occupations that are opening up in our society (Scadden, 1983).

**Barriers to Social Fulfillment**

One of the major issues occupying the life of the young adult, blind or sighted, is intimacy. In general, relationships that are developed during childhood and during adolescence that sustain an individual during critical periods of life are severed during the period when a young person begins to assert his or her independence. Breaking away from the close, secure ties of a family during late adolescence is essential to achieving personal independence and psychological separation (Van Hoose and Worth, 1982).

For better and for worse, congenitally blind children learn early and unavoidably in their lives to depend to a large extent on others, chiefly adults, for information about the world, access to it, physical guidance through it and
validation of their own perceptions of it. This generalized disposition can become strong and difficult to reverse because parents of blind children are often bewildered, feel helpless and consequently are overprotective (Davidson and McKay, 1980).

Blind adolescents who receive their education and training in segregated settings face many of the same barriers and wage the same battles that begin in childhood. Because they have lived in the unavoidably isolating environment of the residential school, they often have inadequate knowledge and experience in how to gain access to information - this effects their ability to read the environment and to cultivate authentic social relationships (Davidson and McKay, 1980). Interactions with sighted persons are further complicated by the blind person's inability to make eye contact, and his/her inability to use non-verbal cues. This information constitutes a large part of the communicative process.

Furthermore, blind persons face frustration arising from myths pertaining to blindness. Such myths contribute to patronizing, pitying, indifferent, rejecting attitudes that many sighted people bring to social encounters with blind persons.

The teenage years, stormy for most youngsters, are particularly trying for boys and girls with severe visual impairments. For the blind and visually impaired teenager special, painful realizations coincide with adolescence. The most obvious is the restriction upon driving. Another less obvious but profound limitation often leads to a series of humiliations that shape the psycho-sexual identity of blind adolescents.

As sexual awareness and pairing off behaviors begin during adolescence, interactions between boys and girls become increasingly non-verbal and dependent upon vision. Youngsters whose sight is impaired encounter particular difficulty,
and face considerable stress in their encounters with peers around matters that are pertinent to sexuality and physical intimacy (Cutsforth, 1951; Carroll, 1961; Chase, 1986). Blind and visually impaired adolescents and adults experience a need for support and help in expressing their needs and desires for love and physical intimacy in ways that will be clearly understood and accepted by their peers.

Learning to maneuver an automobile has become a rite of passage in our culture. It has become an important part of the male adolescent's social identity. The inability to drive can be a loss and/or deprivation that carries with it life-long implications with respect to identify formation. It can be an ongoing source of extreme pain, humiliation and inconvenience (Chase, 1986). It can also represent an ongoing reminder of dependency, and remain a source of ongoing conflict and resentment in the blind person's life.

Adjusting to Blindness in Young Adulthood

In his discussion of adjustment to blindness, Reverend Thomas Carroll equates blindness to death. In so doing he enumerates a list of twenty losses that accompany sight loss.

In his list of losses resulting from blindness Carroll includes the following. The loss of: (1) a sense of security (psychological security), (2) physical security, (3) basic skills, (4) communication, (5) appreciation, (6) occupation and financial status, and (7) losses to the whole personality.

Carroll follows his list of losses with the presentation of a rehabilitation program that seeks to restore functioning by first encouraging the acceptance of each itemized loss. Carroll's plan also includes skill training. Rehabilitation provides for the teaching of a repertoire of compensatory skills that are either learned for the first time, or which become substitutes for old
skills that may have become non-adaptive with the onset of significant visual impairment.

Carroll's rehabilitation program additionally provides supportive counseling to address cognitive and emotional needs that emerge from the traumatic experience of blindness. Carroll relies upon professionals familiar with visual impairment and the problems it creates to help blind persons to become accepting of self and others. Goals of treatment center around helping the subject of a sight loss and those closest to him to regain lost hope. Rehabilitation in general focuses on restoration of the recently blinded person to previous levels of functioning.

**Developing Competence**

Much like the program advanced by Carroll, psychologist Gerald Tuttle (1984) has developed a model rehabilitation program that follows a sequential order. Tuttle's sequential model of adjusting with blindness is built on the premise that adjusting with blindness follows the same pattern as that of adjusting to any of life's many traumas or crises. Tuttle's seven phase model is based largely on the concept of competence - an important notion defined and explained in the first chapter of this dissertation.4

To grow and mature the blind young adult (congenital and adventitiously blinded) must come to accept and adapt to the experience of sight loss. He must also master compensatory skills and behaviors at the same time he is adopting new ways to perceive and define the self in relation to others. Successful adaptation is achieved through skillful use of tools and devices that aid the blind person in his efforts to gain increased control over social and physical environments (Vander Kolk, 1986). Successful adaptation to blindness also involves the acknowledgement of the need for, the search for, the recognition
of, and the effective utilization of personal, interpersonal, and institutional resources. Personal resources are one's own strengths and assets. Interpersonal resources refer to supportive networks consisting of family, friends, and professionals, while institutional supports include schools, agencies, and/or organizations of and for the blind (Tuttle, 1984; p.209).

Cultivating Supportive Networks

The premise that social supports help to cushion or buffer the impact of traumas, and the notion that supportive relationships help to diminish the stress generated by life transitions are scientific theses that have generated excitement and enthusiasm among social workers, psychologists, anthropologists, sociologists, and biomedical researchers.

Hammer (1981) and others (Kahn and Antonucci, 1981) have argued in favor of increasing emphasis on research examining the availability of social support for specified populations deemed "at-risk". This view is ratified by Schilling and Schinke (1983) who have indicated that handicapped men, women, and children are particularly reliant upon family and friends for essential supports.

For the most part, the concept of social support and its importance in the growth and development of blind persons has been largely overlooked by those who have studied the lives of blind men, women and children. Blind and visually impaired persons, like all others, experience the need for support throughout their lives. How individuals without sight manage to access support through organized sets of interpersonal linkages is an area of scientific inquiry that merits increased scrutiny.

A review of the literature on blindness has shown that studies examining the proposed theoretical links between growth and wellness in adulthood and supportive social network ties are almost non-existent. Studies that outline and
seek to explain the means by which blind young adults procure essential supplies of expressive and/or instrumental support are equally rare. Instead of a corpus of studies that seek to detail the supportive networks consciously formed by blind and visually impaired persons one finds texts and articles that address topics concerned with the families of blind persons. Social work texts such as the classic *Social Casework and Blindness* (Finestone et al., 1960) and articles found in mainstream publications make reference to family members, and other relatives as supports. Such publications typically detail how primary group members can be supportive of the blind individual's attempts to adjust to his/her vision loss. Texts less often differentiate helping roles that fall to friends, neighbors, work associates and others who constitute de-facto members of an organized, if not informal, helping network. The notion that blind adults consciously and also competently design and sculpt their own sets of helping relations has only recently begun to achieve some recognition in the vast literature pertaining to blindness.5

In a discussion of factors influencing adjustment to blindness, Tuttle acknowledged the importance of supportive groups of family and friends in overcoming the traumas associated with blindness. Tuttle included parents, spouses, siblings and friends as potential members of supportive networks. He also cited work done by Cook-Clampert (1981), Coopersmith (1967), Cowen et al. (1961), Eisenstadt (1955), and Sommers (1944) to illustrate the role that individuals possessing hope and affirmation can play in building the self-esteem of congenitally and adventitiously blinded children.

At the present time it is unclear just how much access blind and visually impaired young adults have to interpersonal resources in the form of supportive networks. It is also not known how able and successful many blind and visually impaired
impaired young adult men and women are in building effective, satisfying social networks.

An improved understanding of the formation, structure and the function of personal networks of blind and visually impaired adults should help to determine whether young people with significant visual impairments are vulnerable to isolation and to health impairments that have been linked in epidemiological studies to weak and/or ineffective social support systems.

Social Support and Health

Since the 1950's, behavioral scientists have attempted to identify psychosocial factors that affect health and well being. From this work has emerged a long list of variables that seem to be of importance. A considerable body of research has demonstrated a higher rate of disease among persons who have experienced job changes, job loss, residential moves, migration, and the death of a loved one. All of these events involve the disruption of existing social relations.

During the last five to ten years there has been considerable interest in determining whether positive relationships between social support and health occur because social support enhances health and well-being, irrespective of stress level (the "direct" or "main-effect" hypothesis), or because support protects people from the pathogenic effects of stressful life events (the "stress-buffering" hypothesis).6

Major Issues in the Definition and Measurement of Social Support

Although there is general consensus that social support can buffer and/or moderate specific types of stress, and though there is also evidence that support, variously defined, can exert an impact on health and well-being, there is considerable disagreement on the definition of social support. Disagreement
on definition spills over into selection of methods and procedures that have been used to measure social support.

In a survey of social support literature, Cohen and Syme (1985) present eight questions that identify issues relevant to defining and measuring support. The issues they raise include such matters as: (1) Who is providing support? (2) What kind of support is being provided? (3) To Whom is support provided? (4) For which problem is support provided? (5) When is support provided? (6) For how long is support provided? (7) What are the costs of giving and receiving support? (8) How do each of the issues identified in the first seven questions interact in determining support level.

Cohen and Syme also point out in their article that support can be analyzed from two divergent perspectives: structure and function. Structural measures describe the existence of and interconnections between social ties. Functional measures assess whether interpersonal relationships serve particular functions. Structural measures are generally considered to measure objective characteristics of social networks, while functional measures generally ask persons about their perceptions of the availability of adequacy of resources provided by other persons.

Because the term social support has been used to refer to different aspects of interpersonal relationships, each aspect must be considered part of the general domain of social support. Social support is, however, most commonly used to designate the functional aspects of social relationships. The term social network is most often used to refer to the structures existing among a set of relationships. Social integration and isolation are most often used to refer to the existence or quantity of relationships (House and Kahn, 1985; pp.84-85).

Building upon the theoretical work of Cobb (1979, 1976) and others, Lin
advances a synthetic definition of social support that subsumes the functional and structural aspects of social networks. He defines social support as the perceived or actual instrumental and/or expressive provisions supplied by the community, social networks, and/or intimate and/or confiding partners. Lin's view of social support reflects an appreciation for each of the dimensions inherent in the concept. His definition distinguishes between perceived and actual support and also reflects the reality that peoples' social worlds are composed of layers of significant — and not so significant others (Boissevain, 1974).

Lin's conception of social support also recognizes the essential fact that there are at least two major elements of support — instrumental and expressive. Lin defines instrumental support as help "involving the use of relationship as a means to achieve a goal, such as seeking a job, getting a loan, or finding someone to baby-sit". He defines expressive support as help that involves "the use of relationships as an end as well as a means". Lin cites the following as examples of expressive support; sharing sentiments, ventilating frustrations, reaching understanding on issues and problems, and affirming one's own as well as the other's worth and dignity (Lin, 1986; p.20).

Similar, but more generalized than Lin's definition of social support is Kahn and Antonucci's (1981) characterization of support as interpersonal transactions that involve the exchange of "affect, affirmation and aid".

This dissertation makes use of Barrera's (1983, 1981) conception of social support which effectively integrates all of the notions presented above. Barrera's multi-faceted definition of support includes the functional aspects of supportive relationships, the structural elements of social networks and the subjective dimensions of support included in Lin's synthetic definition.
Barrera's conception of support, unlike the rest, considers satisfaction with actual and perceived sources of support - it also defines support with respect to types of helping behavior.

**Conduits of Support: Social Networks**

While most discussions of support make reference to supportive networks, Hall and Wellman (1985) distinguish between studies that seek to detail what commodities flow within natural helping networks from studies that focus exclusively on the structural properties of social networks. Until recently social support studies have tended to see all interpersonal ties as supportive and have treated the variable of support as a global, unidimensional phenomenon. Experts now recognize that all ties are not supportive (Schilling, 1987): that support is not a single phenomenon, and that the ways in which ties fit together in networks affect the nature of relationships between individuals (Hall and Wellman, 1985).

**Describing and Analyzing Social Networks**

Knoke and Kuklinski (1982) promulgate a framework for analyzing social networks that is rooted in a social epistemology that distinguishes between an "attribute" and a social "relation". Knoke et al. define an attribute as an intrinsic characteristic of a person, an object, or an event. A relation by contrast "is not an intrinsic characteristic of a single party, but is viewed as "an emergent property of the connection or linkage between units of observation" (p.10).

The distinction between an attribute and a relation expressed so clearly by Knoke et al. can be found in J. Clyde Mitchell's (1969) definition and characterization of a social network as "a specific type of relation linking a defined set of persons, objects or events". The distinction is further expressed
in a series of structural and interactional dimensions that characterize the form and essence of all social networks.

**Structural Criteria**

Mitchell defined network morphology as "the relationship or patterning of links in a network in respect to one another" (Mitchell, 1969; p.12). Included among the attributes of whole networks, or the set of network links are the notions of anchorage, density, reachability and range.

Anchorage refers to the specification of an individual whose behavior the observer wishes to interpret. This central person or group is generally referred to as "ego".

Density has been variously defined as "the degree to which members of a persons' network are in touch with each other" - independently of ego. The construct is normally expressed as the ratio of the number of existing links to the number of possible links" (Fischer, 1977; p.36). Density represents an "index of the potential, not of the actual flow of exchange occurring in a prescribed set of network links" (Boissevain, 1974; p.39). In general, networks that are narrowly defined tend to evidence a "tighter" structure than networks that are more "loosely" delineated.

Dense networks unlike sparsely knit, ramified, or multiple networks tend to reinforce normative behavior. This being so, dense networks tend to deny individuals exposure to experiences that deviate from expected social norms and mores. High density networks may similarly discourage cultivation of social ties with others who network members might tend to naturally view as "outsiders". For handicapped and physically disabled persons, dense networks can provide benefits as well as encumbrances with respect to the formation of social relationships. While they provide stable and consistent supplies of emotional support, dense
networks insulate the disabled person from numerous potential sources of support and affirmation, and effectively deprive the disabled person of a wide range of new social experiences. Dense ties discourage identification and location of diffuse ties that are frequently associated with heterogeneous reference groups.

Reachability refers to the ease with which ego is able to contact other network members. One's reachability or accessibility may be a function of actual physical distance, or it may be an artifact of the situation in which ego knows only one network member through another member. For social workers, reachability has particular meaning in relation to the availability of network members for mobilization in specific problem situations (Pfouts and Safier, 1981).

The concept of range refers to "the number of persons (actors) included or connected in a network" (Fischer, 1977; p.35). Another term often used interchangeably with the notion of range is the concept of "network size". Boissevain (1974) characterizes network size as "the most important structural criterion". This is, in his words, "because other criteria are calculated as a proportion of the total possible, or actual links in a network" (p.37). Network size is determined by the definition of "who constitutes the relevant network", and is a direct reflection of the method used by an investigator to elicit network data (Wood, 1984; p.323). As a general rule, networks established on the basis of interaction with a focal individual tend to be larger in size than those composed of kin and other intimates.

Llamas, Pattison, and Hurd (1981) have estimated personal networks to range in size from 20 to 30 persons. McFarlane, Neale et al. (1981) reporting slightly different results, have placed the number at 8 or 9 persons.

Larger network size has frequently been associated with more positive outcomes and healthier individuals than smaller network size (Wood, 1984; p.323).
Stokes (1983), however, has suggested that the percentage of relatives in a network may affect the impact of network size.

**Interactional Criteria**

Networks can also be analyzed in reference to relational content. In such instances, attempts are made to describe dyadic links.

In a framework for analyzing social exchange presented earlier, Mitchell proposed a group of five variables which he believed delineate the content of dyadic links. These key concepts and variables included: the content of network ties, directedness, durability, intensity and frequency of interaction.

Content of a network tie, or simply, "content" refers to the meanings which persons in a network attribute to their relationships. When Mitchell developed his conception of content, he spoke in terms of the purposes for which links are established. Content is frequently delineated by differentiating ties based on such factors as kinship, friendship, neighborhood association, professional help and occupation. Another approach, discussed earlier as social support- focuses more closely on the specific function of network ties, ranging from economic assistance to categories of support, advice and feedback (Pfouts and Safier, 1981).

In addition to describing the nature of network ties, content can be discussed with respect to whether a linkage contains only one content area (uniplex relation) or more than one content area (multiplex relation). Boissevain (1974) has noted that single-stranded relations tend to become many stranded if they persist over time. Multiplex ties also tend to be stronger than uniplex ties (Boissevain, 1974; p.30).

Densely knit, bounded, solidary networks generally enhance the ability of the relatively powerless to conserve and control their existing internal
resources; they mobilize help quickly through a network. The pervasive interconnections in such networks help members to maintain internal social control. At the same time, their tight boundaries limit the ability of members to acquire external resources.

Sparsely knit, ramified, multiple networks, on the other hand tend to be better suited to the acquisition of external resources through direct and indirect ties. Diffuse networks tend to encourage linkages to more diverse social circles, giving network members access to a wider variety of resources (Wellman, 1981).

Directedness addresses the question of whether or not network relationships are reciprocal. Directionality refers to the direction in which exchange occurs. Both concepts are based upon the thesis that content exchanged between two or more individuals can be equal, complementary or unequal. In general, equality or complementarity in the flow of items exchanged is an indication of equality in terms of power or prestige between a person or persons who are transacting. Where there is asymmetry in exchange over time, there is very often a difference in status and power between the actors (Boissevain, 1974; p.33-34).

Durability is a concept that refers to the life of a given network link. As it is used by Fischer (1977), the term durability represents how successfully a tie has endured disruption and competition from other sources. It reflects the amount of experience shared by two people. Durability is a formulation that is closely tied to a quality inherent in all dyads, that being - frequency of interaction. Frequency of interaction (frequency of contact) refers to the number of contacts among people within a network. Frequency often leads to, and is the result of the quality of the relation - in the sense of multiplexity of shared roles and the nature of things exchanged. Frequency of interaction may be, but
is not always an index of the investment of the actors in a relation. Boissevain has noted that the durability of a tie can be a more precise indicator of the strength of a tie than frequency of contact. This is because duration accurately indicates the amount of time that two or more people have invested in one another.

Additional constructs have been proposed by network analysts to achieve a more complete sense of interpersonal ties. Boissevain (1974), Mitchell and Trickett (1980), Wood (1984) and others have either examined or proposed examining such factors as network dispersion (clustering), the strength (intensity) of a tie, and the source of network ties (attributed and dominant) in future studies.

Mitchell and Trickett have defined network dispersion to mean "the ease with which a focal person can make contact with members of his/her network". Dispersion is typically measured in terms of geographic proximity. Clusters are segments or compartments of networks which have a relatively high density. The persons forming clusters tend to be more closely linked to each other than they are with the rest of the network. Conversely, a cluster may also be viewed as a compartment of a network which has a relatively low ratio of external relations as compared to internal relations. The existence of clusters in a given network can influence behavior. Clusters are typically recruited from different activity fields (Boissevain, 1974; p.41).

The strength or intensity of a link in an egocentric network refers to the extent to which a focal individual experiences obligations, or otherwise feels free to exercise the rights implied in linkage with another person (Pfoutos and Safier, 1981). The strength of network ties can be determined through the analysis of objective measures such as frequency of contact. The intensity of
social relations can also be examined in terms of subjective criteria (Boissevain, 1974: p.41). In general, subjective appraisals of the strength of a network tie are achieved by use of psychometric instruments that represent "moment to moment" evaluations of intimacy or closeness felt by one person toward another. A technique that has been used with increasing frequency involves calling upon an informant to choose one of six response categories that best describes "how close" the informant "feels" to each identified network confidant.

The source of a tie refers to the context, field, or type of social or role relation giving rise to a given network tie. Kinship, childhood, neighborhood, work or voluntary association are examples of sources of network relations. The term dominant source refers to the single context, if any, that may have provided most of a focal person's acknowledged relationships (Fischer, 1977).

**Network Boundary Specification**

In all network studies an issue of central importance is that of specifying network boundaries (Laumann, Marsden and Prensky, 1983).

Laumann, Marsden and Prensky distinguish between two analytical traditions which they label "realist" and "nominalist". Milardo (1988) also proposes a heuristic device that distinguishes between three different network types.

A study assuming a realist orientation adopts the presumed vantage point of the actor in defining the boundaries of his/her social action. In this approach, a network is described as it is experienced by those within it. Kim's (1970) study of the "community of the blind", which has been summarized in the following section, exemplifies this orientation.

A nominalist perspective, unlike a realist, imposes a conceptual framework that reflects the investigators's own analytic purposes, and may, or may not express the intentionality or experience of those under examination.
Milardo differentiates between three types of personal social networks. They are (1) "intimate" networks, (2) exchange networks, and (3) interactive networks. By definition, intimate networks are composed of close associates and/or significant others. They are defined on the basis of feelings of closeness or intimacy. Intimate networks are normally constructed through the use of surveys or interviews that generate names of alleged network members. To obtain an accurate list of intimate network members a focal person is typically asked to nominate those he or she "feels the closest to". The focal person can also nominate his/her best friends.

In contrast to intimate networks which are constructed from names of associates selected on the strength of a subjective appraisal of closeness, there are exchange networks. Exchange networks contain individuals with whom an individual is most likely to come into regular contact. The identification of individuals included in exchange networks typically entails two procedures. The first involves the use of a highly structured interview schedule that presents a focal person with a set of social settings (e.g., personal, household, work) in addition to several categories of people who are defined specifically in terms of a high probability of rewarding exchange.

During the first stage of information gathering, the focal person (ego) is invited to list the name (or names) of individuals who provide specified types of assistance. The second phase includes a series of general prompts that enable the respondent to add to a core list of names previously obtained. This two stage procedure has been used by Fischer et al. (1977), by Fischer (1982) and by Barrera (1981).\[7

Interactive networks, as compared against exchange and intimate networks, are structures that reflect frequency of observed interaction. Interactive
networks are typically based upon diaries and logs that document the actual frequency of interactions that occur between a focal individual and his identified network associates.

**Social Network Applications**

The first systematic attempts at characterizing social networks stem from the work of British social anthropologists. Studying a Norwegian fishing village, Barnes (1954) found the typical structural concepts of role status and territorial location to be inadequate to fully capture the village's social life. Barnes began to plot the interactions that an individual would have with others, and he used concepts from mathematical graph theory to describe the individual's social field. The result was termed an individual's personal network.

Anthropologist Elizabeth Bott (1957) examined the effects of different network structures on the role behavior of married couples. Bott's work is representative of a wide range of studies which have examined the effects of network variables upon individual behavior.

Community psychologists, epidemiologists, and social workers have studied the structural features of sociocentric networks to differentiate populations at-risk (Garbarino, 1977). Others (McKinlay, 1973; Hammer, 1963) have related network structure to help seeking behavior.

Finalyson (1976), Tolsdorf (1976), Nuckolls et al. (1972), and Walker et al. (1977) have similarly examined the relationship between structural network variables and response to stress and crises.

Granovetter's (1973) exploration of relationships between network structure and network links represents still another application of network methods. His analysis of the social ties of business school graduates is representative of a group of studies that have proven useful in explaining social processes such
as information diffusion.

The current study examines the structure of supportive and non-supportive links. It also seeks to describe selected attributes of whole ego-centric (personal) social networks. It takes the position that such networks are consciously formed by a group of individuals known to share a specific characteristic (visual impairment).

Social Networks and Blindness

Within the vast literature on blindness only Pfouts and Nixon have conducted a network study of blind persons. In their study, Pfouts et al. surveyed 98 totally blind adults ranging in age from 20 to 56 years. Intent to investigate possible relationships between selected socio-demographic variables and measurable social outcome variables (e.g., family income, employment status, and independence skills), Pfouts and Nixon limited their study to one network descriptor (network size). They also analyzed the relational content of network ties, examining, in particular, role multiplexity, frequency of contact, and directedness. They also considered the perceptions of support held by their subjects.

Although their research qualifies as network analysis, Pfouts and Nixon focused most of their attention on exploration of possible relationships among key socio-demographic variables and income, employment and social independence. They used network descriptors (the ones listed above) as indicators of social independence.

Pfouts and Nixon found blind subjects' networks to vary widely in size (they fail to note the mean size of networks sampled). They also report that subjects with small networks (8 persons or less) are prone to isolation and poverty. Their research design and social network analytic methods provided for the
identification and measurement of those persons who Milardo (1988) refers to as network "intimates". Their procedures for nominating network members were consistent with those typically used in studies of network intimates.

In addition to other findings to be discussed, the investigators found network size to be uninfluenced by sex, race, age, vocational rehabilitation training or marital status. The investigators also found small network subjects more likely to:

- be unemployed
- be more likely to receive SSI
- have no kin support
- have no friend, or only one friend
- have daily contact with only one other person
- be on the receiving end of services and advice
- say they receive no emotional support
- express more negative attitudes toward others
- not be in reciprocal relationships with others

Pfouts and Nixon also reported a correlation between network size and educational attainment. They reported that educated working men and women enjoyed the support of an assortment of individuals, while those without work (and less schooling) were found to have fewer positive relationships, and were found to be involved in less emotionally gratifying social relationships than those with jobs. This finding is particularly important given the high rate of unemployment among blind adults.

Pfouts and Nixon's finding of a relationship between education at institutions for the blind and subsequent gainful employment is another important result of the study that coincides with Granovetter's contention that weak, diffuse ties are important to information gathering and to procurement of certain types of instrumental aid.

The strong relationship between residential schooling and gainful employment prompted Pfouts and Nixon to acknowledge the value and strength of informal
social networks among blind adults and to propose alternatives. The authors muse:

We wonder whether for public school graduates some new informal mechanism will arise to replace the "old boy" network of former schoolmates from residential schools which has been described to us as a tightly bonded and highly effective "sociability and employment" support system. Perhaps wider exposure in the public schools to nonsegregated networks, and to non-traditional job options will produce a new generation characterized by increased participation in the labor force, greater occupational diversity and mobility; and a fuller participation in the ongoing life of society (p.48).

Pfouts and Nixon associate certain dangers with small networks. They assert that men and women with small networks run the greatest risk of poverty and isolation.

As a first step, Pfouts and Nixon's research is invaluable. Their identification of groups of blind individuals who live at risk of isolation and poverty should alert all to the potential harm attached to inadequate social ties. However, Pfouts and Nixon's research also leaves room for discussion and debate and it opens the door for follow-up along a great many dimensions.

Pfouts and Nixon neglect to explore the source of network ties, they overlook the important distinction between actual and perceived support, and leave for others a challenge to expose the mechanisms that contribute to viable exchange networks.

Pfouts and Nixon also neglect developmental factors. Their study looks at formed networks and consequently fails to identify or describe the factors that contribute to the origination of networks perceived to be "supportive". Their study furthermore fails to address the influence of negative network influences on those perceived most "at-risk".

Network variables such as geographical dispersion receive no attention in the Pfouts and Nixon study, notwithstanding the fact that the physical proximity
of network members would appear to be particularly relevant to the construction of the networks of handicapped and disabled people (Pogrebin, 1987).

Kim's (1970) monograph describing the social structure of identified blind residents of the city of Minneapolis contains few references to discrete social networks of blind people. Instead, Kim applies sociological principles of community formation to assess the social homogeneity of the adult residents of Minneapolis. Nonetheless, Kim's manuscript does furnish information concerning the affiliation motives of blind adults.

In general terms, Kim found visually handicapped subjects to be sensitive to the attitudes of the sighted. He found that position in the status community predicts identification with other blind persons. The partially sighted subjects in his study displayed an unequivocal preference for contact with sighted individuals. From Kim's observations, one might expect the personal networks of blind adults to vary in composition by degree of visual impairment.

In the Social Sources of Adjustment to Blindness, Lukoff and Whiteman (1970) examined in considerable detail the affiliation behaviors of blind adults. Their study in certain respects resembles a modern network analysis insofar as Lukoff and Whiteman made clear efforts to systematically list the friends, family members, and significant others most central to survey participants.

Lukoff and Whiteman generally found "independent" subjects to be those most likely to form dense, but dispersed, homogeneous networks. Like Pfouts and Nixon, they found a remarkable number of isolated individuals. They detected an association between isolation and psychological disposition (independence orientation). In addition, Lukoff and Whiteman reported statistical associations between isolation, age, and social class.

Dependent persons were typically the most isolated, as were the old, and
the poor. Working-class adults blinded in later life were found to be at greatest risk of social isolation. Conversely, attenders of special schools for the blind were found to be the most immune to social isolation. Attenders of schools for the blind were also those most likely to have jobs and to have found their work through school chums.

Josephson's (1968) investigation into the social lives of the blind reveals very little about the affiliation behaviors, or the social networks of blind young adults, but focuses on how blind men and women of all ages spend their leisure time. His study contributes little to our ability to describe the characteristics of the social networks of blind adults, or young adults. However, Josephson's investigation does shed light upon the frequency of interpersonal contacts that are initiated by blind adults.

Josephson found men and women from 20 to 39 years to be the most active age group among the blind. He also found men and women in the young adult age category to be the most sociable. Seventy five percent of those questioned in Josephson's survey visited with friends at least once a week. Josephson also found persons living alone to engage in more visiting than those living with family members.

Josephson's survey of 684 blind adults residing in locations throughout the country was one of the first studies to confirm an unemployment rate approaching 50% among persons 20 to 39 years of age.

Josephson's study, perhaps more than anything else documents the tendency for blind adults to gravitate toward one another—when blindness cannot be detected by others.

The final study summarized here, an investigation of the occupational choices made by blind and visually impaired young adults comes closest to
describing social process among blind young adults.

Winton (1970) discovered a number of interesting friendship patterns among his young adult subjects. He found that men and women who identified themselves as blind persons "were often part of some social group which was composed of blind persons". While he found a majority of his subjects to claim at least one blind best friend, with one-fifth claiming three or more blind friends. Winton did not explore the conditions, circumstances, or the context giving rise to friendships. Winton observed a tendency among blind adults to coalesce in homogeneous social enclaves. Winton notes:

When we consider that there are perhaps two or three blind people per 100 of the general population, the social network among the blind appears much more tightly structured than we would expect to occur by chance (p.169).

Winton attributed the close ties he found among his subjects to the stigmas ascribed to blindness, and to the tendency for the sighted to avoid contact with blind persons. His explanation of the trend he witnessed - finding blind persons closely connected in relationships with one another - is grounded in public prejudice toward blind persons. A condensed version of Winton's view can be found in the following quotation:

...the belief that blind individuals should be together results in an increased likelihood that the blind will be grouped together, resulting in contact that frequently culminates in friendships that are functional for the blind" ...(Winton, 1970; p.170).

Winton maintains that the essence of blind (to blind) friendships rest on the "shared revolt" against the very institutionalized groups of the blind which bring blind people together. He also notes that some blind persons "assess their worth by the ratio of blind to sighted friends" (p.172).
To his credit, Winton, perhaps more than anyone else to date, described the texture of life among blind young adults. His qualitative study of young adults yields insight into the social fabric of blind young adults. Winton did not— in fact, he could not use methods that have only recently been developed to map the networks of blind young adults, and which define their structure.
1. Schein and DeSantis (1986) define incidence as "the number of new cases of a disease or condition occurring within a specified period of time". They define prevalence as "the number of cases of a disease or condition present in a population within a specified period of time" (Schein & DeSantis, 1986: p.519). Incidence refers to the occurrence of a condition, while prevalence denotes the existence of the condition. When these figures are divided by appropriate estimates of the populations "at-risk", the results are incidence and prevalence ratios - which are major epidemiological and social research tools.

2. In lay terms, a person is considered blind if, at a distance of 20 feet or less, he/she can see no more than what a person with normal sight can identify at a distance of 200 feet.

3. To distinguish those who become blind later in life from those born with a significant visual impairment, and to further distinguish the circumstances of individuals who become blind as children, special terms have been developed. A person who loses his or her sight before age 5 is said to be congenitally blind. One who loses his/her eyesight after having seen and mentally recorded a variety of visual images, by contrast, is said to be adventitiously blind (Roberts, 1973).

4. Coelho, Hamburg and Adams (1974) devote an entire section of the book Coping and Adaptation to a comprehensive discussion of the most salient dimensions of competence. In a chapter focusing on strategies of adaptation, psychologist Robert White discusses adaptation as mastery, and as an expression of ability to compromise. He identifies variables of adaptive behavior including among them information, internal organization, and autonomy. White defines competence as a broad over-arching concept that emphasizes the need of an organism to accommodate and make use of changes that occur naturally in space. White's essay is followed by several essays by Murphy, and Hamburg which examine competence in the framework of two developmental life stages namely, childhood and early adolescence. The edited volume also contains a brilliant analysis of coping with a long term disability. In the article co-authored by Adams and Lindemann, two cases of young adults disabled by injuries caused by accidents are presented. The authors present pertinent case facts, stipulate the direct and indirect interventions that were made by professional helpers, and they discuss and compare the two cases in terms of coping strategies that proved to be least and most effective. The concept of competence and its potential application in all areas of social work practice is fully delineated in an edited volume by Maluccio (1981). In Promoting Competence in Clients, a series of authors define and describe competence oriented practice with selected client groups. They include women, children, the aging, involuntary clients, and families with a member having a psychiatric impairment.

5. The sociological perspective that views human behavior "including the formation and maintenance of social relations, as choices made with limited alternatives" has been termed by sociologist Claude Fischer (1977) as the "choice-constraint" model. An important element of the model is Fischer's premise
that individuals' choices vary both with their preferences and their options. Fischer argues that geographical mobility and population density have no simple, direct effects on people but that their effects instead depend upon the various opportunities and constraints that different people face. This perspective lends itself to the study of individuals with disabilities such as blindness.

6. The "direct-effect" hypothesis argues that social support enhances health and well-being irrespective of stress level. In this formulation all direct benefits derived from support are understood to occur as a consequence of the perception that in the event of a crisis, stressful life event, or life transition support from others can be expected. Another concept implicit in the direct effect hypothesis is the notion that social support accrues from one's "embeddedness" in a social constellation.

Current studies such as those by Pearlin (1985) suggest that the benefits derived from social support originate in the perceptions and strongly held convictions that known associates (kin and non-kin) can be expected to be available, and will extend certain types of anticipated assistance when circumstances demand. The insulation and security afforded by supportive networks are believed to produce increased feelings of positive affect, elevated feelings of belongingness, and amplified feelings of self-worth and mastery. The direct effects hypothesis in essence turns on the premise that positive affect influences overall susceptibility to physical illness through neural transmitters and through nonspecific mechanisms in the body's immune system.

Another model has also been developed to explain the direct effects of embeddedness in a social network. This explanation emphasizes social intercourse. This model finds some support in evidence that suggests that individuals deprived of regular feedback are statistically more prone to morbidity, disease and illness than are those who are subject to regular social routines that involve others. This model turns on the thesis that psychological states may effect health through their influence on behavior and physiological response. Feedback and direction from others may aid in the avoidance of life stressors that would otherwise increase the risk of both psychological and physical disorder.

Sociological explanations have also been proposed to account for specific observed health benefits of social network involvement. In such sociological interpretations, role relationships are understood to provide a set of identities, a source of positive self-evaluation, and the basis for a sense of control and mastery. Sociological explanations suggest that role obligations contribute meaning and purpose to life. Such meaning is believed to reduce the likelihood that profound despair will be experienced. In the absence of despair, chances for wellness improve.

The buffering hypothesis operates slightly differently than the direct effect model. Unlike the direct effect model, the buffering hypothesis argues that "support exerts its beneficial effects in the presence of stress by protecting an individual from the pathogenic effects of stress". Central to the buffering hypothesis are two theses: (1) that resources provided by others in a natural helping network serve to redefine and reduce the potential for harm, and thus bolster the ability of the individual to cope with increased demands, and (2) that support may intervene between the experience of stress and the onset of a pathological outcome by reducing or eliminating the stress experience- or by directly influencing responsible illness behaviors or physiological process.
7. The procedure just described is identical to the procedure that I used to construct the egocentric personal social networks of a sample consisting of 55 blind and visually impaired adults. The research design and research methods and instruments used to collect data are described in detail in Chapter 3 of this paper. The questions used to elicit the identities of network members are included in Appendix A.
Overview

This chapter describes the methods used in a cross-sectional study of the social support networks of a small yet heterogeneous group of legally blind and visually impaired young adult men and women.

A cross-sectional study of a non-random sample of 55 legally blind and visually impaired men and women ranging in age from 20 to 50 years was conducted. The 55 young adults who participated in the study were recruited from the total identified population of blind and visually impaired men and women known to reside within the boundaries of the State of Delaware.

Conceptual Model

This study originated in a series of questions that sought to describe and to explain how men and women with significant visual difficulties piece together or otherwise configure systematic relations in the form of personal social networks. The study follows theory advanced by sociologist Claude Fischer (1977) which stipulates that all social networks are moment to moment creations: the product of choices limited by environmental constraints.

Fischer's "choice-constraint" model of network formation explains the formation of personal networks as a dynamic process that extends across the human life cycle. Fischer's network paradigm assumes that people "actively choose among alternative social relations", and that choice is constrained by a "social environment" which determines the relative costs and values of alternatives" (Fischer, 1977; p.39-40).

In this study the investigator examines the relationship between salient sociological and demographic variables (independent measures) and various
dimensions of social network structure and a measure of life satisfaction (dependent measures) with the ultimate goal of determining the degree to which visual disabilities effect the formation of social support networks.

Research Questions

This research takes its direction from a series of broad objectives and from a core group of hypotheses which seek to explain how visually impaired young adult men and women purposefully construct egocentric social networks. For the most part, attention focuses on retrospective description of the social support networks rendered by young adult study subjects. Particular emphasis is directed toward achieving an understanding of: (1) who blind young adults choose for friends, (2) where new friends are likely to be found, and to what extent networks are likely to be dominated by kin. This dissertation attempts to accomplish the following research objectives. They are:

(1) To systematically identify, and describe the morphological characteristics of the social support networks of a sample of legally blind and visually impaired young adults. Network dimensions examined include: network composition, network size, duration of network links, the intensity or "closeness" of ties, the frequency of contact with network associates, proximity to network relations, and the overlap or multiplexity of network ties.

(2) To specify the differential social and physical contexts that are identified by legally blind and visually impaired young adults as the most common and the most accessible locations for making initial connections with others.

(3) To test eleven hypotheses which explore proposed relationships between various aspects of blindness (independent measures), and social network structure (dependent measures) and life satisfaction.

Research Hypotheses

The hypotheses that have been formulated investigate relationships between selected dimensions of blindness and network structure. Perhaps the most important relationship explored is the relationship between functional vision, expressed in the form of a score achieved on a seven-item scale - and network
composition, a variable representing the proportion of kin to nonkin who comprise ego's social support network. A negative relationship is hypothesized between functional vision and network composition. The hypothesis holds that individuals with decreasing levels of vision are likely to fashion networks that contain increasing proportions of kin.

A second hypothesis explores the relationship between functional vision and network size, predicting a positive association between the two variables. Network size is defined in terms of the number of individuals providing one or more types of social support.

Four of the remaining nine research hypotheses explore relationships between vision-related variables which are treated as independent measures — and network size and composition, which are handled as dependent measures. The vision-related variables tested by study hypotheses are: (1) age of onset of blindness, (2) attendance at a residential school for the blind and (3) acceptance of blindness.

Seven hypotheses test proposed relationships between specified socio-demographic variables and network size and network composition. The socio-demographic variables examined in relation to network composition and network size include: (1) subject age, (2) gender, (3) marital status, (4) employment status and (5) the level of physical impairment. These variables were selected from a list of variables obtained in a review of the literatures on adulthood, blindness, and social networks. Additional variables such as: (1) level of independent functioning (ADL), and (2) cause of blindness (progressive diagnosis) were also examined in relation to network composition and network size. Correlation coefficients were computed for these and other variables.

Study hypotheses are presented on page 51.
RESEARCH HYPOTHESES

1. Hypotheses Involving Vision Related Variables (4)

(H1): There will be an inverse relationship between functional vision and network composition. As vision decreases, the ratio of kin to nonkin network relations will increase.

(H2): There will be a direct positive relationship between functional vision and network size. Subjects with better vision will have larger networks.

(H3): There will be a positive relationship between age of onset of blindness and network composition. As age of onset of blindness increases, the ratio of kin to nonkin help will also increase.

(H4): There will be a negative relationship between attendance at a residential school for the blind and network composition. Those who have attended a residential school for the blind will receive a greater measure of help from nonkin than from kin.

II. Hypotheses Involving Socio-demographic Variables (7)

(H5): There will be a positive relationship between subject age and network composition. Older subjects will tend to have networks that contain a higher proportion of kin to nonkin helpers than younger subjects.

(H6): There will be a positive relationship between subject gender and network composition. Females will have networks that contain a higher proportion of kin to nonkin helpers than males.

(H7): There will be a positive direct relationship between marital status and network composition. Both male and female subjects who are married will fashion networks that contain a higher proportion of kin to nonkin than their unmarried counterparts.

(H8): There will be a negative direct relationship between employment status and network composition. Unemployed subjects will have networks that contain a higher proportion of kin to nonkin helpers than employed subjects.

(H9): There will be a positive relationship between employment status and network size. Employed subjects will have larger networks than unemployed subjects.

(H10): There will be a positive relationship between physical impairment and network composition. Subjects with secondary disabilities and other health impairments will have networks that contain a higher proportion of kin to nonkin helpers than those less impaired.

(H11): There will be a negative relationship between physical impairment and network size. Subjects with secondary and other health impairments will have larger support networks than those less impaired.
### Table: HYPOTHESES FOR BIVARIATE RELATIONSHIPS WITH PREDICTED DIRECTION OF RELATIONSHIP AND VALUES OF VARIABLES

<table>
<thead>
<tr>
<th><strong>INDEPENDENT VARIABLE</strong></th>
<th><strong>DEPENDENT VARIABLE</strong></th>
<th><strong>PREDICTED DIRECTION OF RELATIONSHIP</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Functional Vision</td>
<td>Network Composition</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>Ordinal Scale</td>
<td>Proportion of Kin to Nonkin</td>
<td></td>
</tr>
<tr>
<td>1 = No Vision to 7 = High Vision</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Functional Vision</td>
<td>Network Size</td>
<td>POSITIVE</td>
</tr>
<tr>
<td>Same as Above</td>
<td>Number of Unduplicated Network Relations</td>
<td></td>
</tr>
<tr>
<td>3. Age of Onset</td>
<td>Network Composition</td>
<td>POSITIVE</td>
</tr>
<tr>
<td>(0 to 38 Yrs.)</td>
<td>Proportion of Kin to Nonkin</td>
<td></td>
</tr>
<tr>
<td>4. Residential Schooling</td>
<td>Network Composition</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>Dichotomous</td>
<td>Proportion of Kin to Nonkin</td>
<td></td>
</tr>
<tr>
<td>1 = Yes 2 = No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Subject Age</td>
<td>Network Composition</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>(20 to 50 Yrs.)</td>
<td>Proportion of Kin to Nonkin</td>
<td></td>
</tr>
<tr>
<td>6. Subject Gender</td>
<td>Network Composition</td>
<td>POSITIVE</td>
</tr>
<tr>
<td>Dichotomous</td>
<td>Proportion of Kin to Nonkin</td>
<td></td>
</tr>
<tr>
<td>1 = Male 2 = Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Marital Status</td>
<td>Network Composition</td>
<td>POSITIVE</td>
</tr>
<tr>
<td>Dichotomous</td>
<td>Proportion of Kin to Nonkin</td>
<td></td>
</tr>
<tr>
<td>0 = Not Now Married 1 = Now Married</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Employment Status</td>
<td>Network Composition</td>
<td>NEGATIVE</td>
</tr>
<tr>
<td>Dichotomous</td>
<td>Proportion of Kin to Nonkin</td>
<td></td>
</tr>
<tr>
<td>1 = Unemployed 2 = Employed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Employment Status</td>
<td>Network Size</td>
<td>POSITIVE</td>
</tr>
<tr>
<td>Same as above</td>
<td>Number of Unduplicated Network Relations</td>
<td></td>
</tr>
<tr>
<td>10. Phys. Impairment</td>
<td>Network Composition</td>
<td>POSITIVE</td>
</tr>
<tr>
<td>1 = V.I. 2 = L.B. W/O Dis. 3 = L.B. With Dis.</td>
<td>Proportion of Kin to Nonkin</td>
<td></td>
</tr>
<tr>
<td>Same as above</td>
<td>Number of Unduplicated Network Relations</td>
<td></td>
</tr>
</tbody>
</table>
The Research Instrument

To obtain the data needed to achieve study objectives, a survey instrument was designed and developed. The instrument contained 132 questions which were subdivided into three distinct sections. Survey items were drawn from seminal studies on the blind and visually impaired. Items were chosen on the basis of their relevance and on their established validity and reliability.

Section One contained a total of 88 questions which were spread across eight yellow-colored legal-sized pages. The 88 questions yielded 157 discrete items of information. Questions contained in the first section obtained values for 17 variables. These included five variables related to blindness and visual impairment (age of onset of blindness, cause of blindness, use of low vision aids, acceptance of visual impairment, ability to read and write braille); ten socio-demographic variables (age, gender, marital status, employment status, occupation, type of school attended, length of residence in the community, race, physical impairment); and two psycho-social variables (mastery and life satisfaction).

In addition, section one contained four multi-item scales which established (1) functional vision, (2) self-sufficiency/ independence, (3) psycho-social coping/mastery, and (4) degree of life satisfaction.

A 13 item health-checklist was also included in the first section. The checklist was used to screen for evidence of secondary disabilities or health conditions that might contaminate the influence of any or all of the independent measures.

To eliminate any possibility of spurious relationships arising from unreported health impairments or disabling conditions, the additional step was taken to cross-check the name of study subjects with State records. Subjects
possessing known infirmities and/or disabilities were identified with the help of this added screening procedure.

The second and third sections contained 26 and 18 questions, respectively. The questions included in the second section were adapted from the Arizona Social Support Inventory Scale, or ASSIS (Barrera, 1981, 1983). The ASSIS was first developed by psychologist Manuel Barrera as part of an effort aimed at mapping and analyzing the networks of pregnant teenagers. Included in the ASSIS are a group of seven questions that elicit a list of up to 35 names of "supportive" and "non-supportive" associates. The name eliciting questions contained in the ASSIS were used to establish network size, to measure the relational content of network ties, and to ascertain the proportion of multiplex ties that existed between the subject, or ego, and his/her network relations. In addition, one question from the ASSIS was used to indicate whether support had been provided by each named network member during the preceding month.

Section Three contained 17 forced-choice, fixed response questions which were adapted from the Network Analysis Profile, or NAP (Sokolovsky and Cohen, 1981). Selected items on the NAP were used to procure an accurate, and complete description of the characteristics of network relations. These items were used to measure the six network variables chosen for examination, namely: (1) network composition, (2) the source of network ties, (3) proximity, (4) duration, (5) frequency of contact with network ties, and (6) closeness or intensity.

As was the case with the ASSIS, all items found on the NAP proved to be easily administered to persons with little or no vision; they were suited to oral administration. In addition, directions were for completion of the survey were uncomplicated, and easily understood. These were important practical considerations strongly tied to instrument construction.
Selection of the ASSIS and the NAP followed a thorough review and critique of at least 30 different social network and social support inventories. The ASSIS was ultimately selected over other instruments on the strength of its reported reliability, and on the basis of its ability to construct whole networks composed of supportive and non-supportive links. The ASSIS is also one of a very few instruments that define network membership by using a comprehensive group of categories of support. Unlike many other social support inventories available for use, the Arizona Social Support Inventory Scale also contains a series of questions that evaluate satisfaction with actual and perceived support (Tardy, 1985; Wood, 1984).

All of the items included in the final field tested version were reviewed and critiqued by a panel of experienced researchers and clinicians. The review panel included experienced clinical social workers (2), a clinical psychologist, and research methodologists (2). Each of the "clinical" panelists were experienced practitioners - two of the three were engaged in work with blind and visually impaired adults - the third is a social work educator and clinician who has worked extensively with young adults. The two methodologists who served as panelists were also educators with extensive experience and expertise in the areas of in survey design, item construction and item validation.

All six panelists were directed to evaluate questionnaire items with regard to relevance to stated research objectives. Panelists were also asked to critique all items with regard validity, utility, conceptual clarity, and ease of administration. The trial instrument was then pilot tested.

Independent and Dependent Measures

To test the relationships expressed in the aforementioned study hypotheses, major constructs were first conceptually defined, and were then operationally
defined.

As noted above, social, demographic and psychological characteristics of blind and visually impaired subjects were initially manipulated as independent measures. Social network variables were grouped and treated as dependent measures.

Table 1 (page 57) presents a complete listing of the 28 variables examined in this study. Table 2 (page 58) presents reliability coefficients for the scales utilized to measure functional vision, level of self-sufficiency/independence, mastery and level of life satisfaction.
# TABLE 1

## Variable List

### I  INDEPENDENT MEASURES  (19 variables)

#### A. Variables related to blindness and visual impairment
1. DEGREE OF VISUAL IMPAIRMENT
2. AGE OF ONSET OF BLINDNESS
3. CAUSE OF BLINDNESS/ PROGRESSIVE–NON–PROGRESSIVE
4. USE OF LOW VISION AIDS
5. ACCEPTANCE OF VISUAL IMPAIRMENT
6. LEVEL OF SELF–SUFFICIENCY (INDEPENDENCE)
7. ABILITY TO READ AND TO WRITE BRAILLE
8. TYPE OF SCHOOL ATTENDED

#### B. Socio-demographic and Psychological variables
9. AGE
10. GENDER
11. MARITAL STATUS
12. EMPLOYMENT STATUS
13. OCCUPATION
14. LEVEL OF EDUCATION ATTAINED
15. LENGTH OF RESIDENCE IN COMMUNITY
* 16. LEVEL OF LIFE SATISFACTION
17. PSYCHO–SOCIAL COPING (MASTERY)
18. RACE
19. PHYSICAL IMPAIRMENT

### II  DEPENDENT MEASURES  (9 variables)

#### C. Social Network Variables (9)
"Structural Variables" (4)

1. NETWORK SIZE
2. NETWORK COMPOSITION
3. DOMINANT SOURCE OF NETWORK TIES
4. PROXIMITY

"Characteristics of Dyadic Links" (5)

5. ROLE MULTIPLEXITY
6. DURATION
7. INTENSITY (CLOSENESS – INTIMACY)
8. FREQUENCY
9. RELATIONAL CONTENT OF TIES (TYPES OF SOCIAL SUPPORT)

   a) Private Feelings   e) Physical Assistance
   b) Material Aid      f) Social Participation
   c) Advice            g) Negative Interactions
   d) Positive Feedback
TABLE 2 - RELIABILITY COEFFICIENTS

<table>
<thead>
<tr>
<th>NAME OF SCALE</th>
<th># ITEMS</th>
<th>CRONBACH'S ALPHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. FUNCTIONAL VISION SCALE</td>
<td>7</td>
<td>.79</td>
</tr>
<tr>
<td>2. INDEPENDENCE/ADL SCALE</td>
<td>9</td>
<td>.83</td>
</tr>
<tr>
<td>3. SATISFACTION WITH LIFE SCALE</td>
<td>5</td>
<td>.81</td>
</tr>
<tr>
<td>4. COPING/MASTERY SCALE</td>
<td>7</td>
<td>.83</td>
</tr>
</tbody>
</table>

Defining and Measuring Blindness

Josephson (1968, 1963) and others (Lukoff et al., 1970; Scott, 1968) have detailed major methodological and procedural problems that inhere in studying blind persons and others possessing rare, or low-incidence handicaps.

Josephson isolated two significant problems that dominate research pertaining to blind and visually impaired persons of all ages. They are: (1) problems associated with defining the condition known as blindness, and (2) difficulties associated with identifying and locating blind/visually impaired subjects (e.g., sampling).

In the preceding chapter specific issues and problems associated with the task of defining blindness were raised and discussed. Legal blindness and functional vision were among the terms defined. Bauman (1969) has noted that the definition of legal blindness creates particular problems for the researcher "because it (the legal definition) embraces people so heterogeneous with regard to vision that they form nothing like one group".

To address deficiencies in the construct of legal blindness, Bauman advanced a functional definition that establishes three mutually exclusive categories in which individuals with vision losses can be located. Her categories include: (1) the set of persons for whom vision is of no practical use in a testing or working situation. In this group Bauman included individuals who are totally blind and
those with light perception. (2) The set of persons for whom vision is helpful
in testing or working situations but who cannot read even moderately enlarged
ink print really effectively. These individuals may distinguish very large print,
such as newspaper headlines. A third category included (3) the set of persons
who use ink print effectively (e.g. those who use large type).

Bauman's scheme allows persons with differing levels of residual vision to
be combined and treated as a single group as long as individuals with residual
vision are distinguished from, and treated separately from persons known to
possess no measurable vision (e.g. light perception, totally blind).

This research employs the legal definition of blindness as well as the
construct of functional vision.

Under Delaware law, a blind person is defined as "one who is totally blind
or who has visual acuity of not more than 20/200 in the better eye with
correction, or whose vision is limited in field so that the widest diameter
subtends an angle no greater than 20 degrees" (Delaware Revised Statutes: 31-
2101). Under the same set of state statutes the diagnosis of blindness can be
made only by designated ophthalmologists or optometrists (Delaware Revised
Statutes: 31-2306). Receipt of services, benefits, or entitlements reserved for
blind persons is contingent upon certification of legal blindness by the Delaware
Division for the Visually Impaired (DVI). Delaware law provides for the inclusion
of the names of all identified legally blind persons on an official state
register (Delaware Revised Statutes: 31-2108). Delaware statutes require the DVI
to assume responsibility for the maintenance of the state register.

In this study legal blindness is established by the Delaware Division for
the Visually Impaired. Functional vision is measured separately, and somewhat
differently. To determine the level of functional vision, a series of seven
questions were read to each subject. The questions identify a series of operations that require different levels of functional vision to achieve. The questions begin with an item (yes-no) that asks "Do you see anything at all?" and proceed with six additional items each specifying a function that requires an increasing amount of residual vision to achieve. The final item asks "Do you have difficulty recognizing faces?".

Five of seven items on the functional vision scale described above were initially developed by Lukoff and Whiteman (1970). Two items were added to the Lukoff-Whiteman scale to enhance the scale's validity. These items were validated in research published by the New York Association for the Blind (Horowitz et al., In press).

Conceptual and Operational Definitions

The following eight pages contain a description of the 28 independent and dependent measures. Each variable has been both conceptually and operationally defined.

I. INDEPENDENT MEASURES (20 VARIABLES)

A. VARIABLES RELATED TO BLINDNESS/VISUAL IMPAIRMENT

1. Degree of Visual Impairment - There are a variety of terms that are used to differentiate the continuum of difficulties that evolve from, which co-occur with, or which occur as the result of a significant reduction or total loss of vision. The terms legal blindness, visual impairment, visual disability, visual handicap and visual disorder are widely utilized. A discussion, complete with definition, of each of the preceding terms can be found in the previous chapter, and elsewhere (Kirchner, 1985).

In this study, degree of visual impairment is defined and measured as functional vision. Functional vision refers to one's ability to employ one's remaining vision (e.g. residual vision) to perform a standard core of everyday functions. To operationalize the variable, Lukoff and Whiteman's (1970) 5-item Likert-type, self-report, vision scale was modified for use (p.264). Two additional measures validated by Horowitz, et. al (in press) were added to the Lukoff-Whiteman scale to enhance the scale's validity. The vision scale used in this study is reproduced below.
NOW I WOULD LIKE TO ASK YOU SEVERAL QUESTIONS ABOUT YOUR VISION:

- Do you see anything at all?
- Do you have light perception—that is, can you tell if a light is on, or whether it is day or night?
- Can you make out moving objects, such as cars, people walking, and so forth?
- Are you able to recognize people you know if they are close enough?
- Can you read regular print?
- Do you have trouble reading a telephone book?
- Do you have difficulty recognizing faces?

2. **Age of Onset of Blindness** - Age of onset of blindness refers to the chronological age when a measurable loss of vision is first detected. In this study, age of onset was measured by a single item question which asked an informant the following: How old were you when you first began to experience loss of sight?

3. **Cause of Blindness** - The etiology of blindness was determined by the response to a single item fixed-response measure. This measure asked the following question: How did you come to be visually impaired, that is, what caused your blindness or visual impairment?

4. **Use of Low Vision Aids** - A low vision aid is a prosthetic device that helps to remediate a functional loss that can be directly linked to visual impairment. The visually impaired person generally uses a low vision aid, such as a cane, guide dog, or glasses, to aid, or to enhance his/her current level of functioning. To ascertain current use of a low vision aid, informants were presented with a single item measure which asked: Do you use any mobility aids, such as a cane, guide dog, glasses or other?

5. **Acceptance of Visual Impairment** - This construct was included in the study to gain a very global indication of each informant’s acceptance/denial of visual disability. The variable was measured by a single self-report item with four fixed-responses.

*QUESTION 75*

Which of the following statements BEST DESCRIBES your attitude about your visual difficulties or visual impairment?

1. It's a fact of life that I have learned to accept.
2. It's an inconvenience.
3. It's a source of frustration.
4. It's possibly the worst thing that could have ever happened to me.

6. **Level of Self-Sufficiency/Independence** - This measure is derived from a multi-item scale that expresses capability in nine functional life-skill areas. The nine areas are routinely included among a group of self-help skills tabbed "Activities of Daily Living" (ADL). The nine tasks are summed to produce an index of self-sufficiency. The areas included in the scale are:
(1) identification of money and ability to make change, (2) obtaining and using bank or credit services, (3) the preparation and cooking of own meals, (4) selection of clothes to wear each day, (5) laundering of dirty clothes or independent arrangement for having clothes professionally laundered, (6) shopping for groceries and personal hygiene items, (7) usage of local recreation facilities, (8) independent travel, and the (9) cleaning of one's own apartment, home, or room without assistance.

7. **Ability to Read and to Write Braille** - Braille is a coded system of raised dots with a six-dot cell. Various configurations represent letters, numbers, symbols, and punctuation. Chase (1986) asserts that an efficient braille reader can develop a facility with braille that permits rapid integration of material. Braille writing requires the use of instruments. Braille can be written on a typewriter-like machine (Braille-writer), or it can be written with a set of tools referred to as slate and stylus. The variable designated "ability to read and to write braille" has been measured by two yes-no type questions which establish whether a young adult informant "knows how to read, and to write braille".

B. SOCIO-DEMOGRAPHIC AND PSYCHOLOGICAL VARIABLES

8. **Age** - Chronological age is determined by subtracting the date of birth from the date of interview. Date of birth and the interview date are both listed on the first page of the interview schedule. The variable of age when obtained is expressed in years, months and days. To facilitate analysis, days and months are rounded up to the next year.

9. **Gender** - Interviewers were instructed to enter the informant's gender under Question 5 on the interview schedule.

10. **Marital Status** - This descriptive nominal variable was determined by asking each informant the following question: What is your marital status? Forced-choice, fixed-responses to the question included the following: (1) single/ never married, (2) now married, (3) widowed, (4) divorced or annulled, (5) separated, (6) life partner (describes gay-lesbian relationships), (7) no response.

11. **Employment Status** - Employment status is a variable that was used to ascertain gainful employment. The measure was included in the study to provide a crude indication of the level of employment/unemployment within the research sample. It was also used as a gross indicator of social integration. The use of employment status as a indicator of social integration is based on a corpus of social research studies which have established an ongoing, positive relationship between employment and social prestige and status. To assess employment status, informants were presented with a simple yes-no question which asked the following: Are you currently employed? Employed informants were asked to volunteer additional information including (1) the number of hours worked per week, and (2) length of time on-the-job. Unemployed informants were asked to identify the reason/cause of unemployment.
12. **Type of Employment** - This important nominal level variable refers to occupational classification (Marsh, 1986). Type of employment is measured by a single forced choice question which contains a list of eight fixed-responses. The responses represent eight broad occupational categories. In the administration of this item all interviewers were instructed to ask the following question: What full-time, part-time, or volunteer work do you do? Interviewers were directed to write the responses they obtained to this question on the answer form when doubt existed around the coding of a particular response. In such cases, which represented 8% of the total, the principal investigator coded the response. Marsh (1986; p.124-127) provides a concise yet thorough discussion of the pitfalls and potential sources of error that inhere in occupational coding and classification.

13. **Type of School Attended** - This nominal, dichotomous variable establishes attendance at a residential school for the blind. Type of school attended is measured by a single, yes-no question which asks the informant the following: Have you attended a residential school for the blind?

14. **Highest Grade Completed** - This variable describes and quantifies the amount of formal education and/or training obtained by an informant. The level of educational attainment was operationalized by establishing the highest grade an informant completed and received credit for.

15. **Length of Residence** - Length of residence in the community is a measure that expresses how much actual time (recorded in months) an informant reports he/she has lived in the town or city which he/she has identified as his/her lawful place of residence.

16. **Level of Life Satisfaction** - This variable measures an informant's appraisal of his/her life satisfaction. The construct and operational definition of "subjective life satisfaction" were developed and tested by Diener, Emmons, Larsen and Griffin (1985). The satisfaction with life construct is measured by a 5 item scale that is intended to reveal a person's own judgement of his/her quality of life. "Because satisfaction with life is often a key component of mental well-being", the creators of the scale profess that their scale "may have clinical utility with a wide range of clients including...adults experiencing mid-life crisis" (p.290). The SWLS has been found to correlate with self-esteem, a checklist of clinical symptoms, neuroticism, and emotionality. The level of life satisfaction scale used by the investigator has been reproduced below.

*QUESTIONS 84 - 88

Directions: I am now going to read you five statements with which you may agree or disagree. After I read each statement, please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree.

- In most ways my life is close to ideal.
- The conditions of my life are excellent.
- I am satisfied with my life.
- So far I have gotten the important things I want in life.
- If I could live my life over, I would change almost nothing.
17. **Psycho-social Coping/ Mastery** — Pearlin and Schooler (1978) have defined coping as "behavior that protects people from being psychologically harmed by problematic social experience" (p.2). In their coping paradigm, Pearlin et al. present a structure of coping that identifies apparatuses that evaluate an imminent or potential threat and which insulate, protect, or deter people from the perceived source of danger. The authors draw a distinction between social resources, psychological resources, and specific coping resources. Pearlin and Schooler define psychological resources as "the personality characteristics that people draw upon to help them withstand threats posed by events and objects in their environment" (p.5). The authors further identify mastery (along with self-esteem, and self-denigration) as psychological resources that constitute "barriers to the stressful consequences of social strain" (p.5). Most pertinent pertinent to this research is their definition of mastery. They define mastery as "the extent to which one regards one's life chances as being under one's own control in contrast to being fatalistically ruled" (p.5).

Pearlin and Schooler developed a seven item instrument which employs a five point Likert-type scale to measure "mastery". The definition and the scale refined by Pearlin and his associate are used in this research to assess psychological coping/mastery. Their scale has been reproduced below.

**QUESTIONS 77 - 83**

Directions: I am now going to read you seven statements with which you may agree or disagree. After I read each statement, please tell me whether you strongly agree, agree, neither agree or disagree, disagree, or strongly disagree.

- I have little control over the things that happen to me.
- There is really no way I can solve some of the problems I have.
- There is little I can do to change most of the important things in my life.
- I often feel helpless in dealing with the problems of life.
- Sometimes I feel that I'm being pushed around in life.
- What happens to me in the future mostly depends upon me.
- I can do just about anything I really set my mind to.

18. **Race** — Bulmer (1986) has stated that race and ethnicity are among the most elusive terms to define clearly in social science research. The use of the term "race" in social science research refers to the way in which members of a society perceive differences between groups in that society and defined the boundaries of such groups, taking into account physical characteristics such as skin color. Bulmer notes that ethnicity is more inclusive than race. He points out that an ethnic group is a collectivity within a larger society having a "real or putative common ancestry, memories of a shared past, and a cultural focus on one or more symbolic elements which define the ethnic group's identity." (Bulmer, 1986; p.54)

In this research race is determined by a single forced-choice, fixed-response question which includes six response categories. The question asks: "What is your racial or ethnic group? Response options include (1) American Indian, (2) Hispanic, (3) Oriental, (4) Black, (5) White, and (6) Other.
19. **Physical Impairment** - Since blindness is a physical condition, it may occur alone or it may occur as one of a group of physical disorders and complications. In cases where blindness is one component of a complex syndrome, it can be expected that the total personality will be affected a great more by the general systemic effect of the disease than by the isolated factor of blindness. To control for the effects of physical disorders and/or health impairments, two experimental controls were utilized. One of the two controls has been described elsewhere. This control involved the use of data furnished by the State of Delaware which restricted the sample to include persons without physical impairments.

The second experimental control involved the use of a 13 item Health-Checklist which was administered to each subject as part of the social network/social support interview. The checklist identified 12 different physical and/or mental disorders and required a notation when a subject indicated he/she had one of the specified disorders/physical impairments/disabilities.

The disorders/physical impairments included in the screening checklist included: (1) seizure disorders, (2) learning problems, (3) cancer, (4) cerebral palsy, (5) multiple sclerosis, (6) diabetes, (7) polio, (8) hearing impairment/hearing loss, (9) difficulty walking, (10) difficulty speaking, (11) loss of one or more limbs, (12) serious emotional difficulties/alcoholism, (13) Other disorders/physical impairments/disabilities, or mentally or physically limiting conditions.

II **DEPENDENT MEASURES (9 VARIABLES)**

A. **STRUCTURAL CHARACTERISTICS OF WHOLE NETWORKS**

1. **(Actual) Network Size** - As the term implies, actual network size refers to the total number of persons who constitute ego's network (Fischer, 1982). In this study, network size is represented by an index (from 1 to 35) which represents an unduplicated count of persons who have been identified by the focal person as a supplier/provider of one or more categories of social support (Barrera, 1983).

2. **Network Composition** - Network composition refers to the roles, and/or type of relationships that identified network participants occupy vis a vis the focal individual. Besides kinship, associates can be differentiated in various ways - on the basis of the social situation, role, or context in which the respondent knows them (Fischer, 1982). In this study, network composition has been defined and analyzed with respect to kinship. Composition is discussed in terms of a kin-nonkin dichotomy.

3. **Dominant Source** - A concept similar and related to network composition is the notion of dominant source of network links. The construct refers to either the physical context that provides the opportunity for initial contact/exchange, or to a specific social context that confers a sense of meaning to a series of ties (Fischer, et al., 1977; Fischer, 1982). Kinship, childhood, neighborhood, work and voluntary clubs and associations are examples of dominant sources which can give rise to more than one network relation.
4. **Dispersion** - Mitchell and Trickett (1980) have defined network dispersion to mean "the ease with which a focal person can make contact with members of his/her network. Dispersion is typically measured in terms of geographical proximity.

**B. CHARACTERISTICS OF DYADIC LINKS**

5. **Role Multiplexity** - The term role multiplexity (multi-dimensionality) denotes the number of functions served by a relationship. If a relationship serves only one function, it is unidimensional. If it serves more than one function, it has multiplex strands, or is considered multi-dimensional. In this study, role multiplexity is measured by counting each of the different support functions that are assumed by each and every network node.

6. **Duration** - As it is used by Fischer et al. (1977), the term duration refers to the temporality of a relationship. The duration of a bond reflects the amount of experience shared by two people. The concept represents how successfully a tie has endured disruption and competition coming from other sources. Mitchell and Trickett's (1980) use of the term "durability" closely corresponds to Fischer's usage of duration. Mitchell and Trickett have defined durability as "the degree of stability of the individual's links with others in his/her own network". In this study, duration is measured by a single open-ended question which queries the informant on how long he/she has known each of persons listed as providers of one or more categories of support. The length of time indicated is expressed in the form of "number of months known".

7. **Intensity** - The intensity, or strength of a dyadic link refers to "the extent to which a focal person experiences obligations, or otherwise feels free to exercise the rights implied in a linkage with another person" (Pfouts and Safier, 1981). In this study, the intensity (closeness) of a given tie is measured through a Likert-type scale. The measure calls upon the informant to choose one of six fixed-responses which "best describes how close the informant feels" to each of the individuals the informant has identified as his/her network confidants.

8. **Frequency** - The frequency of contact refers to the actual number of times an informant has been involved in a transaction with a given network confidant (Pfouts and Safier, 1981). In this study, frequency of contact has been determined by totalling the responses to three questions that measure different types of attempted communication. The separate survey items that determine frequency of contact provide estimates of (1) the number of face to face contacts with identified network participants (avg. visits), (2) the number of letters (braille or typed), and (3) the number of voice to voice contacts (e.g. phone calls) that occur among ego and each of his/her identified network confidants (avg. talk). There are two major self-report techniques that can be used to establish frequency of contact. One involves using a question or series of questions that measure the number of contacts attempted within a specific period of time (e.g. How many times have you telephoned (substitute name) during the last 5
days?). A second technique, which is more open-ended, involves the use of question which requires the subject to establish his/her own temporal boundaries - (e.g. How frequently do you telephone, or do you receive telephone calls from (substitute name)? The second technique was used in this study to measure frequency of contact.

9. The Relational Content of Ties - As previously noted, the relational content of a network tie refers to the meanings which persons in a network attribute to their relationships. Relational content, or content, is frequently delineated by differentiating ties based on factors such as kinship, friendship, neighborhood association, professional help and occupation. Another approach -the one used here, focuses on the specific function of network ties. The procedures used in this research to ascertain the content of ties were adapted from work done by Barrera (1981, 1983). Professor Barrera's methodology has been described and explained elsewhere in this paper. His approach to determining the content of network ties involves the use of seven questions that generate the names of persons who regularly provide one or more distinct types of social support (viz. emotional sharing, material aid, advice, positive feedback, and companionship). Others have used a form of interview technique which prompts the informant to identify those persons with whom ego feels the closest or most intimate. The informant is then asked to identify the nature of exchanges that come to mind when each intimate is named.

Barrera's taxonomy of social support also provides for the identification and inclusion of persons who may be problematic. The content of the ties binding ego to such persons is labelled by Barrera as a "negative interaction".

Barrera's procedures for evaluating relational content also incorporate measures that distinguish between perceived support and actual support rendered. His methodology also furnishes a means of assessing satisfaction with support. This data was collected and analyzed but will not be presented in this paper as it exceeds the scope of the study originally proposed.

The questions used to ascertain relational content of ties are listed below.

QUESTION 89 (Private Feelings): If you wanted to talk to someone about things that are very personal and private, who would you talk to?

QUESTION 93 (Material Aid): Who are the people you know that would lend or give you $25.00 or more if you needed it, or would lend or give you something (a physical object) that was valuable?

QUESTION 97 (Advice): Who would you go to if a situation came up when you needed some advice?

QUESTION 101 (Positive Feedback): Who are the people that you could expect to let you know when they like your ideas or the things that you do?
QUESTION 105 (Physical Assistance): Who are the people that you could call on to give up some of their time and energy to help you take care of something that you needed to do - things like driving you someplace you needed to go, or, helping you do errands, or going to the store for you... things like that?

QUESTION 109 (Social Participation): Who are the people that you get together with to have fun or to relax?

QUESTION 113 (Negative Interaction): Who are the people that you can expect to have some unpleasant disagreements with or people that you can expect to make you angry and upset?

Description of the Study Location

An attempt was made to gain access to the entire population of legally blind and visually impaired young adults in Delaware. It was desirable to locate a sufficiently large and fully accessible sampling frame; for reasons to be discussed, the decision was made to locate and conduct the present study within the geographical confines of the State of Delaware.

Delaware is one of 27 U.S. states that provides for the registration of all identified legally blind persons who reside within its boundaries. In 1989, the Delaware blindness registry contained the names of 1,182 legally blind persons. This count included 262 men and women (with and without secondary handicaps) between the ages of 18 and 44 years.

Delaware is also the second smallest of the 50 states occupying a mere 2,057 square miles of territory. Because it is small and offers an excellent system of highways and roads that criss-cross the state, any location within the state can be reached within three hours of travel time. This makes the state ideally suited for the conduct of social science research.

Delaware also possesses a mixture of urban, suburban, and rural communities and a population base that is diverse with respect to age, race, religion and occupation. Each of the state's 263 legally blind young adults resides within
a seventy five mile radius of Dover, the state capital; and within a one hundred and twenty five mile radius of Wilmington, which is Delaware's largest city and only urban center.

**Procedures and Sample Selection**

Subjects were recruited from among two hundred ninety-eight potential subjects. The study sample (N = 55) consisted of thirty eight legally blind young adults without secondary disabilities, or "other health impairments" (physically impaired) (n = 38); eleven legally blind men and women with secondary disabilities (n = 11); and six visually impaired men and women without secondary disabilities, or "other health impairments".

Subjects were solicited from: (1) the pool of all blind and visually impaired young adults known to self-help groups and private agencies serving blind and visually impaired Delawareans, and, (2) from the pool of all identified legally blind young adult Delawareans.

**Blind and visually impaired subjects** were obtained with assistance from the Delaware Association for the Blind (DAB), a private, not-for-profit agency that services blind and visually impaired Delawareans of all ages. Additional blind and visually impaired subjects were supplied by local clubs and organizations that advocate for blind and visually impaired persons. These organizations included the Delaware Association of Blind Athletes (DABA), and the Delaware Chapter of the National Federation of the Blind (NFB).

**Legally blind subjects** were located with assistance from the Delaware Division for the Visually Impaired (DVI). Legally blind subjects were solicited from names included on the Delaware Blindness Registry. The registry contains the names of all identified legally blind Delawareans, birth to death. In March, 1989, the Delaware blindness registry identified 263 men and women 18 to 44 years
as being legally blind. 134 of the 263 young adults (51%) in this group were known to possess a secondary handicap, or to be "other health impaired". One hundred twenty-nine of two hundred sixty-three persons listed on the blindness registry were certified by state authorities as being free of either a secondary handicap or chronic health condition.

Various efforts, to be described later in this section, were made to contact each of the 129 young adults without secondary disabilities. In the end, 38 of the 129 legally blind young adults included on the Delaware blindness registry (30%) volunteered to take part in the study.²

**Subject Recruitment**

Recruitment for subjects took place during an eight month period extending from July, 1988 to April, 1989. As noted previously, recruitment efforts involved the Delaware Association for the Blind, the Delaware Division for the Visually Impaired, and various clubs and organizations that sponsor activities, or which otherwise promote the interests of blind and visually impaired Delawareans.

Solicitation for subjects commenced in the summer of 1988 with the mailing of a large print (15 point type) letter to 169 visually impaired Delawareans. Letters describing the proposed network study were mailed by the Delaware Association for the Blind to prospective subjects.

In addition to a description of the study, each letter contained information pertaining to subject rights and informed consent as required by Columbia University guidelines and New York State law. The invitation to participate in the study was written by the principal investigator and was printed under the agency letterhead. A pre-addressed, postage-free reply envelope accompanied each letter.
The first letter generated a total of 25 responses; 3 of which were refusals. A follow-up letter generated an additional 8 replies. The follow-up letter was mailed to 141 non-respondents approximately one month after the initial mailing. The second letter was also set in large type, and was reproduced on stationery bearing the DAB letterhead.

The second letter differed from the first in two respects. Firstly, it was about one-half as long, and secondly, it contained provision for telephone response. Respondents were given the choice of phoning the Delaware Association, or phoning a private second line. The private line was made available to persons who desired to conceal interest and/or possible participation in the study from DAB personnel in the belief that such knowledge might jeopardize future service provision.

Another potential barrier unrelated to the matter of privacy/confidentiality was also directly addressed by the telephone response option. The telephone response option made it easier for prospective subjects to volunteer for the study. The telephone option made respondents less dependent upon others to complete printed forms and to mail them. This can be an important consideration in the life of a person with a visual disability, who may feel more independent and competent using the phone than he/she may feel when using the mails.

The second letter generated eight replies. This response brought the study sample to 33 persons. None of the eight respondents used the telephone reply option.

Two complementary promotional techniques were initiated along with the direct mail campaign. One technique involved using the Delaware Association monthly newsletter, which goes out to all clients, to publicize the study, and
to ask for volunteers.

Within days of the mailing of the second letter, the Delaware Association included a notice in its October, 1988 newsletter, which described the social network study and which appealed for volunteer subjects.

This notice was supplemented by an appeal voiced by the Executive Director of the Delaware Association, which went out on audiotapes that were distributed to all subscribers to the Associations' taping program.

It is not possible to establish the effect, if any, that either the newsletter or the taped notice had upon the direct mail campaign.

Subject recruitment efforts also involved outreach to local clubs/organizations with direct access to blind and visually impaired adults. Agency staff helped the principal investigator to identify key clubs/organizations and their officers. Telephone contact with the President of the Delaware Association of Blind Athletes (DABA), and the President of the Delaware Chapter of the National Federation of the Blind resulted in the location and identification of five subjects.

Efforts to locate and solicit subjects continued into the Winter of 1988, at which time telephone calls were made to non-respondents. The calls were made by two DAB staffers, mostly during late afternoon, and early evening hours. The staffers were both enthusiastic about the project and were committed to its successful completion. Both were visually impaired, who were active, influential persons with extensive personal networks that included a cross-section of blind and visually impaired young adult Delawareans from throughout the state.

Telephone calls were the second most effective means of obtaining study subjects. One hundred 41 phone calls made by the DAB staffers added 12 subjects to the sample pool.
The final effort made to recruit subjects for the study involved the Adult Services Unit of the Delaware Division for the Visually Impaired.

The last of three letters was mailed out under the signature of the Director of Adult Services for the DVI to 92 legally blind men and women between 18 and 44 years of age. To encourage increased response to the letter, a postage-free, pre-addressed large print postcard accompanied each large print letter.

This procedure generated eight responses— a total that included five volunteers and three refusals. The DVI letter brought the final total of study subjects to 55.

**Interviewer Selection and Training**

Interviews were conducted by a staff of seven part-time research assistants. Project staff were recruited by Career Planning and Placement counselors from Goldey Beacom College, and the University of Delaware, and by placement counselors employed by the Wilmington Senior Volunteer Center. Applicants were selected on the basis of prior work experience, training, and on the results of their performance in an interview which evaluated such factors as: demonstrated ability to understand and relate to project goals and objectives, ability to listen and to communicate effectively in one to one situations, empathy and consideration for others. All staff were college graduates who had completed at least one course in interviewing, or in social research methodology. A valid drivers' license and access to a motor vehicle were qualification were also basic requirements for employment.

Four men and three women were hired and trained as research staff during the months of June and July of 1988. Five of seven remained with the project to its final completion in mid-April of 1989. Project staff ranged in age from 23 to 70 years of age. Six of seven were single. Six of the seven were caucasian;
one staff member was black. Three of six possessed graduate degrees in the fields of psychology, higher education, and social work, respectively. Every project staff member held a permanent full-time job while working on this project.

Because all field research personnel were required to independently schedule interviews and to provide their own transportation to the homes of study subjects, a valid drivers' license and access to a motor vehicle were necessary. In addition, the research instrument was only available in print and had to be completed in pen or pencil. For these reasons, it was not possible to recruit visually disabled interviewers.

Two of seven interviewers were natives and long-time residents of Delaware. Five others were legal residents who had lived in-state for a period of at least two years.

Research staff were paid on the basis of completed interviews. Staff also received compensation for attending and participating in mandatory training and supervision sessions.

Additional compensation was allotted for interviews that were conducted in Southern Delaware. The adjustments in fee reflected the additional time for transportation and extra expense incurred for travel to locations fifty or more miles from the Wilmington-Newark (Delaware) metropolitan area.

To insure uniform administration of the research instrument, research staff were provided with eight hours of paid, mandatory training. Additional steps were taken to monitor field operations so that the highest quality data could be procured throughout the protracted data collection phase.
Socio-demographic Characteristics of Study Sample

1. Age and Gender

Respondents for the present research were 25 males (45%) and 30 females (55%) who ranged from 20 to 50 years of age. Approximately two thirds of the 55 subjects were between 35 and 50 years of age; the remaining 36% of the subjects fell within the 20 to 34 year age category. The mean age of all respondents was 36.1 years with a standard deviation of 6.45.

2. Race, and Marital Status

The study sample was predominantly white. Seventy eight percent of the informants (43 persons) were white; 18% were black (10), and 4% (2 subjects) were hispanic. Fifty one percent (28) of all subjects were married. Twenty percent (11) of the 27 single, divorced, or widowed young adults in the sample professed to live alone.

3. Education

Eighty nine percent (47) of the sample claimed to have completed 12 or more years of formal schooling (46% received some sort of post-graduate or advanced training). Eleven percent (6) of those interviewed completed fewer than 12 years of formal education. One quarter (14) of 55 subjects attended a residential school for the blind.

4. Self-sufficiency/ Independence

To assess the range of life skills (ADL) possessed by each of the 55 men and women in the study sample, individuals were required to respond to a series of questions which were tabulated and transformed into an index of self-sufficiency. The mean score achieved by survey participants was 22.2 with a computed standard deviation of 3.6. Scores ranged from a minimum of 9.00 to a maximum of 27.00.
5. **Employment Status**

The unemployment rate among the sample respondents was characteristically high. Forty four percent of those interviewed were unemployed. Fifty eight percent (32 subjects) of the survey respondents claimed to be working. Sixty six percent of those with jobs (21 subjects) worked 37.5 or more hours per week. Eleven persons were under-employed.

One-half of those with jobs (16 subjects) were employed as salespersons, skilled or semi-skilled laborers or technicians. Over one-sixth (6 subjects) were employed as professionals, or worked in a white-collar business occupation. Another sixth of those with jobs worked in sheltered work settings.

6. **Length of Residence in the Community**

The young adults volunteering for this study tended to be long-time residents of their respective communities. Subjects averaged 121.67 months/10 years (SD = 132.29/11 years). They resided in 18 different communities located throughout Delaware.

The distinguishing features of the social networks of sample respondents are presented in the next chapter.
ENDNOTES

1. The 298 potential subjects referred to here represent the names of all blind and visually impaired young adults (minus persons with identified secondary handicap) included on the client list of the Delaware Association for the Blind (169) plus the group of identified legally blind young adults (without secondary disabilities) who are listed on the Delaware Blindness Registry (129).

2. Because legal blindness is a relatively rare condition affecting fewer than 2% of all Americans (Goldstein, 1972), locating large groups of blind persons is often difficult. Schein and DeSantis (1986) illustrate the problem by way of the following example.

If one surveys 5,000 persons drawn at random from the general population, then one would expect to find only ten blind persons among them. Those ten would not be representative of the blind population, nor would they be sufficient for most statistical purposes. Yet a sample of 5,000 persons is a large undertaking (Schein & DeSantis, 1986; p.517).

To locate persons with low incidence conditions, Sudman advises using controlled lists or master samples. This view is supported by Schein and DeSantis who present a strong case for the use of blindness registers in social research and program planning. Their confidence in the register is conditional. To be considered valid and reliable a register must meet each of three conditions. They are: (1) information contained in a register must be gathered in accordance with well-defined, uniform procedures. (2) Consistent effort must be made to include information about all persons in the register's jurisdiction who meet specific criteria, and (3) information must be collected and maintained consistently for a period of years.

Critics of the register contend that all registers are incomplete, or perhaps, even worse; that they are sloppy and inaccurate. Critics allege that registers contain old information; that they are rarely and infrequently brought up to date. A second charge alleges that registers are biased; that they overidentify successful, well-adjusted and poorly adjusted individuals - those who are most likely to come to the attention of service providers. Critics contend that registers underreport the number of individuals thought to be less successful - and less visible - those who Scott has tabbed "the hidden blind".

Schein and DeSantis argue that registers that are rigorously maintained in accordance with the conditions listed above are valid, reliable sources of information that remain the most accurate and cost effective means of locating large representative clusters of legally blind study subjects.

3. Although considerable thought was given to including persons with visual impairments among the team of prospective interviewers, the decision was ultimately made to select interviewers from the pool of persons who responded to employment notices. Since one of the requirements for work was possession of a valid drivers license, and access to a motor vehicle, legally blind persons were effectively disqualified. The small print questionnaire and detail contained
in the questionnaire also made it particularly difficult for a visually impaired person to read the instrument and to register answers in the appropriate spaces without considerable practice.

4. 55% of those sharing quarters with another lived with either a spouse or live-in companion. 31% lived with children, with friends, and/or with relations other than parents. 14% of the single subjects lived with their parents. As a side note, 60% of those queried reported that both of their parents were alive; 27% of the 55 study subjects identified one living parent. 13% of the young adults participating in the study reported the loss of both parents.
CHAPTER FOUR
RESULTS

Overview

This chapter presents the results of a cross-sectional survey administered to 55 legally blind and visually impaired young adult Delawareans during the fall and winter of 1988-89. Research objectives previously discussed are used in this chapter as a guiding framework for presenting study results.

The chapter begins with a discussion of six variables that capture the visual characteristics of the study sample. They include: (1) functional vision (degree of visual impairment), (2) the use of low vision aids, (3) age of onset of blindness, (4) cause of blindness (progressive - non-progressive etiology), (5) the chance of vision recovery, (6) acceptance of blindness, and, (7) knowledge of braille.

Attention then moves to discussion of three multi-item scales used to assess the psycho-social adaptation of subjects. The scales were used to assess: (1) adaptive behavior (Activities of Daily Living) (2), psycho-social coping (Mastery), and (3) life-satisfaction (Satisfaction with Life).

The remainder of the chapter contains a detailed description of the characteristics of the social support networks delimited by the fifty five men and women subjects. This chapter also includes an analysis of data which describe salient characteristics of supportive and non-supportive network links. The analysis presented in this chapter also extends to examination of the content of network links.

Analysis proceeds within a framework examining network form and function. Discussion centers around four structural network variables and four interactional variables. They are: (1) network composition, (2) the dominant
source of network relations, (3) network size, (4) proximity, (5) the content of network ties, (6) mean duration of network links, (7) intensity, and (8) role multiplexity.

In keeping with study objectives, effort is also made to identify the environments and social contexts that contribute to the formation of friendships. The chapter concludes with an examination of salient relationships found to exist among designated independent and dependent measures.

A. INDEPENDENT MEASURES

Characteristics of the Study Sample

1. Functional Vision - The study sample showed considerable variability with respect to reported functional vision.

Close to half of the respondents reported visual capabilities placing them in a high vision category. Twenty six (48%) young adults professed to be able to read regular print, to read a telephone book, or to have enough vision to enable them to recognize the faces of others.

Thirty three percent (18 subjects) possessed low vision. This group of subjects indicated that they were able to discern moving objects, or to recognize people they knew from afar.

Twenty percent of the sample (11 subjects) reported having no useable vision. These individuals could see nothing at all, or in some instances retained simple light perception.

The sample recorded a mean score of 3.69 (SD = 2.07) on the seven-item functional vision scale. Scores on the vision scale ranged from zero - indicating a "no-vision" condition - to a maximum score of eight ("high-vision"), indicating a capacity to recognize familiar and unfamiliar faces.
2. Use of Low Vision Aids - To overcome navigational barriers, persons with visual impairments often rely on a range of implements and devices that are known as low vision aids. Low vision aids include such implements as the cane, used to assist the visually impaired person in walking; the guide or "seeing-eye" dog, used to aid in navigation; and such common items as corrective lenses.

Within the study sample, 44 of 55 persons (80%) reported using one or more low vision aids. The aid most widely used by young adult respondents was the walking cane. Canes were used by close to one third of the sample (32.7%).

Glasses were the second most widely used low vision aid. Twenty three percent of the sample wore corrective lenses. Guide dogs were used by 12.7% of the sample.

Twenty percent of the young adults used no low vision aids.

<table>
<thead>
<tr>
<th>TABLE 4 USE OF LOW VISION AIDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE</td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td>Uses No Aid</td>
</tr>
<tr>
<td>One or More</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>
3. **Age of Onset of Blindness** - The age of onset of blindness among subjects ranged from birth to 34 years of age. Two-fifths, or forty percent (22 subjects) of all subjects experienced their onset of vision loss within the first two years of their lives. Twenty nine percent (16 subjects) experienced their onset of vision loss at 6 to 17 years of age. Thirty one percent began to lose their vision from 18 to 34 years of age.

The mean age of onset of vision loss for the sample was 10.2 years (SD = 10.67).

<table>
<thead>
<tr>
<th>VALUE</th>
<th>NUMBER</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 2 YRS.</td>
<td>22</td>
<td>40%</td>
</tr>
<tr>
<td>6 - 17 YRS.</td>
<td>16</td>
<td>29%</td>
</tr>
<tr>
<td>18 - 34 YRS.</td>
<td>17</td>
<td>31%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>55</td>
<td>100%</td>
</tr>
</tbody>
</table>

4. **Cause of Blindness/ Progressive v. Non-Progressive Etiology** - The causes of blindness reported by subjects in descending order of their occurrence were: injury, retrolental fibroplasia, retinitis pigmentosa, glaucoma, and macular degeneration, respectively. Subjects also attributed their blindness/visual impairments to a wide range of causes such as birth complications, tumors, ulcers, cataracts, diabetes, cerebral palsy and multiple sclerosis. The cause of blindness could not be determined for six subjects on the basis of information they provided. Table 6 presents a summary distribution of the causes of blindness reported by subjects. In addition, Table 6 contains a characterization of each cause as "progressive" (e.g.; degenerative) or as "non-progressive". This characterization differentiates individuals who experience gradual deterioration of their vision (e.g.; macular degeneration, retinitis pigmentosa) from those
who have conditions that result in total blindness, or in conditions that produce a vision loss that eventually stabilizes and produces no further decline in visual acuity.

Approximately 42% (23) of the sample lost their sight as the result of a disease, illness, or medical condition that is degenerative.¹

<table>
<thead>
<tr>
<th>TABLE 6</th>
<th>CAUSE OF BLINDNESS/ PROGRESSIVE–NON–PROGRESSIVE ETIOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE</td>
<td>TOTAL</td>
</tr>
<tr>
<td>Injury</td>
<td>11</td>
</tr>
<tr>
<td>Retrolental Fibroplasia</td>
<td>9</td>
</tr>
<tr>
<td>Retinitis Pigmentosa</td>
<td>8</td>
</tr>
<tr>
<td>Glaucoma</td>
<td>5</td>
</tr>
<tr>
<td>Macular Degeneration</td>
<td>4</td>
</tr>
<tr>
<td>Other: C.P., M.S.</td>
<td>4</td>
</tr>
<tr>
<td>Congenital</td>
<td>4</td>
</tr>
<tr>
<td>Diabetes</td>
<td>1</td>
</tr>
<tr>
<td>Cataracts</td>
<td>1</td>
</tr>
<tr>
<td>Ulcers</td>
<td>1</td>
</tr>
<tr>
<td>Brain Tumor</td>
<td>1</td>
</tr>
<tr>
<td>Cannot Be Determined</td>
<td>6</td>
</tr>
<tr>
<td>TOTAL</td>
<td>55</td>
</tr>
</tbody>
</table>

5. Chance of Vision Recovery - Eighty three percent of all respondents indicated that they anticipated little or no chance of recovering their lost vision.

<table>
<thead>
<tr>
<th>TABLE 7</th>
<th>CHANCE OF RECOVERING VISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE</td>
<td>NUMBER</td>
</tr>
<tr>
<td>Exc., Good, Fair</td>
<td>3</td>
</tr>
<tr>
<td>Poor chance</td>
<td>6</td>
</tr>
<tr>
<td>No chance</td>
<td>45</td>
</tr>
<tr>
<td>TOTAL</td>
<td>54</td>
</tr>
</tbody>
</table>
6. **Acceptance of Vision Loss** - A majority of subjects expressed an acceptance of their visual impairment/blindness. Seventy-five percent characterized their visual impairment as "a fact of life" that they had "learned to accept". Six percent identified their condition as "an inconvenience". Sixteen percent depicted their visual impairment as "a source of frustration". Only 2 of 55 (4%) described their sight loss as "probably the worst thing that could have ever happened" to them.

<table>
<thead>
<tr>
<th>TABLE 8  ACCEPTANCE OF BLINDNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE</td>
</tr>
<tr>
<td>It's a fact of Life</td>
</tr>
<tr>
<td>It's an Inconvenience</td>
</tr>
<tr>
<td>It's a source of Frustration</td>
</tr>
<tr>
<td>It's probably the Worst...</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

7. **Ability to Read and Write Braille** - A relatively large proportion of the young adults in the sample - forty percent - professed to be able to read and write braille.

<table>
<thead>
<tr>
<th>TABLE 9  KNOWLEDGE OF BRAILLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>VALUE</td>
</tr>
<tr>
<td>Can Read &amp; Write Braille</td>
</tr>
<tr>
<td>Can NOT Read &amp; Write Braille</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>
8. **Level of Self-Sufficiency/Independence** - The majority of subjects indicated that they were able to care for themselves day in and day out. Respondents recorded a mean score of 22.18 (SD = 3.601) on a self-sufficiency measure which assessed capabilities in a range of important activities of daily living (ADL). These included using bank and credit services, identifying money and making correct change, preparing and cooking meals, laundering clothes, independent travel, housecleaning, shopping, dressing and using recreational facilities in the community. Possible scores on the ADL scale ranged from 0.0 to a maximum 27.0 points. Scores achieved on the ADL by subjects varied from 9.0 to 27.0. A comparison of the mean scores achieved by 38 legally blind subjects with 11 physically impaired respondents was significant at the .01 level.

<table>
<thead>
<tr>
<th>TABLE 10 LEVEL OF SELF-SUFFICIENCY (ADL SCALE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEGALLY BLIND (n = 38)</td>
</tr>
<tr>
<td>------------------------</td>
</tr>
<tr>
<td>MEAN SCORE</td>
</tr>
<tr>
<td>STANDARD DEV.</td>
</tr>
<tr>
<td>RANGE</td>
</tr>
<tr>
<td>T-Test</td>
</tr>
</tbody>
</table>

9. **Mastery** (Psychosocial Coping) - Pearlin and Schooler (1978) have defined mastery as "the extent to which one regards one's life chances as being under one's own control in contrast to being fatalistically ruled" (Pearlin and Schooler, 1978; p.5). In this study, a seven item, five point Likert-type scale was used to assess coping/mastery. The lowest achievable was zero—the highest possible score was 35. Scores obtained by subjects in this study varied from 13 to 35 points. The mean score earned was 23.4 with a standard deviation of 5.3.
A comparison of the group means for legally blind and physically impaired subjects was not statistically significant.

**TABLE 11  PSYCHOSOCIAL COPING (MASTERY SCALE)**

<table>
<thead>
<tr>
<th></th>
<th>LEGALLY BLIND (n = 38)</th>
<th>PHYSICALLY IMPAIRED (n = 11)</th>
<th>TOTAL GROUP (N = 55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAN</td>
<td>23.7</td>
<td>22.5</td>
<td>23.4</td>
</tr>
<tr>
<td>STANDARD DEV.</td>
<td>5.5</td>
<td>5.6</td>
<td>5.3</td>
</tr>
<tr>
<td>RANGE</td>
<td>13.0 - 35.0</td>
<td>15.0 - 30.0</td>
<td>13.0 -35.0</td>
</tr>
<tr>
<td>T-Test</td>
<td>t = .66</td>
<td>p = .51</td>
<td></td>
</tr>
</tbody>
</table>

10. **Level of Life Satisfaction** - Study subjects expressed general satisfaction with their lives as indicated by the mean score obtained for the sample on the five-item Satisfaction With Life Scale (SWLS). Individual scores on the SWLS were normally distributed with a recorded mean of 17.0 (SD = 4.9). The lowest possible score on the SWLS was zero. The maximum score was 25.0. Scores obtained by respondents ranged from 8.0 to 25.0.

T-tests comparing the group means of legally blind and physically impaired subjects on the SWLS failed to reach statistical significance.

**TABLE 12  LEVEL OF LIFE-SATISFACTION (SWL SCALE)**

<table>
<thead>
<tr>
<th></th>
<th>LEGALLY BLIND (n = 38)</th>
<th>PHYSICALLY IMPAIRED (n = 11)</th>
<th>TOTAL GROUP (N = 55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAN SCORE</td>
<td>17.32</td>
<td>16.00</td>
<td>17.02</td>
</tr>
<tr>
<td>STANDARD DEV.</td>
<td>5.30</td>
<td>5.04</td>
<td>4.94</td>
</tr>
<tr>
<td>RANGE</td>
<td>8.00-25.00</td>
<td>8.00-25.00</td>
<td>8.00-25.00</td>
</tr>
<tr>
<td>T-Test</td>
<td>t = .73</td>
<td>p = .47</td>
<td></td>
</tr>
</tbody>
</table>
B. DEPENDENT MEASURES

Characteristics of the Social Support Networks of Study Subjects

(1) NETWORK COMPOSITION

a. Kin / Non-kin

In a previous section the procedures used to elicit the names and identities of network relations were explained. These procedures generated a list of 664 persons who provided one or more types of social support (social companionship, material aid, affirmation, physical assistance, advice and affection) to the young adults constituting the study sample.

Among the major propositions tested in this study are notions pertaining to the composition of the support networks which are deliberately constituted by young adults with visual impairments. Studies concerned with the psychosocial development and adjustment of persons born with and developing visual impairment in later life, and other literatures concerned with life-span development and social networks suggest that individuals with disabilities rely more on their relatives for help as they age than non-disabled persons (Kazak and Wilcox, 1984). If this premise were true, the social support networks of visually impaired young adults would contain a high proportion of kin to nonkin. This proportion would increase with visual and physical impairment. It is also reasonable to predict the existence of a positive relationship between the degree of visual and physical impairment and network size (e.g.; increased levels of impairment are associated with reduced network size). If level of impairment were correlated with smaller networks with fewer helpers to provide a panoply of services, one would logically expect to find helpers assuming a larger helping role. This would be manifested in the increased proportion of multiplex roles assumed by the associates of severely impaired young adults. Role multiplexity
would increase in relationship to the level of physical and visual impairment
and in proportion to network size.

Univariate analysis of aggregate network data generally appear to support
the notion that young adults with significant visual impairments fashion networks
that contain a high proportion of kin. Bivariate analyses to be discussed,
however suggest that functional vision level is not significantly linked to
network composition.

Individuals characterized as "friends" constituted the largest category of
network links. Friends accounted for 22% of the 664 total number of helpers who
had been identified by all 55 of my blind and visually impaired subjects. Parents
constituted 20% of the total of all supporters. Spouses represented 18% of all
supporters; while siblings represented 13% of the total group of identified
helpers. Other relations were represented in the following percentages:
professionals (6%), in-laws (5%), neighbors, other extended family members (e.g.
grandparents, aunts, uncles, cousins, nieces and nephews), and co-workers (4%).

<table>
<thead>
<tr>
<th>RELATIONSHIP TO EGO</th>
<th># OF NETWORK RELATIONS</th>
<th>% OF TOTAL NETWORK RELATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRIEND</td>
<td>148</td>
<td>22.3</td>
</tr>
<tr>
<td>PARENT</td>
<td>134</td>
<td>20.2</td>
</tr>
<tr>
<td>SPOUSE/COMPANION</td>
<td>123</td>
<td>18.5</td>
</tr>
<tr>
<td>SIBLING</td>
<td>89</td>
<td>13.4</td>
</tr>
<tr>
<td>PROFESSIONAL</td>
<td>42</td>
<td>6.3</td>
</tr>
<tr>
<td>IN-LAW</td>
<td>37</td>
<td>5.6</td>
</tr>
<tr>
<td>NEIGHBOR</td>
<td>36</td>
<td>5.4</td>
</tr>
<tr>
<td>OTHER EXT. KIN</td>
<td>31</td>
<td>4.7</td>
</tr>
<tr>
<td>CO-WORKER</td>
<td>24</td>
<td>3.6</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>664</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>
While friends were identified most often as potential supports, family members actually dominated the networks of blind and visually impaired men and women who participated in my study. Supportive ties to relatives (parents, siblings, spouses, in-laws, aunts, uncles, cousins, grandparents, nephews, nieces, etc.) accounted for over three-fifths (62%) of all network links. By contrast, nonkin (co-workers, neighbors, professionals, and friends) constituted 38% of total network ties.

b. Age

Age helps, in part, to explain the configuration of the support networks of study subjects with respect to composition. Men and women 18 to 44 years compose 54% of the total number of named network relations. Forty-five to sixty-four year olds account for a little more than one-quarter (28%) of total ties, while individuals 65 years and over, combined with children below 18 constituted 11% of the total of network ties. The mean age for a network relation is 37.7 years (SD = 8.28). Ages of subjects network helpers varied from 2 to 54.4 years.

<table>
<thead>
<tr>
<th>AGE INTERVALS</th>
<th>PROPORTION OF RELATIONS</th>
<th>STANDARD DEVIATION</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 17 YRS.</td>
<td>.08</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 - 44 YRS.</td>
<td>.54</td>
<td>.21</td>
<td>.00 - .91</td>
</tr>
<tr>
<td>45 - 64 YRS.</td>
<td>.28</td>
<td>.16</td>
<td>.00 - .75</td>
</tr>
<tr>
<td>65 AND OVER</td>
<td>.10</td>
<td>.12</td>
<td>.00 - .50</td>
</tr>
</tbody>
</table>

**MEAN (N = 55) 37.66 YRS. 8.28 2.78 - 54.38 YRS**

c. Marital Status

The social networks of respondents contained a higher proportion of married persons than single persons. Approximately 61% all network members were married; 39% were not married. Network supports were more likely to be married than
subjects. In contrast to network helpers, 51% percent of the fifty five blind young adults subjects were married.

TABLE 15  MARITAL STATUS OF NETWORK RELATIONS

<table>
<thead>
<tr>
<th>MARITAL STATUS</th>
<th>PROPORTION</th>
<th>STANDARD DEV.</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MARRIED</td>
<td>.61</td>
<td>.21</td>
<td>.23 - 1.00</td>
</tr>
</tbody>
</table>

d. Race

The racial composition of the pool of supportive helpers was similar to the racial composition of the study sample. Seventy seven percent of the network members whose names were elicited were white. Approximately 18% of the remaining number of identified supports were black, hispanic, or asian. The race of 5% of the helpers could not be determined. In such instances subjects simply did not know and could not determine the race or ethnic origin of a person providing support. The high percentage of whites and low percentage of blacks named by respondents as supports is consistent with Fischer's (1977) contention that individuals tend to gravitate toward others who are perceived by ego as most similar to themselves.

TABLE 16  RACE OF NETWORK RELATIONS

<table>
<thead>
<tr>
<th>RACE</th>
<th>PROPORTIONS</th>
<th>STANDARD DEVIATION</th>
<th>RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHITE</td>
<td>.77</td>
<td>.33</td>
<td>.00 - 1.00</td>
</tr>
<tr>
<td>BLACK</td>
<td>.18</td>
<td>.33</td>
<td>.00 - 1.00</td>
</tr>
</tbody>
</table>

e. Visual Characteristics of Network Relations

Subjects named only 81 legally blind or visually impaired men, women and/or children as members of their support networks. This constitutes approximately 7% of the sum of all identified network ties, and averages out to approximately
1.5 blind persons per network. This result is significant in light of Winton's (1970) earlier observation that men and women identifying themselves as blind were "often part of some social group which was composed of blind persons". It corroborates Winton's assertion that blind adults are likely to find one another despite the fact that blindness is a low-incidence condition.

...when we consider that there are perhaps two or three blind people per 100 of the general population, the social network among the blind appears much more tightly structured than we would expect to occur by chance (Winton, 1970; p.169).

(2) SOURCE OF NETWORK TIES

A. How Network Ties With Nonkin Originate

The young adult Delawareans sampled indicated that their places of work were important contexts in the identification and recruitment of supportive ties. Close to fourteen percent of all nonkin relations originated in contacts occurring within the context of the workplace.

Programs and activities sponsored by public and private agencies for the blind and visually impaired were also an important source of network ties (13%); as were apartment houses and other residential contexts (12.2%), where an initial contact evolved into a tie with a given meaning or purpose. Friends and relatives also proved to be significant sources of new friendship and potential support. Twelve percent of nonkin relations originated through friends; an equal percentage originated through relatives. School and church functions and other agency functions produced close to 28% of nonkin ties.

The relatively even distribution among the eight sources of network ties suggests that subjects recruit network relations from a range of sources and that no single source contributes overwhelmingly to the generation of new ties to new sources of support in networks as they appear to be configured.
### TABLE 17 SOURCES CONTRIBUTING TO NEW NETWORK LINKS
How Ego and Network Relation First Met

<table>
<thead>
<tr>
<th>SOURCE</th>
<th>NUMBER</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORKPLACE</td>
<td>61</td>
<td>13.7</td>
</tr>
<tr>
<td>AGENCY FOR BLIND/VI</td>
<td>58</td>
<td>13.0</td>
</tr>
<tr>
<td>SAME RESIDENCE</td>
<td>54</td>
<td>12.2</td>
</tr>
<tr>
<td>THROUGH A FRIEND</td>
<td>53</td>
<td>12.0</td>
</tr>
<tr>
<td>THROUGH A RELATIVE</td>
<td>53</td>
<td>12.0</td>
</tr>
<tr>
<td>SCHOOL</td>
<td>48</td>
<td>10.8</td>
</tr>
<tr>
<td>CHURCH</td>
<td>40</td>
<td>9.0</td>
</tr>
<tr>
<td>AGENCY</td>
<td>34</td>
<td>7.6</td>
</tr>
<tr>
<td>OTHER</td>
<td>43</td>
<td>9.7</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>444</td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

### B. The Origin of Nonkin Ties

Similar and related to how new ties with nonkin originate is the matter of where ties originate; that is, what specific locations give rise, or encourage the formation of nonkin ties. Study data indicate that the home and neighborhood are the contexts most frequently associated with the origination of ties to nonkin helpers. Twenty eight percent of nonkin ties originated in the home or neighborhood. Respondents identified their homes, the homes of mutual friends, or the dwellings of would-be, or soon-to-be relations as the locations where their initial contacts with nonkin helpers first occurred.

The second largest number of initial encounters were associated with or traced to recreational or social programs sponsored by fraternal or civic clubs, or to functions, activities or programs of different types run by various human service organizations. Such recreational and social programs included those provided by agencies for the blind and/or visually impaired, and organizations like the YMCA, or YMHA, which serve the needs of the larger community.

Work settings were the third most frequently identified contexts associated with the formation of nonkin links. The church and schools were also important
institutions in the lives of study subjects. These two contexts ranked forth and fifth as venues giving rise to network ties. Parties and bars proved to be poor places for making the types of contacts that evolve into supportive ties.

Study subjects provided interesting anecdotal data of chance meetings taking place in specific types of locations. These meetings took place in hospitals, parks, at the beach, swimming pools, a laundromat, and in various types of shops and stores.

<table>
<thead>
<tr>
<th>TABLE 18 ORIGIN OF NETWORK TIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTEXT</td>
</tr>
<tr>
<td>HOME/NEIGHBORHOOD</td>
</tr>
<tr>
<td>ORGANIZED ACTIVITY</td>
</tr>
<tr>
<td>WORK SETTING</td>
</tr>
<tr>
<td>CHURCH FUNCTION</td>
</tr>
<tr>
<td>SCHOOL</td>
</tr>
<tr>
<td>AT PARTY</td>
</tr>
<tr>
<td>BAR</td>
</tr>
<tr>
<td>OTHER</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

(3) RELATIONAL CONTENT OF NETWORK TIES: SOCIAL SUPPORT

a. Dimensions of Social Support

Various methods and procedures described in depth elsewhere in this paper have been used by social scientists to assess and evaluate the types and amounts of support that are exchanged among individuals in groups based on kinship, and in formal groups composed exclusively of nonkin, and mixed groups; which include kin and nonkin members. In this study attention is confined to the assessment of seven types of social support. They include: positive feedback, physical assistance, advice and communication of private feelings.

Univariate analysis of the relational content of the ties of my young adult
subjects indicated that social participation was the most frequently identified type of support obtained from network relations. However, Table 19 will show that ties both representing and expressing the receipt of material aid, positive feedback, physical assistance, advice, and communication of private feelings were fairly evenly distributed among six relational categories of social support (e.g.: material aid, positive feedback, physical assistance, advice, and private feelings). Negative interactions constituted less than ten percent of the total relational content of identified network ties.

<table>
<thead>
<tr>
<th>RANK</th>
<th>TYPE OF SOCIAL SUPPORT</th>
<th># OF NETWORK TIES PROVIDING SUPPORT</th>
<th>% OF TOTAL SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SOCIAL PARTICIPATION</td>
<td>194</td>
<td>17.05</td>
</tr>
<tr>
<td>2</td>
<td>MATERIAL AID</td>
<td>183</td>
<td>16.08</td>
</tr>
<tr>
<td>3</td>
<td>POSITIVE FEEDBACK</td>
<td>182</td>
<td>15.99</td>
</tr>
<tr>
<td>4</td>
<td>PHYSICAL ASSISTANCE</td>
<td>164</td>
<td>14.41</td>
</tr>
<tr>
<td>5</td>
<td>ADVICE</td>
<td>158</td>
<td>13.88</td>
</tr>
<tr>
<td>6</td>
<td>PRIVATE FEELINGS</td>
<td>152</td>
<td>13.35</td>
</tr>
<tr>
<td>7</td>
<td>NEGATIVE INTERACTIONS</td>
<td>105</td>
<td>9.22</td>
</tr>
</tbody>
</table>

b. The Sources of Social Support

Persons identified by subjects as "friends" proved to be the front-line source of social support. The pattern of reliance upon friends for support is evidenced in the number of ties which were attributed to friends for each category of social support. Ties attributed to friends accounted for 37% of the sum of all network ties (N= 1138).

After friends, subjects turned the most frequently for support to their parents. Parents contributed approximately 16% of the total of social support. Spouses/Companions furnished approximately 11% of the total, while siblings contributed provided a little less than 10% of total support.
Active ties to helpers classified as kin (e.g.: parents, spouses, siblings, in-laws, other relatives) represented approximately 46% of the total of network ties, whereas ties to helpers classified as nonkin (e.g.: friends, neighbors, co-workers, professionals) constituted 54% of the aggregate of active ties.

<table>
<thead>
<tr>
<th>PRIMARY SOCIAL CONTEXT</th>
<th># OF TIES</th>
<th>% OF TOTAL SUPPORT</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRIEND</td>
<td>425</td>
<td>37.3</td>
</tr>
<tr>
<td>PARENT</td>
<td>154</td>
<td>16.3</td>
</tr>
<tr>
<td>SPOUSE/COMpanion</td>
<td>111</td>
<td>11.2</td>
</tr>
<tr>
<td>SIBLING</td>
<td>105</td>
<td>9.2</td>
</tr>
<tr>
<td>NEIGHBOR</td>
<td>73</td>
<td>6.4</td>
</tr>
<tr>
<td>IN-LAW</td>
<td>64</td>
<td>5.6</td>
</tr>
<tr>
<td>CO-WORKER</td>
<td>59</td>
<td>5.2</td>
</tr>
<tr>
<td>PROFESSIONAL</td>
<td>56</td>
<td>4.9</td>
</tr>
<tr>
<td>OTHER RELATIVES</td>
<td>44</td>
<td>3.9</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>1138</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

More in-depth analysis of the social support database indicates that subjects obtained a broad base of support from their friends. My blind and visually impaired subjects turned first to friends for companionship, material aid, positive feedback, physical assistance, advice and emotional support before turning to other sources. This pattern is illustrated in Table 22. Friends ranked first in the provision of six types of support. Friends were the third ranked source of negative interaction.

Parents proved to be the second most consistent source of support. They ranked second in five of seven social support categories including negative interaction. Spouses/companions were also an important source of support to the young adults who were studied. The data appear to suggest that the spousal roles of companion and confidant are most valued by subjects. Spouses were least looked to for material aid and were infrequently identified as a source of conflict or
stress.

The data also suggest that siblings were approached mainly as sources of material aid. Siblings followed friends, parents, and spouses as a source of emotional support. They were least sought after as sources of companionship.

On balance, co-workers, and professionals proved to be the weakest sources of support. Co-workers achieved their highest ranks as companions and as sources of positive feedback, however, they also received the highest ranking as the source of negative interactions.

Professionals achieved their highest ranks as sources of advice, as supports for sharing private feelings, and as sources of positive feedback. They were regarded as poor sources of material aid, and physical assistance. They were not used as companions, and were the least likely to be named as the source of negative interactions.

TABLE 21 SOURCE OF SUPPORT BY TYPE OF SOCIAL SUPPORT

<table>
<thead>
<tr>
<th>SOURCE OF SUPPORT</th>
<th>SOC. PART.</th>
<th>MAT. AID</th>
<th>POS. FEED</th>
<th>PHYS. ASST</th>
<th>ADV. FEEL</th>
<th>PRIV. FEEL</th>
<th>NEG. INT</th>
<th>TOTAL N=1138</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRIEND</td>
<td>123</td>
<td>69</td>
<td>60</td>
<td>62</td>
<td>50</td>
<td>45</td>
<td>16</td>
<td>425</td>
</tr>
<tr>
<td>PARENT</td>
<td>10</td>
<td>30</td>
<td>34</td>
<td>34</td>
<td>32</td>
<td>25</td>
<td>20</td>
<td>185</td>
</tr>
<tr>
<td>SPOUSE</td>
<td>14</td>
<td>17</td>
<td>23</td>
<td>19</td>
<td>20</td>
<td>26</td>
<td>8</td>
<td>127</td>
</tr>
<tr>
<td>SIBLING</td>
<td>8</td>
<td>28</td>
<td>19</td>
<td>6</td>
<td>16</td>
<td>19</td>
<td>9</td>
<td>105</td>
</tr>
<tr>
<td>NEIGHBOR</td>
<td>12</td>
<td>8</td>
<td>10</td>
<td>16</td>
<td>12</td>
<td>4</td>
<td>11</td>
<td>73</td>
</tr>
<tr>
<td>IN-LAW</td>
<td>11</td>
<td>17</td>
<td>7</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>64</td>
</tr>
<tr>
<td>CO-WORKER</td>
<td>11</td>
<td>3</td>
<td>12</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>24</td>
<td>59</td>
</tr>
<tr>
<td>PROFESSION'AL</td>
<td>1</td>
<td>6</td>
<td>12</td>
<td>3</td>
<td>14</td>
<td>18</td>
<td>2</td>
<td>56</td>
</tr>
<tr>
<td>OTHER</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>11</td>
<td>3</td>
<td>6</td>
<td>10</td>
<td>44</td>
</tr>
<tr>
<td>RELATIVES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTALS</td>
<td>194</td>
<td>183</td>
<td>182</td>
<td>164</td>
<td>158</td>
<td>152</td>
<td>105</td>
<td>1138</td>
</tr>
</tbody>
</table>

[1] The figures in each column represent the number of ties linked to each type of social support.
TABLE 22  RANK ORDERING OF PRIMARY SOCIAL CONTEXTS OF SUPPORT

| SOURCE OF SUPPORT | SOC. MAT. PART. | POS. AID | FEED | PHYS. FEED | ADV. FEED | PRIV. FEED | NEG FEED | INT FEED |
|------------------|----------------|---------|------|------------|-----------|----------|---------|
| FRIEND           | 1              | 1       | 1    | 1          | 1         | 1        | 3       |
| PARENT           | 5.5            | 2       | 2    | 3          | 2         | 3        | 2       |
| SPOUSE           | 2              | 3       | 3    | 3          | 3         | 2        | 7       |
| SIBLING          | 7              | 3       | 4    | 4.5        | 4         | 4        | 6       |
| NEIGHBOR         | 5.5            | 6       | 7    | 4.5        | 6         | 4        | 4       |
| IN-LAW           | 3.5            | 5.5     | 8    | 7          | 7         | 7.5      | 8       |
| CO-WORKER        | 3.5            | 9       | 5.5  | 8.5        | 8.5       | 9        | 1       |
| PROFESSIONAL     | 8              | 7       | 5.5  | 8.5        | 5         | 5        | 9       |
| OTHER RELAT.     | 9              | 8       | 9    | 6          | 8.5       | 7.5      | 5       |

(4) NETWORK SIZE

The procedures used in this study to construct social support networks made it possible for as many as thirty five different natural helpers to be identified. The range of possible scores extended from zero to thirty five, meaning that subjects could name as few as zero helpers, and as many as thirty five different helpers. Actual scores ranged from four to sixteen; meaning that the smallest networks contained four persons (2 subjects); and the largest networks contained sixteen members (3 subjects). The scores representing network size were distributed along a normal curve. The mean value for network size was 10.3 persons (S.D. = 3.0). The distribution of scores for the sample is displayed in Table 23.

TABLE 23  NETWORK SIZE

<table>
<thead>
<tr>
<th>NETWORK SIZE</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
<th>CUMULATIVE PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 TO 3</td>
<td>0</td>
<td>00.0</td>
<td>00.0</td>
</tr>
<tr>
<td>4 TO 8</td>
<td>15</td>
<td>27.3</td>
<td>27.3</td>
</tr>
<tr>
<td>9 TO 12</td>
<td>28</td>
<td>50.9</td>
<td>78.2</td>
</tr>
<tr>
<td>13 TO 16</td>
<td>12</td>
<td>21.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>

MEAN FOR NETWORK SIZE= 10.3  S.D.= 3.0  RANGE= 4.0-16.0
It is worth noting here that the mean number of persons identified as network relations, and the range in network sizes are consistent with results published elsewhere - findings specific to studies of the social networks of nondisabled, healthy adult subjects.

These results also compare favorably with results obtained by researchers who have used similar network analytic methods, measures and network boundary specifications. This is discussed in greater depth in the next chapter.

(5) ROLE MULTIPLEXITY

Previous discussion pertaining to the stress buffering and stress mediating models of social support has underscored the relevance and importance attached to the meaning of uniplex and multiplex relations. In general, the more multistranded the relation the more durable and intimate the tie. This is so because a tie with more than one strand binds two people together so that each party to the tie "is involved in more of the other's life and the tie is able to endure the rupture of a specific strand". (Wellman, Carrington, and Hall, 1988; p.165)

The majority of relations among subjects and their helpers were uniplex relations. Close to 53 percent of all persons identified as supports provided only one type of support. Subjects averaged .477 multiplex relations with network members. The distribution of multiplex relations within the sample is displayed in Table 24, below.
TABLE 24 DISTRIBUTION OF PROPORTION OF MULTIPLEX TIES IN SAMPLE

<table>
<thead>
<tr>
<th>PROPORTION</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
<th>CUMULATIVE %</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00 TO .09</td>
<td>3</td>
<td>5.5</td>
<td>5.5</td>
</tr>
<tr>
<td>.10 TO .19</td>
<td>2</td>
<td>3.6</td>
<td>9.1</td>
</tr>
<tr>
<td>.20 TO .29</td>
<td>4</td>
<td>7.2</td>
<td>16.4</td>
</tr>
<tr>
<td>.30 TO .39</td>
<td>6</td>
<td>10.9</td>
<td>27.3</td>
</tr>
<tr>
<td>.40 TO .49</td>
<td>14</td>
<td>18.1</td>
<td>45.5</td>
</tr>
<tr>
<td>.50 TO .59</td>
<td>13</td>
<td>23.7</td>
<td>69.1</td>
</tr>
<tr>
<td>.60 TO .69</td>
<td>10</td>
<td>18.2</td>
<td>87.3</td>
</tr>
<tr>
<td>.70 TO .79</td>
<td>5</td>
<td>9.1</td>
<td>96.4</td>
</tr>
<tr>
<td>.80 TO .89</td>
<td>2</td>
<td>3.6</td>
<td>100.0</td>
</tr>
<tr>
<td>TOTALS</td>
<td>55</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

(6) DURATION OF NETWORK LINKS

In this study the duration of a network link is expressed in months, and represents the amount of time an individual providing a specific dimension of support was known by ego at the time he/she was interviewed.

The average length of time subjects knew the persons in their networks was 143.5 months or approximately 12 years. The standard deviation of the mean was 95.66 months (approximately 8 years). The range of months known varied from 20 months (less than two years) to 600.25 months (50 years). These figures include links to both kin and non-kin and the variability evident is a function of the nature of the link.

It is also important to note in this section the average length of residence in the community. Subjects resided an average of 121.67 months (approximately 10 years) in their respective communities (SD = 132.3/ approx. 11 years). The variance in months ranged from one month to 528 months, or 44 years. About one half of my subjects (50.9%) lived in the same community 73 months (6+ years) or less. Approximately three quarters (76.4%) of young adults studied indicated that they had lived in the same community for 12 or fewer years.
TABLE 25  THE MEAN DURATION OF NETWORK LINKS

<table>
<thead>
<tr>
<th>MEAN # OF MONTHS EGO HAS KNOWN ALL MEMBERS OF HIS/HER SOCIAL SUPPORT NETWORK</th>
<th>MEAN # OF YEARS EGO HAS KNOWN ALL MEMBERS OF HIS/HER SOCIAL SUPPORT NETWORK</th>
<th>FREQ.</th>
<th>PER-CENT</th>
<th>CUM PER-CENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 TO 60 MONTHS</td>
<td>0 TO 5 YEARS</td>
<td>10</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>61 TO 120 MONTHS</td>
<td>5+ TO 10 YEARS</td>
<td>14</td>
<td>25</td>
<td>43</td>
</tr>
<tr>
<td>121 TO 180 MONTHS</td>
<td>10+ TO 15 YEARS</td>
<td>15</td>
<td>27</td>
<td>70</td>
</tr>
<tr>
<td>181 TO 240 MONTHS</td>
<td>15+ TO 20 YEARS</td>
<td>9</td>
<td>16</td>
<td>86</td>
</tr>
<tr>
<td>241 TO 300 MONTHS</td>
<td>21+ TO 25 YEARS</td>
<td>6</td>
<td>12</td>
<td>98</td>
</tr>
<tr>
<td>301 MONTHS AND OVER</td>
<td>25+ YEARS AND OVER</td>
<td>1</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>TOTALS</td>
<td>55</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

(7) INTENSITY OF TIES

The intensity or strength (closeness) of each dyadic link was measured subjectively through use of a question requiring the respondent to disclose how close he/she felt to each identified network member. Responses assumed the form of a value from 1 ("I consider this person to be my best, or one of my best friends".) to 5 ("I don't consider this person to be a friend".) Good friends were assigned a value of 2. Acquaintanceships were assigned a value of 3, while associations considered "neutral" were valued at 4.

The mean value obtained as a measure of closeness between subjects and their network relations was 2.03 (SD = .53). This particular result indicates that subjects tended to feel close to their identified supportive relations. Close enough, that is, to characterize the average network relation as a good friend.
TABLE 26  STRENGTH OF TIES

<table>
<thead>
<tr>
<th></th>
<th>TOTAL #</th>
<th>PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEST FRIEND (or, one of best friends)</td>
<td>205</td>
<td>35%</td>
</tr>
<tr>
<td>GOOD FRIEND</td>
<td>234</td>
<td>39%</td>
</tr>
<tr>
<td>ONE OF MANY FRIENDS</td>
<td>92</td>
<td>16%</td>
</tr>
<tr>
<td>NEITHER FRIEND NOR ENEMY</td>
<td>45</td>
<td>7%</td>
</tr>
<tr>
<td>DO NOT CONSIDER A FRIEND</td>
<td>16</td>
<td>3%</td>
</tr>
<tr>
<td>TOTALS</td>
<td>592</td>
<td>100%</td>
</tr>
</tbody>
</table>

(8) PROXIMITY

A variable known to correlate with intimacy is physical proximity. To ascertain the physical distance between respondents and their helpers, subjects were asked to specify where they lived in relation to each named network member.

Slightly more than one-fifth of the all network members (21.2%) lived in ego's neighborhood. Eleven and one-half percent of all identified network links shared a room or lived in the same apartment with ego. Nearly fifteen and one-half percent of all persons named as supports lived in the same building as ego.

When the percentage of neighborhood helpers (21.2%) were combined with percentage of helpers who lived out of the neighborhood but in the same city or town as study subjects (39.1% of all ties), a discernable pattern of local support became evident. Sixty percent (60.3%) of study subjects' social supporters lived within the same city; only minutes away by motor vehicle. One fourth of all helpers lived in another town or city. These out-of-towners lived anywhere from one-half hour to four hours from study subjects. Fourteen percent of all identified social supporters lived out-of-state. The majority of out-of-state helpers (11.5%) resided in one of the states adjacent to Delaware (Maryland, Pennsylvania, New Jersey). A smaller number (3%) lived elsewhere in the U.S. These figures are presented in Figure 2, below.
Figure 2 presents the results of a simple descriptive analysis analyzing the relationship between each of the seven dimensions of social support previously noted and physical proximity to network members. Careful examination of Figure 2 reveals a variegated pattern of social support provision with respect to physical proximity. The patterns of support provision in evidence are consistent with Litwak and Szelenyi's (1969) model of primary group structures which contends that neighbors can best handle small tasks that entail some urgency. Litwak's model stipulates that kin are the preferred source of help in major crises and rites of passage, while friends, peers and other nonkin typically provide empathy, affection and consensus and also furnish help for
nonurgent needs.

In my study, network members providing physical assistance to subjects tended to live the closest to study subjects and were mostly drawn from the ranks of friends, neighbors and other nonkin. Almost 76% of all persons identified as sources of physical assistance lived within the same city and were drawn disproportionately from the ranks of friends. Subjects also appeared to count on locals most often for emotional support (private feelings), positive feedback and social companionship. Locals were also the most frequent source of negative contact. By comparison, network members living furthest away from subjects (e.g., in the same state, and out-of-state) were largely kin who most often provided substantial supplies of material aid and intimate advice.

C. PREDICTED BIVARIATE RELATIONSHIPS

Analysis has thusfar been confined to description of the visual, as well as the socio-demographic and psychological attributes of the 55 legally blind and visually impaired young adult Delawareans who served as study subjects. A description of the formal and informal helpers who constitute ad-hoc networks of social support has been presented. In this section significant relationships among and between specified independent and dependent variables are examined.

Eleven (11) hypotheses were used to anchor the investigation. Four of the eleven hypotheses explored relationships between selected vision-related factors and network composition/network size. Two of these (H1 and H2) focused on the relationship between functional vision and network composition/network size. The remaining hypotheses tested predicted relationships between age of onset of blindness (H3), attendance at a residential school for the blind (H4) - and network composition/network size.

Seven hypotheses tested proposed relationships among a select group of
socio-demographic variables, which were treated as independent variables - and network composition and network size; which as above, were analyzed as dependent measures. The relationships examined include: age and network composition (H5); gender and network composition (H6); marital status and network composition (H7); employment status and network composition (H8); employment status and network size (H9); physical impairment and network composition (H10); and, physical impairment and network size (H11).

Discussion of Hypotheses Involving Vision Related Variables

The first relationship that was examined through hypothesis testing concerned functional vision and network composition. The first hypothesis, which is presented below, proposes the existence of a negative relationship between useable vision and network composition. This hypothesis was advanced to determine whether young adults with low vision are more likely to rely upon close family and friends for support than persons with greater amounts of useable vision. This hypothesis was central to my goal of ascertaining whether functional vision by itself affects access to social support. Hypothesis H1 is presented directly below.

HYPOTHESIS 1: There will be an inverse relationship between functional vision and network composition. As vision decreases, the ratio of kin to nonkin links will increase.

A second hypothesis attempts to determine whether vision level independently explains network size. This hypothesis was inspired by Fischer's "choice-constraint" model of community formation. Fischer's paradigm holds that social support networks are personal communities that are actively and deliberately shaped. The parameters and distinguishing features of such networks that constitute the structure of the network evolve from choices that individuals make minute by minute throughout their lives; these choices are subject to
environmental, psychological, physiological and social constraints. Position in the social structure as determined by income, ethnicity, and education are particular factors known to influence the structure of personal networks. Other factors include opportunity and frequency of contact, attitudes, and personality traits.

A visual impairment considered within the broad framework of Fischer's paradigm represents a constraint upon choice. A visual impairment severe enough to limit mobility can well restrict access to the physical and/or social contexts that are important to network and friendship formation. Unappealing stereotypes of blind persons are additional examples of factors that discourage uninhibited exchange among and between blind and sighted persons.

The second hypothesis, expressed in boldface print below, explores the relationship between functional vision and network size. The hypothesis permits the investigator to determine whether limited vision independently reduces network size. The hypothesis explores whether young adults with partial sight have larger networks than individuals who have no useable vision.

HYPOTHESIS 2: There will be a direct positive relationship between functional vision and network size. Network size will increase as functional vision increases.

Results

The negative relationship predicted between functional vision and network composition was not supported by study data (r = .19, p = .09).

The relationship predicted between functional vision and network size was only partially supported by sample data. The predicted direction of the relationship was positive, however the correlation, while significant at the .05 level was in the opposite direction predicted (r = -.29).
HYPOTHESIS 3: There will be a positive relationship between age of onset of blindness and network composition. As the age of onset increases, the ratio of kin to nonkin help will also increase.

Experts in the field of blindness maintain that age of onset is one of a handful of critical factors that explain differences in the process of adjustment/adaptation to blindness. Experts have expressed different positions regarding the impact of blindness on friendships within the human life span.

Father Thomas Carroll generally considered vision loss as disruptive to established relationships regardless of age of onset. Others (i.e.; Cutsforth, 1966) have suggested that late onset is particularly hard on relationships, and that late onset is especially stressful when it coincides with failing health, or occurs in later life when many are particularly financially vulnerable.

Hypothesis 3 investigates the nature of the relationship between age of onset and network composition for the purpose of determining whether late onset threatens the continuity of ties with close kin and other family members.

Results

The predicted relationship between age of onset and network composition was supported by study data (r = .29; p = .02).

HYPOTHESIS 4: There will be a negative relationship between attendance at a residential school for the blind and network composition. Those who have attended a residential school for the blind will have networks with a higher proportion of kin to nonkin members than non-attenders.

Several studies, notably those by Pfouts and Nixon (1982), Lukoff and Whiteman (1970) and Winton (1970) have determined that residential schooling is tied to employment, social participation, and to successful coping and adjustment to blindness. The mechanism detailing how this occurs, however has yet to be determined. Whether successful coping results from various skills acquired at schools for the blind (e.g.; orientation and mobility, social skills), or whether
successful coping develops from ego enhancing experiences remains an important unanswered question. There is good reason to believe that coping and successful adjustment to blindness is linked to ties (both strong and weak) that form in residential settings.

A matter of specific interest to the investigator here is the relationship between residential schooling and network composition. At question is whether blind attenders of such schools manifest differences in the composition of their personal networks; that is, whether attenders are less inclined to turn to family or to close friends for help.

Pfouts and Nixon's contention that ties formed in residential schools are enduring, and contribute to an increased chance of employment suggests that residential school attenders have access to a set of diffuse ties that generate a range of varied support dimensions; to which non-attenders do not enjoy access. Attendees would therefore have less need to turn to family for support and would consequently rely more heavily upon friends for the support they require.

The hypothesis advanced in this study with respect to residential schooling and network composition posits a negative relationship between the two aforementioned variables. The proposed hypothesis holds that attenders of residential schools for the blind are likely to turn less to close kin and family for support while turning more to friends and other nonkin.

Findings

The proposed hypothesis was not supported by study data.

Correlation coefficients for all hypotheses involving vision-related variables are presented in Table 27, found below.
### Table 27
**Correlations for Hypotheses Involving Vision-Related Variables**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>Predicted Direction</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Functional Vision</td>
<td>Network Composition</td>
<td>NEGATIVE</td>
<td>.19</td>
<td>.09</td>
</tr>
<tr>
<td>H2 Functional Vision</td>
<td>Network Size</td>
<td>POSITIVE</td>
<td>-.29</td>
<td>.02*</td>
</tr>
<tr>
<td>H3 Age of Onset</td>
<td>Network Composition</td>
<td>POSITIVE</td>
<td>.31</td>
<td>.01**</td>
</tr>
<tr>
<td>H4 Residential Schooling</td>
<td>Network Composition</td>
<td>NEGATIVE</td>
<td>.11</td>
<td>.20</td>
</tr>
</tbody>
</table>

*One-tailed test of significance

* p < .05

** p < .01

### Hypotheses Involving Socio-demographic Variables

**Hypothesis 5**: There will be a positive relationship between subject age and network composition. Older subjects will have networks that contain a higher proportion of kin to nonkin helpers.

In two landmark network studies, Edward O. Laumann (1973) and Claude Fischer (1982) noted that changes occur in the composition of networks across the human life cycle. In his study of Detroit men, Laumann concluded that the sources from which men chose their closest friends are strongly linked to life cycle stage. Unmarried men, for example, were especially likely to identify childhood friends as best friends - and network members. As they aged, however, men were much less likely to list childhood friends as active network members, and instead identified persons known for a much shorter time.

Close ties formed in the neighborhood and at work became the major replacements for childhood friends left behind. With marriage, young men looked to spouses for companionship, and they turned to their workplaces for new
friendships. The proportion of best friends who were work friends remained constant after marriage until age 65.

To assess the relationship between age and network composition among blind and visually impaired young adults, a hypothesis was formulated. The hypothesis was developed to test Laumann's finding that age affects network composition in a positive direction. The hypothesis tests the proposition that young adults advancing toward middle-age alter their networks by turning increasingly to kin for the majority of their social support.

Findings

The predicted relationship between age and network composition was not supported by my data. The correlation summarizing the relationship between the aforementioned variables was insignificant, and in the direction opposite to the one predicted (r = .09; p < .01).

HYPOTHESIS 6: There will be a positive relationship between gender and network composition. Females will have networks that contain a higher proportion of kin to nonkin helpers than males.

The earliest network studies such as Bott's (1957; 1971) network analyses of London families and marital network patterns, and Barnes's (1954) analyses of relationships in Norwegian fishing villages - established gender as an important variable in explaining network composition. Pfouts and Nixon's social network research focusing on blind adults identified a significant relationship between gender and network size. Blind women tended to have larger networks than their male counterparts, regardless of age.

Based on the results of others, it was predicted that female subjects would identify a larger proportion of kin as providers of support than their male counterparts.
Findings

The proposed relationship between gender and network composition was not supported by study data ($r = .06; p < .33$).

HYPOTHESIS 7: There will be a positive direct relationship between marital status and network composition. Both male and female subjects who are married will formulate networks that contain a higher proportion of kin helpers than will unmarried subjects.

A hypothesis exploring the relationship between marital status and network composition was formulated from theory advanced by Fischer et al. and others who, in studying the developmental formation of networks, have argued that marriage extends the size and range of one's network. The same theorists also indicate that kin ties also carry obligatory duties and responsibilities which reinforce attachments and which consequently reduce the frequency of contact with friends and other nonkin.

To test this premise, it was hypothesized that individuals in a marital relationship would identify a higher proportion of kin as providers of support than those who were not in relationships.

Findings

The predicted relationship between marital status and network composition was supported by study data ($r = .35; p < .01$). The moderate, significant relationship between the independent and the dependent measures lends support to Hypothesis 7.

HYPOTHESIS 8: There will be a negative direct relationship between employment status and network composition. Unemployed subjects will have networks that contain a higher proportion of kin to nonkin helpers than employed subjects.

HYPOTHESIS 9: There will be a positive relationship between employment status and network size. Employed subjects will have larger networks than unemployed subjects.
Fischer (1982) and Laumann (1973) have determined that positions in the economic structure influence friendship choices. Fischer notes that "people in different lines of work are physically segregated on the job; people in different social classes are physically segregated by residence and socially segregated in leisure-time activities" (Fischer, 1982; p.63).

To determine the degree to which employment influences network configuration for blind and visually impaired young adults, two hypotheses were formulated and put to test. Hypothesis 9 explores the relationship between employment status and network composition and tests the supposition that blind young adults who work are likely to have more integrated networks, containing a higher proportion of nonkin members over kin.

The hypothesis also implies a statement of the converse— that is, individuals without work are likely to be members of networks that contain a larger proportion of kin to nonkin as providers of social support.

Hypothesis 9 explores the relationship between employment status and network size. The decision to include this hypothesis was inspired by Pfouts and Nixon's pioneer network study, which discovered evidence of a relationship between the two variables. The decision to test the relationship between employment status and network size represents an effort to replicate a portion of Pfouts and Nixon's work on a different, younger sample.

Hypothesis 9 tests Pfouts and Nixon's finding that individuals with jobs are likely to have larger networks than those who are unemployed.

Findings

The predicted relationship between employment status and network composition was not supported by sample data.

The predicted relationship between employment status and network size was
supported by a correlation of .34 (p < .01).

HYPOTHESIS 10: There will be a positive relationship between physical impairment and network composition. Subjects with secondary disabilities and other health impairments will have networks that contain a higher proportion of kin to nonkin than those less impaired.

HYPOTHESIS 11: There will be a negative relationship between physical impairment and network size. Subjects with secondary and other health impairments will have larger social support networks than those less impaired.

Findings

The hypothesized relationship between physical impairment and network composition was not supported by the obtained correlation. The relationship between physical impairment and network size was also not supported by study data. Correlations for hypotheses involving socio-demographic variables are displayed in Table 28, found on the next page.
### TABLE 28
CORRELATIONS FOR HYPOTHESES INVOLVING SOCIO-DEMOGRAPHIC VARIABLES

<table>
<thead>
<tr>
<th>INDEPENDENT VARIABLE</th>
<th>DEPENDENT VARIABLE</th>
<th>PREDICTED DIRECTION</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5 Subject Age</td>
<td>Network Composition</td>
<td>POSITIVE</td>
<td>-.09</td>
<td>.26</td>
</tr>
<tr>
<td>H6 Subject Gender</td>
<td>Network Composition</td>
<td>POSITIVE</td>
<td>.06</td>
<td>.33</td>
</tr>
<tr>
<td>H7 Marital Status</td>
<td>Network Composition</td>
<td>POSITIVE</td>
<td>.35</td>
<td>.01**</td>
</tr>
<tr>
<td>H8 Employment Status</td>
<td>Network Composition</td>
<td>NEGATIVE</td>
<td>.14</td>
<td>.15</td>
</tr>
<tr>
<td>H9 Employment Status</td>
<td>Network Size</td>
<td>POSITIVE</td>
<td>.34</td>
<td>.01**</td>
</tr>
<tr>
<td>H10 Physical Impairment</td>
<td>Network Composition</td>
<td>POSITIVE</td>
<td>-.13</td>
<td>.18</td>
</tr>
<tr>
<td>H11 Physical Impairment</td>
<td>Network Size</td>
<td>NEGATIVE</td>
<td>-.15</td>
<td>.14</td>
</tr>
</tbody>
</table>

One-tailed test of significance

* p < .05
** p < .01

---

D. INTERCORRELATIONS BETWEEN INDEPENDENT VARIABLES AND NETWORK MEASURES

The section just concluded addresses predicted relationships among a small group of variables. Further analysis was undertaken with collected data to explore relationships between additional vision-related, psychosocial and socio-demographic variables and selected network variables. These variables have been identified. Correlation coefficients expressing the relatedness of the vision-related, psychosocial and socio-demographic variables to the designated network measures are presented in Tables 29-31. To compensate for the relatively small N used and to minimize the occurrence of Type II errors, coefficients of association were subjected to two-tailed tests of significance.
I. VISION-RELATED VARIABLES

In general, the vision-related variables which were selected for study had only minimal affect on network variables. Thirty two intercorrelations yielded three relationships significant at the .05 level. Age of onset of blindness and network composition proved to be weakly to moderately associated. Functional vision and network size were weakly to moderately associated in a negative direction; and cause of blindness and network size also proved to be moderately inversely associated.

Functional vision did not have the affect on network dimensions that one might have believed it would. In case of point, functional vision proved to be significantly related to only one network dimension - network size. As a rule, subjects possessing the poorest vision were inclined to have the largest helping networks. This relationship did not appear to be independent but seemed to be subject to the influence of age of onset of blindness. Persons incurring early vision loss tended to identify a greater number of network helpers than persons incurring a significant loss of vision in later life.

A near significant relationship was also obtained for functional vision and proximity. This finding suggests the possibility of a link between visual impairment and location of residence. Other correlations lend additional support for this interpretation. Near significant inverse relationships between: (1) age of onset and duration, (2) age of onset and proximity, and (3) physical impairment and proximity raise the possibility of a trend linking the temporal onset of blindness to family residence patterns. These findings suggest that congenitally blind adults, and adults with multiple impairments may deliberately reside in close proximity to family members to achieve easier access to social support. The pattern appears to differ for individuals who lose their sight in
later life.

Medical diagnosis and prognosis of blindness are widely recognized as having an important impact on the adjustment process (Lowry, 1960). If, for example, "an individual's blindness is caused by a systemic disease such as diabetes, the physical sequelae of the disease may affect the individual's capacities for functioning more directly than does blindness itself" (See Lowry, 1960; p.69-71). In this study, "progressive diagnosis" (cause of blindness), proved to be significantly associated with one network dimension (network size). Residential schooling affected only one network variable - duration.

In addition to examining the impact of each of the preceding variables, the impact of acceptance of blindness on network structure was also examined. Notably, this variable did not significantly influence a single structural network dimension.
### Table 29: Dependent Variables Intercorrelated with Vision-Related Measures

<table>
<thead>
<tr>
<th>DEPENDENT VARIABLES</th>
<th>INDEPENDENT VARIABLES</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Network Composition</td>
<td>.19 *</td>
<td>.31 *</td>
<td>.11</td>
<td>.09</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p = .17</td>
<td>p = .03</td>
<td>p = .41</td>
<td>p = .51</td>
<td>p = .55</td>
<td></td>
</tr>
<tr>
<td>2. Network Size</td>
<td>-.29 *</td>
<td>-.24</td>
<td>-.15</td>
<td>.01</td>
<td>-.33 *</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p = .03</td>
<td>p = .07</td>
<td>p = .29</td>
<td>p = .92</td>
<td>p = .02</td>
<td></td>
</tr>
<tr>
<td>3. Proximity</td>
<td>-.25</td>
<td>-.22</td>
<td>-.14</td>
<td>-.21</td>
<td>-.23</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p = .06</td>
<td>p = .12</td>
<td>p = .30</td>
<td>p = .12</td>
<td>p = .11</td>
<td></td>
</tr>
<tr>
<td>4. Duration</td>
<td>.08</td>
<td>-.20</td>
<td>-.23</td>
<td>.15</td>
<td>-.03</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p = .55</td>
<td>p = .15</td>
<td>p = .09</td>
<td>p = .29</td>
<td>p = .86</td>
<td></td>
</tr>
<tr>
<td>5. Intensity</td>
<td>.21</td>
<td>-.05</td>
<td>.07</td>
<td>.15</td>
<td>-.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p = .13</td>
<td>p = .73</td>
<td>p = .62</td>
<td>p = .28</td>
<td>p = .74</td>
<td></td>
</tr>
<tr>
<td>6. Frequency Visit</td>
<td>-.13</td>
<td>-.13</td>
<td>-.02</td>
<td>.01</td>
<td>-.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p = .36</td>
<td>p = .34</td>
<td>p = .20</td>
<td>p = .93</td>
<td>p = .36</td>
<td></td>
</tr>
<tr>
<td>Talk</td>
<td>-.20</td>
<td>-.14</td>
<td>-.09</td>
<td>.05</td>
<td>-.27</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p = .15</td>
<td>p = .30</td>
<td>p = .59</td>
<td>p = .70</td>
<td>p = .06</td>
<td></td>
</tr>
<tr>
<td>7. Multiplexity</td>
<td>.02</td>
<td>.19</td>
<td>.15</td>
<td>.04</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p = .89</td>
<td>p = .18</td>
<td>p = .28</td>
<td>p = .79</td>
<td>p = .16</td>
<td></td>
</tr>
</tbody>
</table>

Two-tailed tests of significance
* p < .05  
** p < .01

### II. Psychosocial Variables

Four psychosocial variables were intercorrelated with seven network variables. The intercorrelations produced only two relationships that were significant at the .05 level. Coping proved to be weakly associated with network size, and was also moderately related to proximity.

To my surprise, a variable created to provide a crude indication of physical limitation (physical impairment) had negligible affect on six of seven network
dimensions. Physical impairment directly affected only one network variable - frequency of contact (face to face encounters); however, the relationship was not significant at the pre-established alpha level.

Similarly, adaptive behavior had almost no apparent affect on seven of eight network dimensions - proximity was the sole variable with a near significant relationship with ADL. Life satisfaction, treated in this set of analyses as an independent measure, also proved to bear little impact on structural network variables. Each of the preceding relationships are summarized in Table 30.

<table>
<thead>
<tr>
<th>DEPENDENT VARIABLES</th>
<th>INDEPENDENT VARIABLES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physical Impairment</td>
</tr>
<tr>
<td>1. Network Composition</td>
<td>-.13</td>
</tr>
<tr>
<td></td>
<td>p = .24</td>
</tr>
<tr>
<td>2. Network Size</td>
<td>-.15</td>
</tr>
<tr>
<td></td>
<td>p = .28</td>
</tr>
<tr>
<td>3. Proximity</td>
<td>-.15</td>
</tr>
<tr>
<td></td>
<td>p = .29</td>
</tr>
<tr>
<td>4. Duration</td>
<td>-.01</td>
</tr>
<tr>
<td></td>
<td>p = .50</td>
</tr>
<tr>
<td>5. Intensity</td>
<td>.11</td>
</tr>
<tr>
<td>6. Frequency: Visit</td>
<td>-.23</td>
</tr>
<tr>
<td></td>
<td>p = .09</td>
</tr>
<tr>
<td>7. Talk</td>
<td>-.17</td>
</tr>
<tr>
<td></td>
<td>p = .23</td>
</tr>
<tr>
<td>8. Multiplexity</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>p = .53</td>
</tr>
</tbody>
</table>

Two-tailed tests of significance
* p < .05
** p < .01
III. SOCIO-DEMOGRAPHIC VARIABLES

Six socio-demographic variables were intercorrelated with seven network variables. The intercorrelations produced five statistically significant relationships (p < .05). Significant relationships were obtained for: marital status and network composition, employment status and network size, education and closeness, gender and frequency of contact (face to face encounters), and marital status and frequency of contact (telephone contacts).

Age had very little affect on any of the structural network variables examined in this study. This includes network size. Gender, a factor that numerous studies have shown to influence network formation, network structure and utilization of social support, was significantly related to frequency of contact (face to face encounters).

Race had no appreciable affect on any of the network variables considered. Marital status proved to be significantly related to two network variables (network composition and frequency of contact). Education proved to be significantly associated with one structural variable - closeness.

The aforementioned relationships noted above are summarized in Table 31 presented on the following page.
TABLE 31
DEPENDENT VARIABLES INTERCORRELATED WITH
SOCIO-DEMOGRAPHIC VARIABLES

<table>
<thead>
<tr>
<th>DEPENDENT VARIABLES</th>
<th>Subject Age</th>
<th>Subject Gender</th>
<th>Subject Race</th>
<th>Marital Status</th>
<th>Employ. Status</th>
<th>Subj. Educ.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Network Composition</td>
<td>-.09</td>
<td>.06</td>
<td>.00</td>
<td>.35 **</td>
<td>.14</td>
<td>.07</td>
</tr>
<tr>
<td></td>
<td>p = .53</td>
<td>p = .66</td>
<td>p = .98</td>
<td>p = .01</td>
<td>p = .30</td>
<td>p = .61</td>
</tr>
<tr>
<td>2. Network Size</td>
<td>.19</td>
<td>.22</td>
<td>-.01</td>
<td>.11</td>
<td>.34 *</td>
<td>.24</td>
</tr>
<tr>
<td></td>
<td>p = .16</td>
<td>p = .10</td>
<td>p = .92</td>
<td>p = .43</td>
<td>p = .01</td>
<td>p = .08</td>
</tr>
<tr>
<td>3. Proximity</td>
<td>.14</td>
<td>.19</td>
<td>-.02</td>
<td>.04</td>
<td>-.15</td>
<td>.16</td>
</tr>
<tr>
<td></td>
<td>p = .31</td>
<td>p = .15</td>
<td>p = .89</td>
<td>p = .76</td>
<td>p = .28</td>
<td>p = .25</td>
</tr>
<tr>
<td>4. Duration</td>
<td>.18</td>
<td>.19</td>
<td>-.06</td>
<td>.25</td>
<td>-.07</td>
<td>.09</td>
</tr>
<tr>
<td></td>
<td>p = .18</td>
<td>p = .17</td>
<td>p = .65</td>
<td>p = .06</td>
<td>p = .63</td>
<td>p = .53</td>
</tr>
<tr>
<td>5. Intensity</td>
<td>-.01</td>
<td>.16</td>
<td>.15</td>
<td>.01</td>
<td>.14</td>
<td>.29 *</td>
</tr>
<tr>
<td></td>
<td>p = .95</td>
<td>p = .25</td>
<td>p = .26</td>
<td>p = .93</td>
<td>p = .39</td>
<td>p = .02</td>
</tr>
<tr>
<td>6. Frequency Average Visit</td>
<td>-.14</td>
<td>-.29 *</td>
<td>-.16</td>
<td>.12</td>
<td>.17</td>
<td>.08</td>
</tr>
<tr>
<td></td>
<td>p = .30</td>
<td>p = .03</td>
<td>p = .25</td>
<td>p = .39</td>
<td>p = .22</td>
<td>p = .57</td>
</tr>
<tr>
<td>Average Talk</td>
<td>.08</td>
<td>.25</td>
<td>.17</td>
<td>.32 *</td>
<td>.05</td>
<td>.11</td>
</tr>
<tr>
<td></td>
<td>p = .56</td>
<td>p = .06</td>
<td>p = .21</td>
<td>p = .02</td>
<td>p = .72</td>
<td>p = .43</td>
</tr>
<tr>
<td>7. Multiplexity</td>
<td>.01</td>
<td>.04</td>
<td>.08</td>
<td>.02</td>
<td>-.14</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>p = .93</td>
<td>p = .77</td>
<td>p = .56</td>
<td>p = .90</td>
<td>p = .33</td>
<td>p = .75</td>
</tr>
</tbody>
</table>

Two-tailed tests of significance
* p < .05
** p < .01

E. INTERCORRELATIONS AMONG INDEPENDENT VARIABLES

This section summarizes the results of intercorrelations among 15 independent variables. The aforementioned analysis yielded 13 significant relationships. Coefficients of association for all independent variables are displayed in Tables 32. Relationships achieving statistical significance are displayed in Table 33.
# TABLE 32 - INTERCORRELATIONS AMONG 15 INDEPENDENT MEASURES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Funct. Vision (1)</td>
<td>*</td>
<td>.14</td>
<td></td>
<td>.42**</td>
<td>.34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age Onset (2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Res. School (3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accept. Blind (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phys. Impair. (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indep. (8)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Adl) (7)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cope (9)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Life Satisf. (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status (11)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment Status (12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educat. (14)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.30</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Race (15)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Two-tailed Tests of Significance
### TABLE 33
SIGNIFICANT RELATIONSHIPS AMONG INDEPENDENT VARIABLES

<table>
<thead>
<tr>
<th>INDEPENDENT MEASURES</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Functional Vision</td>
<td>Residential Schooling</td>
<td>.36</td>
</tr>
<tr>
<td>2. Functional Vision</td>
<td>Progressive Dx</td>
<td>.52</td>
</tr>
<tr>
<td>3. Age of Onset</td>
<td>Residential Schooling</td>
<td>.42</td>
</tr>
<tr>
<td>4. Age of Onset</td>
<td>Gender</td>
<td>-.27</td>
</tr>
<tr>
<td>5. Residential School</td>
<td>Life Satisfaction</td>
<td>.34</td>
</tr>
<tr>
<td>6. Acceptance Blindness</td>
<td>Life Satisfaction</td>
<td>.28</td>
</tr>
<tr>
<td>7. Progressive Diag.</td>
<td>Education</td>
<td>-.32</td>
</tr>
<tr>
<td>8. Physical Impairment</td>
<td>Independence</td>
<td>-.33</td>
</tr>
<tr>
<td>9. Physical Impairment</td>
<td>Marital Status</td>
<td>-.37</td>
</tr>
<tr>
<td>10. Physical Impairment</td>
<td>Employment Status</td>
<td>.37</td>
</tr>
<tr>
<td>11. Gender</td>
<td>Coping</td>
<td>.35</td>
</tr>
</tbody>
</table>

Two-tailed tests of significance

Vision level was moderately to strongly correlated with two variables; residential schooling, and cause of blindness. Subjects with the poorest vision or with no residual vision whatsoever were the most likely to have attended residential schools for the blind. The correlation between functional vision and cause of blindness indicates that those individuals whose blindness was progressive tended to have higher vision than those who lost their vision as the result of injury, or those who suffered sudden vision loss at birth or soon thereafter.

A moderate to strong relationship was also obtained for age of onset and residential schooling. This correlation corroborates a fact long known - that persons blinded while school-aged are significantly more likely to attend a residential school for the blind than persons who experience significant visual impairment during late adolescence and adulthood.

Moderate correlations were obtained for physical impairment and marital status; for physical impairment and employment status; and for physical impairment and adaptive behavior. These relationships were not predicted, but
are predictable. Physical impairment was significantly correlated with being unmarried, and with being less adept in self-help skill areas. Physical impairment was also significantly linked to employment/unemployment. Subjects with disabilities and other health impairments displayed a moderate tendency toward employment. The fact that a number of study subjects were employed in sheltered workshops in the Wilmington area may help to explain a finding that would otherwise not make much sense.

Other findings worthy of note include the relationships between gender and onset of blindness, and cause of blindness and education. In the case of the first correlation, male subjects were more likely to have lost their vision as adults than female subjects. The second correlation indicates that persons who lost their vision progressively completed fewer years of education than persons who incurred a more acute or sudden vision loss.

The final group of significant correlations interpreted in this section involve relationships between gender and mastery, residential schooling and life satisfaction, and acceptance of blindness and life satisfaction.

The moderate correlation obtained between gender and mastery indicates that female subjects scored higher on the mastery scale than male subjects. Married subjects tended to score higher on the mastery scale than unmarried subjects. These results conform with other published results which indicate that women generally cope better with stress than men, and that marriage tends to protect health. The significant correlations obtained for residential school and life satisfaction and acceptance of blindness and life satisfaction suggest that acceptance of blindness and life contentment dovetail — and that attenders of residential schools for the blind are significantly more likely to enjoy the quality of their lives than non-attenders.
F. INTERCORRELATIONS AMONG SOCIAL NETWORK VARIABLES

This section focused on the interrelationship of the seven network measures addressed in this study. Intercorrelations of network characteristics produced 16 significant relationships. Network size appears to exert the widest influence on the greatest number of network dimensions. This interpretation is evident in Table 34, presented below.

<table>
<thead>
<tr>
<th>DEPENDENT MEASURES</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Network Size</td>
<td>Role Multiplexity</td>
<td>-.30</td>
</tr>
<tr>
<td>2. Network Size</td>
<td>Intensity/Closeness</td>
<td>.75</td>
</tr>
<tr>
<td>3. Network Size</td>
<td>Duration</td>
<td>.43</td>
</tr>
<tr>
<td>4. Network Size</td>
<td>Proximity</td>
<td>.81</td>
</tr>
<tr>
<td>5. Network Size</td>
<td>Frequency - TALK</td>
<td>.88</td>
</tr>
<tr>
<td>6. Network Size</td>
<td>Frequency - VISIT</td>
<td>.83</td>
</tr>
<tr>
<td>7. Role Multiplexity</td>
<td>Intensity/Closeness</td>
<td>-.46</td>
</tr>
<tr>
<td>8. Intensity/Closeness</td>
<td>Proximity</td>
<td>.61</td>
</tr>
<tr>
<td>9. Intensity/Closeness</td>
<td>Frequency - TALK</td>
<td>.61</td>
</tr>
<tr>
<td>10. Intensity/Closeness</td>
<td>Frequency - VISIT</td>
<td>.53</td>
</tr>
<tr>
<td>11. Duration</td>
<td>Proximity</td>
<td>.32</td>
</tr>
<tr>
<td>12. Duration</td>
<td>Composition</td>
<td>.32</td>
</tr>
<tr>
<td>13. Duration</td>
<td>Frequency - TALK</td>
<td>.39</td>
</tr>
<tr>
<td>14. Duration</td>
<td>Frequency - VISIT</td>
<td>.34</td>
</tr>
<tr>
<td>15. Proximity</td>
<td>Frequency - TALK</td>
<td>.62</td>
</tr>
<tr>
<td>16. Proximity</td>
<td>Frequency - VISIT</td>
<td>.54</td>
</tr>
</tbody>
</table>

Two-tailed tests of significance

Moderate to strong correlations tie network size to six network dimensions. Network size was significantly related to role multiplexity, intensity of unique ties, duration, proximity, and to frequency of interaction (e.g.; frequency of phone contact, as well as frequency of face to face encounters).

The relationships between network size and role multiplexity, and network size and intensity require some explanation. The negative correlation between the former variables indicate that study subjects naming a large number of
supportive ties tended to have a decreasing percentage of multiplex ties. The latter correlation between size and intensity indicates that subjects with large networks tended to feel less intimately tied to the persons they named as supports than subjects with smaller networks. Proximity was inversely related to network size. Subjects with smaller networks tended to live in closer proximity to the persons who they named as supports than subjects professing to have large networks.

Large networks were strongly associated with ties that were longstanding. Subjects with large networks had network ties of a longer duration. Subjects with larger networks also were inclined to converse more often with their friends and kin on the phone, and also tended to visit more with the same.

Increased numbers of multiplex relationships were positively associated with intimacy. As the number of multiplex ties increased, perceived closeness to individuals also increased. The strength of ties was also found to be related to proximity. Subjects tended to feel closest to persons living nearest to them. Subjects were also inclined to talk and visit most with the persons in their network whom they felt closest, and to whom they lived the nearest.

Other correlations obtained indicate that kin helpers were likely to be known the longest time.
TABLE 35  INTERCORRELATIONS AMONG 8 DEPENDENT MEASURES

<table>
<thead>
<tr>
<th>NETWORK SIZE (1)</th>
<th>MULTIPLX (2)</th>
<th>CLOSINESS (3)</th>
<th>DURATION (4)</th>
<th>PROXIMITY (5)</th>
<th>COMPOSTH (6)</th>
<th>FREQUENCY (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NETWORK SIZE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MULTIPLX (2)</td>
<td>-.30*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLOSINESS (INTENSITY) (3)</td>
<td>.75**</td>
<td>-.46</td>
<td>p=.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DURATION (4)</td>
<td>.43**</td>
<td>.00</td>
<td>.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.00</td>
<td>p=.98</td>
<td>p=.24</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROXIMITY (5)</td>
<td>.81**</td>
<td>-.23</td>
<td>.61**</td>
<td>.32*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p=.00</td>
<td>p=.09</td>
<td>p=.00</td>
<td>p=.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMPOSITION (6)</td>
<td>.11</td>
<td>.11</td>
<td>-.04</td>
<td>.32*</td>
<td>-.02</td>
<td></td>
</tr>
<tr>
<td>p=.42</td>
<td>p=.42</td>
<td>p=.77</td>
<td>p=.02</td>
<td>p=.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FREQUENCY (7)</td>
<td>.68**</td>
<td>-.19</td>
<td>.61**</td>
<td>.39**</td>
<td>.62**</td>
<td>.23</td>
</tr>
<tr>
<td>p=.00</td>
<td>p=.17</td>
<td>p=.00</td>
<td>p=.00</td>
<td>p=.00</td>
<td>p=.00</td>
<td>p=.08</td>
</tr>
<tr>
<td>VISIT (8)</td>
<td>.83**</td>
<td>-.23</td>
<td>.53**</td>
<td>.34**</td>
<td>.54**</td>
<td>.22</td>
</tr>
<tr>
<td>p=.00</td>
<td>p=.09</td>
<td>p=.00</td>
<td>p=.01</td>
<td>p=.00</td>
<td>p=.00</td>
<td>p=.10</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.90**</td>
</tr>
</tbody>
</table>

Two-tailed tests of significance

* p < .05
** p < .01
G. MULTIVARIATE ANALYSIS

Analysis has thusfar reflected concern with description of specified attributes of the support networks of study subjects. Effort has also been directed toward providing a description of the content of ties that link blind and visually impaired young subjects to the members of their families, to friends, and to other network relations. The interrelationships among five vision-related variables, six socio-demographic variables, four psychosocial variables and nine social network variables have also been examined.

In this section the relationships between multiple independent variables and two disparate criterion variables are explored. Life satisfaction and network size are conceptualized and manipulated as endogenous variables. Multiple regression procedures are used to assess the degree of fit between specified exogenous variables, and each of the above noted endogenous variables.

**Stepwise Regression Analysis of Designated Vision-Related, Demographic, Psychosocial and Network Variables on Life Satisfaction**

A review of relevant research literature indicates that researchers have reported mixed findings with regard to the relationship between social support and life satisfaction. In a study of 2,321 men and women 50 years of age and older, Goudy and Goudeau (1981) found a significant relationship between friendship ties, community involvement and life satisfaction. In a similar study that involved a sample of 74 men and women with a mean age of 70 years, Mancini, Quinn, Gavigan, et al. (1980) found life satisfaction and social network interaction to be unrelated. In yet another study, however, Phillips and Fischer (1981) found network size, number of nonkin, and number of social companions to be significantly associated with happiness.

To identify the best predictors of life satisfaction for the study sample, 13 variables were identified and selected for simultaneous entry into a multiple
regression equation. Predictor variables were identified on the basis of their significant zero order correlations with the criterion variable, or were selected on the basis of their theoretical association with the criterion variable. The variables tested in the regression model included five vision-related measures, three socio-demographic variables, two psychosocial variables, and three network variables. The variables tested included: (1) acceptance of blindness, (2) type of school attended, (3) amount of functional vision, (4) cause of blindness, and (5) age of onset of blindness, (6) employment status, (7) marital status, (8) physical impairment, (9) mastery, (10) adaptive behavior, (11) network composition, (12) network size, and (13) closeness.

An intercorrelation matrix for the 13 predictor variables has been reproduced on the following page (Table 36).
<table>
<thead>
<tr>
<th></th>
<th>ACCEPT BLIND</th>
<th>RES SCHOOL</th>
<th>FUNCTION VISION</th>
<th>CAUSE OF BLIND</th>
<th>AGE OF ONSET</th>
<th>EMPLOY STATUS</th>
<th>MARITAL STATUS</th>
<th>PHYS IMPAIR</th>
<th>MASTERY</th>
<th>ADAPTIVE BEHAVIOR</th>
<th>NETWORK COMP</th>
<th>NETWORK SIZE</th>
<th>CLOSURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCEPT BLIND</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RES SCHOOL</td>
<td>.23</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUNCTION VISION</td>
<td>.12</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAUSE OF BLIND</td>
<td>-.09</td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AGE OF ONSET</td>
<td>.18</td>
<td>.41</td>
<td>.14</td>
<td>.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMPLOY STATUS</td>
<td>-.01</td>
<td>-.14</td>
<td>-.05</td>
<td>.12</td>
<td>-.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MARITAL STATUS</td>
<td>.05</td>
<td>.09</td>
<td>.08</td>
<td>.15</td>
<td>.10</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHYSICAL IMPAIR</td>
<td>.06</td>
<td>-.10</td>
<td>.04</td>
<td>-.14</td>
<td>-.09</td>
<td>-.37</td>
<td>-.37</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MASTERY</td>
<td>-.21</td>
<td>.12</td>
<td>.12</td>
<td>-.01</td>
<td>-.04</td>
<td>-.13</td>
<td>.25</td>
<td>-.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADAPTIVE BEHAV.</td>
<td>-.04</td>
<td>.07</td>
<td>-.11</td>
<td>-.08</td>
<td>-.22</td>
<td>.12</td>
<td>.03</td>
<td>-.33</td>
<td>.17</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NETWORK COMP.</td>
<td>.09</td>
<td>.11</td>
<td>.19</td>
<td>.08</td>
<td>.31</td>
<td>.14</td>
<td>.35</td>
<td>-.13</td>
<td>.22</td>
<td>.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NETWORK SIZE</td>
<td>.02</td>
<td>-.15</td>
<td>-.29</td>
<td>-.31</td>
<td>-.18</td>
<td>.34</td>
<td>.11</td>
<td>-.15</td>
<td>.27</td>
<td>.07</td>
<td>.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLOSERNESS</td>
<td>.09</td>
<td>-.02</td>
<td>-.04</td>
<td>-.23</td>
<td>-.05</td>
<td>.12</td>
<td>.01</td>
<td>.11</td>
<td>.16</td>
<td>.12</td>
<td>.04</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>SATISFACTION</td>
<td>-.28</td>
<td>.34</td>
<td>.12</td>
<td>.08</td>
<td>.02</td>
<td>.14</td>
<td>.10</td>
<td>.11</td>
<td>.43</td>
<td>.03</td>
<td>-.07</td>
<td>.16</td>
<td>.21</td>
</tr>
</tbody>
</table>
Results of Regression Analysis on Life Satisfaction

The stepwise multiple regression procedures outlined in the preceding section identified four predictor variables which were significant at the .01, and .05 level, respectively. They are: mastery, type of school attended, acceptance of blindness, and employment status. In combination, these four variables explained 40% of the variance in the criterion variable.

Mastery, previously defined as a continuous variable representing the extent to which individuals felt that they exercised personal control over their lives, exerted the strongest direct effect on life satisfaction. A review of Table 37 (below) will show that mastery explained approximately 19% of the unique variance on life satisfaction and accounted for more than one-half of the total explained variance for life satisfaction. This finding is consistent with "a growing body of literature [which] emphasizes the positive health effects of increased personal control over life events" (Dean, 1986; p.100).

Residential school attendance, long known by rehabilitation specialists to be highly correlated with various measures of successful psychosocial adjustment to blindness (e.g.; employment) also emerged from the stepwise analysis as a salient predictor of life satisfaction; explaining 8% of the variance in the dependent variable that is not explained by another variable. This result lends support for the argument that residential schools provide unique educational opportunities that other settings (e.g.; public school programs) may be unable to furnish to blind and/or severely visually impaired students. Residential school attenders appear to be significantly more likely to report greater satisfaction with their lives than non-attenders. Moreover, the affect of residential residential schooling on subjects clearly appears to extend into young adulthood.
Another vision-related variable, acceptance of blindness, was also a significant predictor of life satisfaction among study subjects. This second vision-related variable, assessing adaptation to sight loss, as well coping with the stresses of blindness, explained 8% of the unique variance in life satisfaction. Mastery and acceptance of blindness, which represent independent cognitive constructs, accounted for a high proportion of the unique explained variance. Given the study design and the recognized limitations of the statistical procedures used here, it is not possible to infer causality or causal order among the various independent exogenous variables, or to infer causal order between exogenous variables and endogenous variables. However, it seems clear that an increased sense of personal competence does contribute to enhanced life satisfaction, although a case could be made for an inverse causal relationship between the two variables. Results clearly show that study subjects who recorded high scores on the measure of mastery were significantly more inclined to receive high scores on the life satisfaction measure. The question of whether persons who perceive themselves as being either less personally competent, more "externally controlled", or exercise insufficient control over the decisions and/or events that shape everyday life can be helped to change their orientation is a separate, yet related question. Studies conducted with blind and visually impaired subjects suggest that different behavioral and cognitive-behavioral interventions may help persons to achieve an enhanced sense of mastery of their social environments (See for example: Erin, Dignan & Brown, 1991; Harrell & Strauss, 1986; Welch, 1978).

Few would argue the point that employment is an avenue to financial independence. Moreover, it is largely through financial independence that individuals gain an increased sense of adequacy. Tuttle (1984) asserts that "the
degree to which a blind individual has attained or regained a status equal to his peers with comparable abilities is the degree to which he/she is likely to achieve self-acceptance and self esteem" (Tuttle, 1984; p.261). Blind and visually impaired persons who are unemployed, underemployed, or who accept employment at skill levels below their abilities and training find themselves in a serious dilemma. They desire the financial independence that comes with employment. However, their self-esteem and self-acceptance may suffer as a result of their underemployment.

The regression procedures used to select the variables that best predict life satisfaction identified employment status as the last of four significant predictors of life satisfaction. Employment accounted for 5% of the variance not explained by any of the preceding variables. With close to 45% of the study sample wanting for work, this result is particularly compelling. The large "minority" of young adults who do not work lack an unarguably important psychological resource; work. And, as noted earlier, this deficit carries very dramatic developmental implications. Erickson’s epigenetic model of personality development asserts that young adults who are denied the opportunity to both establish and develop a stable work identify lack the means to continue their strivings toward growth and self-actualization and become susceptible to the negative consequences of arrested psychosocial growth and development. A failure to master developmental challenges associated with unique life stages may additionally negatively impact future life stage development.
Table 37

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. MASTERY</td>
<td>.19</td>
<td>.19</td>
<td>.33</td>
<td>.11</td>
<td>.35**</td>
<td>.43</td>
<td>.34</td>
<td>.40</td>
</tr>
<tr>
<td>2. RESIDENT. SCHOOLING</td>
<td>.27</td>
<td>.08</td>
<td>4.38</td>
<td>1.30</td>
<td>.39**</td>
<td>.34</td>
<td>.37</td>
<td>.43</td>
</tr>
<tr>
<td>3. ACCEPT.OF BLINDNESS</td>
<td>.34</td>
<td>.08</td>
<td>-1.62</td>
<td>.64</td>
<td>-.29*</td>
<td>-.28</td>
<td>-.28</td>
<td>-.34</td>
</tr>
<tr>
<td>4. EMPLOYMENT STATUS</td>
<td>.40</td>
<td>.05</td>
<td>2.27</td>
<td>1.09</td>
<td>.23*</td>
<td>.14</td>
<td>.23</td>
<td>.28</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01

Stepwise Regression Analysis of Designated Vision-Related, Demographic, and Psychosocial Variables on Network Size

In this section, the relationship between multiple exogenous variables, and network size is explored. With the exception of network size, studies have shown little consistent evidence that network characteristics are positively or negatively related to health or mental health outcomes. While several researchers have established a positive link between network size and well-being (Brim, 1974; Henderson, et al., 1978), Berkman and Syme (1979) found that larger network size and greater frequency of contact were related to decreased mortality for men and women at all ages, even when other factors such as socio-economic status, initial health status and health practices were statistically controlled. Hirsch, (1981), McKinlay (1981), Mitchell and Trickett (1980) have each discovered relationships between network size and effective coping. On the other hand, Cohen, Teresi and Holmes (1986) found no relationship between network size and psychological symptomatology in an inner city elderly population. Similarly, Schaefer, et al. (1981) found network size to be unrelated to depression,
negative morale, and self-reported physical health.

To identify the best predictors of network size for the study sample, a group of variables having the highest zero order correlations with the criterion variable were identified and combined with a group of variables previously linked to network size. The variables identified and tabbed as salient predictors of network size included: (1) Type of school attended, (2) amount of functional vision, (3) age of onset of blindness, (4) age, (5) gender, (6) marital status, (7) employment status, (8) degree of physical/visual impairment, (9) adaptive behavior, and, (10) mastery.

These variables were analyzed using stepwise regression procedures. This statistical procedure allowed for the simultaneous entry of multiple independent measures in an effort to determine their uncontrolled affect on a single dependent measure. An intercorrelation matrix for the predictor variables tested in the regression analysis is displayed below (Table 38).
### Table 38
**Correlation Matrix for 10 Exogenous Variables Used to Predict Network Size**

<table>
<thead>
<tr>
<th></th>
<th>Function Vision</th>
<th>Res School</th>
<th>Age of Onset</th>
<th>Gender (Female)</th>
<th>Marital Status</th>
<th>Employ Status</th>
<th>Age</th>
<th>Phys Impair</th>
<th>Mastery</th>
<th>Adaptive Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function Vision  (1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Res School (2)</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of Onset (3)</td>
<td>.14</td>
<td>.41</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (4)</td>
<td>.20</td>
<td>.14</td>
<td>-.27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marital Status (5)</td>
<td>.08</td>
<td>.09</td>
<td>.10</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employ Status (6)</td>
<td>-.05</td>
<td>-.14</td>
<td>-.22</td>
<td>-.13</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (7)</td>
<td>-.25</td>
<td>-.07</td>
<td>.15</td>
<td>-.12</td>
<td>.23</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Impair (8)</td>
<td>.04</td>
<td>-.06</td>
<td>-.09</td>
<td>.09</td>
<td>-.37</td>
<td>-.37</td>
<td>-.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mastery (9)</td>
<td>.12</td>
<td>.12</td>
<td>-.04</td>
<td>.35</td>
<td>.25</td>
<td>-.13</td>
<td>.16</td>
<td>.17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adaptive Behav. (10)</td>
<td>-.11</td>
<td>.07</td>
<td>-.22</td>
<td>.11</td>
<td>.03</td>
<td>.12</td>
<td>-.10</td>
<td>-.33</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Network Size (11)</td>
<td>-.29</td>
<td>-.15</td>
<td>-.18</td>
<td>.23</td>
<td>.11</td>
<td>.34</td>
<td>.19</td>
<td>-.15</td>
<td>.27</td>
<td>.07</td>
</tr>
</tbody>
</table>
Results of Regression Analysis on Network Size

Of ten variables tested as predictors of network size, four were found to have independent direct affects on the criterion variable that achieved statistical significance (p < .05, .01). Employment status, mastery, amount of functional vision, and gender emerged from the regression analysis as significant predictors of network size for the study sample. Combined, the above noted variables explained 36% of the variance in network size.

A review of Table 39, which is found on page 137, will show that employment status proved to be the best, albeit modest, predictor of network size, explaining 11% of the unique variance in the criterion variable. This finding indicates that subjects who had jobs were significantly more likely to identify with a large network than those subjects who were unemployed. This result is consistent with the view that the workplace serves an important function in our society as valuable location for meeting and making new friends; although it is also clear that there are instances and times when work ties are less than desireable in the manner in which they may contribute to stress.

Stepwise regression procedures also identified mastery as a significant predictor of network size. Study subjects with high scores on the mastery index were significantly more likely than subjects achieving low scores to have large networks. High scorers may manifest pro-active, pro-social behavior that ultimately gets translated or transformed into interpersonal relationships. Mastery explained approximately 10% of the variance in network size.

Functional vision proved to be the only vision-related variable with a significant direct affect on network size. Functional vision explained approximately 10% of the unique variance in the criterion variable. Subjects with the poorest vision proved statistically to be more likely to identify a
large number of network links than subjects with higher levels of functional vision. While seemingly counterintuitive, this result is, in fact, logical and is easy to explain. Subjects with the poorest vision were typically those who were totally blind. The negative relationship between functional vision and network size effectively indicates that subjects who were totally blind were inclined to have larger networks than subjects with higher vision levels. This relationship appears to reflect the intrusion/operation of a third variable; the age of onset of blindness. The majority of subjects who were totally blind were also congenitally blind, while subjects with higher vision levels typically experienced an onset of blindness in childhood, adolescence, or adulthood.

The fourth and last variable that emerged from the regression analysis as a salient predictor of network size was gender. Gender accounted for approximately 5% of the unique variance in network size. Female subjects were significantly more likely to have large networks than their male counterparts. This finding is generally consistent with the literature on gender and social support. Most studies find that females draw on social support more than males, but that males tend to develop social supports that serve them well in the workplace, but invest relatively less than women in more intimate networks (Schilling, 1987).

The implications of both sets of analyses presented in this section are reviewed and discussed in detail in the final and concluding chapter.
### Table 39

**Stepwise Regression of Designated Exogenous Variables on Network Size**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EMPLOY. STATUS</td>
<td>.11</td>
<td>.11</td>
<td>2.31</td>
<td>.68</td>
<td>.39**</td>
<td>.34</td>
<td>.38</td>
<td>.43</td>
</tr>
<tr>
<td>MASTERY/ COPING</td>
<td>.21</td>
<td>.10</td>
<td>.16</td>
<td>.07</td>
<td>.28*</td>
<td>.27</td>
<td>.26</td>
<td>.31</td>
</tr>
<tr>
<td>FUNCT. VISION</td>
<td>.31</td>
<td>.10</td>
<td>-.51</td>
<td>.17</td>
<td>-.35**</td>
<td>-.29</td>
<td>-.35</td>
<td>-.40</td>
</tr>
<tr>
<td>GENDER (FEMALE)</td>
<td>.36</td>
<td>.05</td>
<td>1.50</td>
<td>.73</td>
<td>.25*</td>
<td>.22</td>
<td>.23</td>
<td>.28</td>
</tr>
</tbody>
</table>

* * p < .05  
** ** p < .01
1. Classification of the causes of blindness into dichotomous groups was made by an ophthalmologist who reviewed data from each case and who assigned each cause to one of the two categories.
Chapter Overview

The ecological approach to social work practice establishes the person as an adapting and coping creature, striving for growth, mastery, and interaction with his/her environment. The eco-systems framework directs social work practitioners to improve the person-environment fit. To achieve this objective, social work interventions may be directed toward the person or toward the environment. Action may similarly be aimed at the interface of the person-environment.

Social support networks are an important part of the social environment and play a key role in enabling the person to cope and adapt to changing circumstances and environments across the life-cycle.

In recent years there has been an explosion of interest and concomitant increase in scholarly activity related to social support and social networks. Despite all of the activity, few have studied the social networks of handicapped and disabled persons. Deep gaps in knowledge and understanding of the supportive networks of handicapped persons extend to blind and visually impaired young adults.

This study addresses questions that pertain to visual impairment and social network structure. This dissertation also explores the relationship between visual impairment and access to social support. Also addressed is the question of how blind and visually impaired young adults extend or enlarge their social support networks.

This chapter begins with a brief review of previous studies of blind adults with particular attention focused on demographics and service needs of blind and
visually impaired adults. The socio-demographic characteristics of my 55 young adult subjects are also discussed and compared in light of previous research findings.

Study hypotheses are examined in the third section of this chapter under the heading of "The Availability, Mobilization and Utilization of Support". The structural and interactional characteristics of the support networks of my subjects are next presented and analyzed. My findings are examined in light of previous network studies of adults without known visual impairments.

Attention subsequently moves to the issue of social network formation. A normative model of network/friendship formation is presented and my own findings are discussed with respect to this model.

The chapter concludes with a section that presents an application of findings to social casework with blind and visually impaired adults. Findings are translated into helping strategies that are consistent with an integrated model of practice which embodies a life-span perspective with regard to social support.

**Demographics and Identified Needs of Visually Impaired Adults**

When Josephson (1968) surveyed a large group of blind adults residing throughout the continental U.S. in 1968, he found a loosely configured network of federal, state and local public and private agencies offering a diverse set of financial, educational, vocational, recreational and health programs and services to men, women and children. He found the quantity and quality of service and the means of service delivery varying markedly from place to place. Josephson found a raft of programs earmarked for visually impaired children, and a host of services geared to the rehabilitation of newly blinded adults. The elderly blind and multiply impaired received far less care and far less attention.
Neither Josephson, nor others whose work has been summarized in this manuscript, considered young adults with severe visual impairments to be an underserved population — nor did they consider young adults to constitute a population at-risk of poverty or social isolation. In his research concerned with the social life of blind adults, Josephson found the vast majority of young adults he surveyed to pursue many different personal interests, to participate in a cross-section of activities and also to be in receipt of a wide array of social services. With respect to unmet service needs, Josephson identified vocational training, and orientation and mobility instruction as specific programs most in need of expansion. Josephson also noted a strong tendency for blind adults to rely on sighted companions for assistance with travel outside the home. In most cases, such dependence upon sighted helpers correlated with low activity and with a personal disposition toward reclusion.

While he found among men and women 65 years and over the highest proportion of persons living in poverty; the highest rate of unemployment; the highest proportion of persons in poor health; and indications of inactivity and social isolation, Josephson detected all of the above problems among a discernible group of visually impaired young adults. This group constituted roughly 4% of Josephson's 21 to 34 year old adult sample.

The disaffected group of young adults showed notable signs of boredom and unhappiness. Individuals averaged eight or more hours each weekday watching television and/or listening to the radio. Forty five percent of the young adult sample were unemployed. These individuals expressed little hope of ever finding work.

Recent studies, most notably those by Resnick (1983), and by Pfouts and Nixon (1982), challenge the notion that most visually impaired young adults live
full, active lives and are largely integrated into the social mainstream. These studies generally suggest that the majority of blind and visually impaired young adults fall within a continuum bounded by the extremes of isolation and integration.

In her study of blind adults residing throughout the Western United States, Resnick found a high proportion of individuals pursing careers in areas previously unknown or closed to visually handicapped persons. The majority of her subjects also reported having considerable contact with sighted persons—over eighty percent reported having sighted friends. A majority participated in a range of indoor and outdoor activities outside of work.

Close to 50% of her subjects were married, or lived with a companion. Thirty percent of these individuals were married to sighted persons.

Their social successes notwithstanding, the majority of Resnick's respondents disclosed strong feelings related to discrimination. Fifty percent indicated that they had experienced discrimination. Twenty eight percent of her sample revealed that they often felt lonely. Twenty three percent attributed previous feelings of isolation to blindness.

In the course of summarizing her findings and putting them into a perspective, Resnick acknowledged the uniqueness of her sample. She characterized her purposive sample of 72 as "a critical minority, a cutting edge, [indicating] where many blind people will be headed in the future" (Resnick, 1983; p.477).

A two person team which conducted research in the same time period found greater heterogeneity among 98 blind adult North Carolinians. Pfouts and Nixon generally found individuals in their sample to be less assimilated. They found "well educated white males with a wide range of independence skills" to be "clear exceptions to an otherwise bleak picture of unemployment and under-employment"
(Pfouts and Nixon, 1982; p.47). Only a fraction of their subjects actually appeared to have achieved the success in obtaining high status work and the extensive interaction with sighted peers that the majority of Resnick's subjects had reported.

Pfouts and Nixon also found level of education to be highly correlated with employment. High school graduates, for example, proved to be considerably more likely to be employed than non-graduates. However, the direct relationship between education and employment so clearly in evidence among Pfouts and Nixon's respondents was not apparent among the blind adults who had been studied by Josephson (1968). Josephson found significant regional differences among his respondents with regard to education and rates of employment.

Marital status and gender were also identified as important correlates of employment. Blind male subjects married to blind females proved to have the highest employment rates. Eighty two percent of the blind males married to blind women were gainfully employed. Blind males with sighted wives did the next best in securing employment (47%). Thirty percent of blind single males found employment. Among females, blind women married to blind men were the most likely to secure work (41%). By contrast, 20% of single females obtained employment. Blind women with sighted husbands were even less apt to be employed (19%).

Pfouts and Nixon also detected a relationship between educational attainment and level of activity. Non-graduates were generally considerably less active than high school graduates. In addition, unemployed non-graduates were also prone to spending many hours sleeping and engaging in time-killing solitary activities.

Demographics and Identified Needs of Study Subjects

The blind and visually impaired young adults who participated in this study displayed many of the characteristics evident among blind adults previously
A high percentage of those interviewed possessed impressive educational credentials which were comparable to those of Resnick's subjects. Forty two percent completed twelve years of schooling; an additional 47% completed additional schooling. Nine percent of the young adult Delawareans who made up the study sample possessed advanced degrees in one of the following fields: rehabilitation counseling, business administration, education or social work. Eleven percent of the study respondents were graduates of four year colleges or universities. Another 20% completed one to two years of college.

Like the majority of blind young adults interviewed by Resnick, the majority of young adult Delawareans studied (53%) were married or involved in a relationship. Twenty one percent of those who were coupled reported that their significant-other was either significantly visually impaired or blind. This compares with a 30% rate among Resnick's respondents.

The employment rate and the types of occupations blind and visually impaired young adult Delawareans reported were also similar to employment rates and occupational statistics reported by demographers (Johnson and Hafer, 1985; Kirchner and Peterson, 1985) and comparable to findings reported in studies of blind and visually impaired adults summarized earlier in this manuscript (Resnick, 1983; Pfouts and Nixon, 1982; Kim, 1970; Winton, 1970; Josephson, 1968). Fifty eight percent of my study sample (32 persons) were employed. The largest segment of this group (16) were employed as salespersons, skilled or semi-skilled laborers, or technicians. Three persons held service sector jobs such as postal worker, day-care provider, and tutor. Six persons were employed as professionals or in business occupations. These occupations and professions included: rehabilitation counselor, meteorologist, business executive, teacher,
small business proprietor, and word processor. Six persons worked in sheltered work settings; two of these individuals had multiple disabilities.

Those who were not working (23 subjects) gave various reasons for their unemployed status. Explanations were consistent with those found in the literature. Four of 23 (17%) subjects claimed an inability to work due to health reasons such as diabetes, kidney failure, hydrocephalus, and/or serious emotional difficulties. Twelve individuals (52% - 9 females, 3 males) expressed a desire to work, but identified three major barriers to employment: transportation, child care, and the lack of marketable job skills. Two of the ten had enrolled in local colleges to upgrade their job skills. Four married women with children, and one married man with children expressed no interest in entering the job market. These adults were largely content with their roles as housewives/househusbands. However, four of the nine women who wished to work, but who were not working, identified the lack of access to child care as a major factor contributing to their inability to enter the labor force. Female subjects also appeared to be more adversely affected by a lack of access to transportation than male subjects.

Only two persons; a married, childless, thirty seven year old woman, and a married, thirty eight year old man with two children, expressed no desire to work. In both cases, the spouses of each subject were also unemployed. Both households received SSI benefits.

The overwhelming majority of men and women sampled (96.4%) accepted their blindness. Moreover, a majority achieved high scores on an adaptive behavior measure indicating a positive behavioral adaptation to visual impairment. Like blind adults studied by others, the employed blind adult Delawareans in my sample were socially active. Employed men and women were significantly more likely to leave their homes than those who did not work outside their homes.
Nearly one-third of all respondents indicated that they ventured from their homes fewer than four times in a typical week.

Review and Discussion of Study Hypotheses

This study centered around a series of hypotheses that examined whether visual impairments, or the combination of visual and physical impairment, significantly influences selected dimensions of network structure. This study also addressed the question of whether visual and/or physical/health impairment influences access to social support.

Eight of the eleven study hypotheses explored predicted relationships between specified vision-related variables, specified psychosocial variables and network composition. Three of eleven study hypotheses predicted significant relationships between functional vision, employment status, physical impairment and network size.

A total of three study hypotheses were supported by sample data; the remaining eight hypotheses were not supported by the sample data as predicted relationships failed to reach pre-determined levels of statistical significance.

Hypotheses predicting positive relationships between network composition and age of onset of blindness (H3); network composition and marital status (H7); and network size and employment status (H9) were corroborated by Pearson Product-Moment correlations significant at the .05 level. A forth hypotheses which predicted a positive relationship between network size and functional vision (H2) was significant at the .02 level, however, the relationship between the aforementioned variables was negative rather than positive and the hypothesis could therefore not be accepted as stated.

Relationships predicted between network composition and functional vision
(H1); network composition and residential schooling (H4); network composition and age (H5); network composition and gender (H6); network composition and employment status (H8); network composition and physical impairment (H10); and, network size and physical impairment (H11) were not supported by study data.

The correlations obtained for hypotheses involving vision-related variables tell an interesting story. The predicted negative relationship between network composition and functional vision failed to materialize. This hypothesis predicted that the proportion of kin to nonkin would vary inversely with vision level; that subjects with little to no remaining vision would report a higher proportion of network ties to close family and other kin than subjects with higher amounts of residual vision. Results borne from analysis of network data did not support acceptance of the aforementioned hypothesis.

A key hypothesis predicting a relationship between network size and functional vision found partial support in the analysis of network data. A correlation coefficient significant at the .05 level was obtained for the relationship between network size and functional vision, however, the variables proved to be inversely, rather than positively related. The direction of the relationship reveals that study subjects with little or no vision prone to have larger networks than their counterparts with greater amounts of vision. There appears to be a reasonable explanation for this result.

The fact that the relationship between the two variables is negative suggests that persons with lower vision are prone to having large networks. Upon close examination of the raw data, it becomes evident that subjects with the poorest vision were indeed most inclined to have the largest networks. In most instances the subjects with the poorest vision were totally blind. Totally blind subjects were also most apt to have lost their vision early in life. Study
results show major differences between congenital and adventitiously blind persons with respect to both network size and network composition. Congenitally blind subjects had significantly larger networks than did adventitiously blind persons. Moreover, subjects who experienced an early onset of blindness were prone to naming a higher proportion of kin as potential sources of support than adventitiously blinded persons. These results are consistent with the characterization of late onset of blindness as socially disruptive, and parallel the published accounts of men and women who have indicated that their sight loss resulted in the loss of established relationships (Tuttle, 1984). The result also meshes with Lukoff and Whiteman's (1970) assertion that early onset, residual vision, and youthfulness correlate with strivings toward independence.

The effects of residential schooling, age, race, gender, marital status, and employment status were also analyzed in relation to network size and composition. Only the latter two of the six variables produced a significant effect on network composition or network size.

A negative relationship between residential school attendance and network composition had been predicted in a formal research hypothesis (H4). This prediction was not corroborated by study data. The prediction was grounded in studies which have found significant differences among attenders of residential schools for the blind and non-attenders in independence-orientation (Lukoff and Whiteman, 1970), and in employment outcome (Pfout and Nixon, 1982).

Although the residential schooling variable did not significantly effect network size or composition of the networks of subjects, a positive relationship approaching statistical significance was obtained between residential school attendance and the average length (duration) of network ties. The correlation between residential school attendance and duration indicates that attenders of
residential schools maintained ties to identified network members that were of a longer average duration than the ties of non-attenders. Winton (1970), Lukoff and Whiteman (1970), and Pfouts and Nixon (1982) each reported similar findings. This trend implies a unique continuity in the friendships of attenders of residential schools for the blind.

The influence of residential schooling on several dimensions of psychosocial functioning were also examined in this study. Residential school attendance proved to have several predictable, and several not-so-predictable effects on acceptance of blindness, adaptive behavior, employment, coping, and level of life satisfaction.

Perhaps most predictably, attenders of residential schools proved to be significantly more likely than non-attenders to accept their blindness or visual impairment. However, at the same time, attenders did not express a significantly greater sense of control over the course of daily events (mastery) than non-residential school attenders. Attenders did, however, feel significantly more satisfied with their lives than did non-attenders. Moreover, residential school attenders also proved to have more sophisticated and developed skills of daily living than non-attenders.

Analysis of study data also revealed evidence of an interaction between functional vision, residential school attendance and adaptive behavior. Residential school attenders with the lowest levels of functional vision tended to achieve higher scores in adaptive behavior than did residential school attenders with higher levels of residual vision.

Positive relationships predicted between network composition and age (H5), network composition and gender (H6), and network composition and marital status (H7) were also tested. The relationships predicted between network composition
and age, and network composition and gender were not supported by sample data. The relationship predicted between network composition and marital status, however, was corroborated by sample data.

The absence of a statistically significant relationship between network composition and age, and the absence of a significant relationship between network composition and gender are important findings. The significant relationship evident between network composition and marital status is also noteworthy. Prominent network studies have tended to support the view that social support varies as a function of temporal location in the human life cycle; with certain exceptions (Schulz and Rau, 1985). In similar fashion, a corpus of social network/social support studies have also shown a discernable relationship between gender and network composition. Previous studies have also established a link between marital status and network composition.

Empirical studies which have measured the exchange of support throughout the life course have shown that networks generally remain the most stable in terms of size and composition during the years approaching mid-life. Kahn and Antonucci (1981) found no evidence of a decline in the size of the personal networks of men and women 50 years and older. A study of native-born Detroit males, 21 to 61 years of age, produced similar results (Laumann, 1973). In the latter study, the number of kin, especially kin identified as close friends, remained consistent across young adulthood and mid-life. However, a secondary analysis of the same data led Stueve and Gerson (1977) to conclude that men "turnover" certain types of relationships during their twenties and thirties. Relationships increased in number through the young adult years, plateaued in middle-age, and eventually declined in late adulthood.

There are also a group of studies that indicate that gender, marriage and
parenthood independently influence network size, composition and utilization of social support.

Stueve and Gerson (1977) found differences between single and married men with regard to the retention/maintenance of friendships within early to mid-adulthood. Stueve et al. found that single men maintained relationships with neighbors and childhood friends and expended relatively less attention and effort toward making new friends than married men. By contrast, young married men were inclined to alter existing ties by replacing childhood friends with male peers drawn primarily from the workplace. New fathers, on the other hand, frequently used their neighborhoods as the prime source of new friendships.

A recent study by Fischer, Sollie, Sorell and Green (1989) also provides support for the view that marital status and gender differentially influence network size, network composition, and patterns of support utilization. Fischer et al. found that engaged and married men and women had social networks that were roughly equal in size to those of single men and women. They also found that engaged and married young adults reported a higher proportion of kin as members of their respective networks than single persons. Burda, Vaux and Schill (1984) found earlier that females had larger social networks composed of more similar others, and perceived themselves as having more support than did males.

The combined effects of blindness and physical impairment on network size and composition were also examined. Significant relationships between physical impairment and network composition, and physical impairment and network size were anticipated. However, neither set of predicted relationships was supported by study data. Level of impairment, however, was found to be significantly tied to employment. Study subjects with health problems and/or secondary disabilities were considerably more likely to have found work than study subjects without
the conditions previously noted. This trend reflects the relatively large number of men and women in the sample working in sheltered workshops.

Level of physical impairment also proved to be significantly linked to adaptive behavior. Subjects who were the most severely impaired achieved lower adaptive behavior scores than subjects who were less impaired. Also worth noting at this point is the significant relationship that surfaced between the variables of marital status and level of impairment. Study subjects who were the most impaired tended to have the slimmest chance of finding a marital partner. This confirms an important trend well-documented in the literature on blindness and disability; multiple disabilities reduce the likelihood of marriage, thereby denying the multiply impaired person an important primary, potential source of support - the marital partner. This result has several important implications with respect to the health and mental health of multiply impaired clients. These implications will be addressed in the concluding section of this chapter.

The selection of a suitable mate, and the acquisition of gainful employment are considered to be the two most important developmental imperatives of young adulthood life. Study hypotheses predicted relationships between network composition and employment (H8), and between network size and employment (H9). A negative relationship was predicted for employment status and network composition. This relationship was based on the premise that persons without an independent means of support, and denied access to an important potential social venue and an acknowledged source of weak ties would turn disproportionately to close family for support. This relationship was not corroborated by sample data. Study subjects with jobs did not appear to rely more or less upon kin than did unemployed subjects.

The positive relationship predicted between employment status and network
size was, however, supported by sample data. Study subjects with jobs did tend to have larger networks than unemployed study subjects. It remains unclear, however, whether employment may have contributed to larger network size, or whether larger network size may have contributed to a greater likelihood of employment. The study design did not lend itself to determining the answer to the preceding question. The significant relationship between employment status and network size reported here is consistent with a result reported by Pfouts and Nixon (1982). In their study of blind adult North Carolinians, Pfouts and Nixon found employed blind adults to have significantly larger social networks than persons who had never been employed.

We will now look more closely into network composition in relation to the larger issues of the availability, mobilization and utilization of social support.

The Availability, Mobilization and Utilization of Social Support

Claude Fischer's (1977, 1982) "choice-constraint" model of network formation alleges that maturational changes, cultural patterns and non-normative life events alter needs, fantasies, material and social expectations, norms of reciprocity and personal capabilities which ultimately influence established patterns of mutual exchange. Fischer's model also alleges that interpersonal relationships undergo minute to minute review in the form of decisions that determine how and where time with others will be spent. In addition to the moment to moment assessments, there also appear to be particular points in the life cycle when relationships become subject to intense review. For men, transitional interludes occur mainly during young adulthood at the time of marriage and parenthood.

In his review of friendships among men, Lewis (1978) found that men reported
more same-sex friendships than women but noted that men's friendships did not tend to be as close or intimate as women's friendships. Similarly, Tesch's (1983) review of friendships across the life span found that, beginning in adolescence, girls tend to emphasize emotional intimacy more than boys. Weiss and Lowenthal's (1975) study of social network changes over the life course found that females noted reciprocity and affection as important in their friendships, while males listed shared interests and activities as most important to them. A study by Hirsch (1979) found that female college students spent more time interacting with others in their social networks and more time sharing feelings and personal concerns than did males during an exam period. Studies by Bahr (1976) and Rosenthal (1985) have shown that women tend to expend more effort at maintaining relations with kin after marriage than do men. Women have also been found to feel closer to their relatives than do males (Booth, 1972).

Pulakos' (1988) comparative study of young adults' relationships with best friends and siblings indicates that young adults may feel closer to their friends than they feel to their siblings. Pulakos also found a tendency among her 17 to 25 year old subjects toward greater affective and social involvement with friends. Relationships with friends were characterized by more positive feelings and less differentiation in role relations than sibling relationships. A wider range of topics also tended to be discussed with friends, and most joint activities were also done more often with friends.

The studies summarized above indicate differentiation in support provision and utilization during young adulthood. These patterns are shaped by gender and by statuses, the most important of which appear to be marriage and parenthood.

The blind and visually impaired young adult men and women who participated in my study clearly considered kin as their first line of social support. Kin
supporters outnumbered nonkin supporters by close to 2 to 1; however, nonkin proved to contribute a larger proportion of total support than did kin. This result suggests that subjects may consider family members as potential sources of support yet they may turn to others for particular types of help when this help is most needed.

Degree of visual impairment did not influence the observed pattern of support provision, nor did age. However, marital status and support provision were significantly related. Married subjects were more apt to turn to family members for total support than unmarried subjects. The latter finding is consistent with results reported elsewhere, several of which have already been cited (Fischer, Sollie, et al. 1989; Tokuno, 1983; Verbrugge, 1977; Shulman, 1975).

As a total group, study subjects were inclined to obtain each type of support from nonkin supporters. Study results indicate that friends constituted the dominant source of companionship, material aid, positive feedback, physical assistance, advice and emotional support.

Parents constituted the second most frequently used source of support. Parents provided substantial amounts of material aid, positive feedback, physical assistance, advice and emotional support. Only for companionship did study subjects look to others for support. Friends, spouses, in-laws, and co-workers proved to be the prime sources of companionship.

Spouses were important providers of social companionship, emotional intimacy, emotional reinforcement, physical assistance and advice. Siblings were approached most frequently for material aid, positive feedback, advice, emotional support; and to a slightly lesser extent, physical assistance. In-laws and co-workers were most frequently utilized as companions, while neighbors were
utilized most often as sources of physical assistance.

Professionals were most often identified as sources of advice and emotional support. They were also valued for the positive feedback they offered.

In his examination of support provision within the social networks of 1,050 healthy, sighted Northern Californians, Fischer (1982) found similar support utilization patterns. Northern Californians routinely turned to spouses, other close kin and friends for both emotional support and affirmation, while turning to neighbors, extended kin and to friends for physical assistance and material aid. Co-workers were utilized as sources of advice, while professionals were considered nominal, incidental social network members. Similar patterns of support provision have been described by Denoff (1982) and by Schulz and Rau (1985).

Network Size and Dimensionality

In her review of social support research, Ell (1984) stipulated that "access to social network resources does not insure that individuals will be supported". She also noted that a fraction of network relationships are actually supportive (p.134). Relationships characterized as supportive were distinguished by certain features including: close proximity, high frequency of interaction, high trust, and reciprocity.

Prominent studies by Pattison, Llamas and Hurd (1981), Froland et al. (1979), Cohen and Sokolovsky (1978, 1979), and Tolsdorf (1976), to mention but a few, have documented relationships between psychiatric disorder and various aspects of network structure. The networks of psychiatric patients have been characterized by fewer linkages, less reciprocity, and less satisfactory perceptions of social support than normative populations.  

Studies which have examined the networks of "normal" healthy adults
(Wellman, Carrington, and Hall, 1988; Fischer, 1982) have shown such adult subjects to have a relatively large number of specialized (uniplex) ties; a finding which suggests that "mentally healthy" adults have few multidimensional relationships and thus are inclined to seek help from a variety of different persons. This help is understood to flow through strong uniplex ties, and through various weak, indirect ties achieved through social acquaintanceships that originate in work, and neighborhood settings.

Network studies have also established a link between psychiatric impairment and network size (Llamas et al., 1981). Maguire (1983) has indicated that the networks of healthy "normals" contain 20-30 people; that neurotics average between 10-12 persons, and that psychotics have the smallest average networks.

The blind and visually impaired Delawareans studied in this research identified an average of 10 persons in their personal networks (SD = 3). This figure is slightly smaller than the average given by Wellman et al. (1988) for East Yorkers (15; SD = 6.6), and it is also smaller than 15-18 person networks of Northern Californians (Fischer, 1982). The average network size of blind and visually impaired Delawareans is also considerably smaller than the 22.2 and 22.6 figures reported by Llamas et al. (1981), and Cohen et al. (1978, 1979) for adults drawn from the general population.

Delaware study subjects, much like Wellman and Fischer's respondents, received the bulk of their social support through single-stranded ties. However, 48% of all ties involved the conveyance of more than one type of social support. This figure tends to signify a relatively high level of reliance on a relatively small number of people. The majority of multiplex ties linked subjects to friends, spouses, and to siblings.

Network size and multiplexity were also found to be inversely related.
Study subjects with larger networks tended to have diminishing numbers of multiplex relationships. An identical pattern was observed by Fischer (1982) among healthy, unimpaired Northern Californians. In his study, Fischer found that adults with "large" networks (20 and more members) reported having more, rather than fewer multistranded relations than persons with "small" networks (10 or fewer members).

The heavy reliance exhibited by blind and visually impaired Delawareans upon friends, spouses and siblings expressed in the form of a high percentage of multidimensional ties stands out as an important finding. While strong relationships with close family and friends are normative, acute dependencies upon close kin appear to be both non-normative and psychologically detrimental.

One particular study (Kazak and Wilcox, 1984) which compared the networks of parents with handicapped children to the networks of parents without handicapped children, found that mothers and fathers with handicapped children had smaller networks than families without handicapped children. The study also revealed that parents with handicapped children were inclined to have denser networks. These parents also shared more members of their social networks than did parents without handicapped children. The result most relevant to this discussion is Kazak and Wilcox's discovery of a significant association between family type and the prevalence of multidimensional ties. Parents with handicapped children had significantly more multidimensional relationships than did parents without handicapped children. Moreover, parents with handicapped siblings characterized supporters providing one variety of support as most helpful in crises or emergencies. Multidimensional ties were characterized as most helpful in the normal conduct of daily life.

Kazak and Wilcox found no discernable difference between the two above noted
groups with regard to the number of extended kin helpers. But they did find that parents with handicapped children had fewer friends than parents without handicapped children.

The blind and visually impaired young adult men and women interviewed for the purposes of my study generally did not appear to be more or less at-risk of having small networks than comparable groups of sighted adults (Wellman et al., 1988; Fischer, 1982).

Eighty seven percent of the participants to this study had at least 6 active network links. Seven percent had 5 or fewer network links. Nine percent lacked the emotional support of a confidant.

The average East Yorker interviewed by Wellman and his associates, by comparison, had 7 active network ties. Seventy five percent identified a minimum of 9.5 active ties. Twelve percent of Wellman's adult respondents had no routine contact with a fellow network associate.

Fischer (1982) reported similar results. Fifteen percent of his Northern California respondents specified 8 or fewer active network ties - or, indicated the lack of a confidant.

Northern Californians with the smallest networks shared several demographic characteristics: they were typically older, poorer, and formerly married (separated, divorced, or widowed). Subjects who lacked the support of a confidant presented a slightly different profile. These individuals were typically older, male, poorly educated and never married.

Blind and visually impaired Delawareans with the smallest networks (fewer than 5 persons) were older, less educated, and unmarried or formerly married. Conversely, subjects with the largest networks had little or no vision, were employed, were inclined to believe that they held control over their fate, and
were female.

**Intimacy, Frequency of Contact, and Proximity of Network Ties**

Intimacy has been defined as "the number of reciprocal functions or services that characterize a tie" (Mitchell and Trickett, 1980; p.31). The variable has also been used to indicate the strength of feelings or thoughts that connect two people.

As a general rule, study subjects thought well of their network helpers. Almost three-quarters of all network relations were identified as either "good friends", or as "best friends". Fewer than one-quarter of all identified helpers were characterized as "acquaintances". Only 3% of close to 500 helpers were characterized as being something less than a friend. However, it is also true that subjects almost without exception, had little problem identifying individuals with whom they had an unpleasant disagreement, or with whom they had become angry or upset.  

Co-workers were the most frequently identified source of negative interaction. Close to one-half of all enumerated links to co-workers were characterized as negative. Parents were also a significant source of negative interaction. Friends, and neighbors followed parents as minor nuisances. Professionals were the least likely to be identified as sources of negative interaction. Within the total context of network ties, negative links to network members constituted less than 10% of total network links. This result suggests that social supporters were perceived as mostly helpful. It is also possible that study subjects could have suppressed the identities of individuals they believed were problematic - possibly because they feared that critical assessments could somehow jeopardize the support they received from helpers; this in spite of assurances from interviewers that all answers and information would
be treated in a confidential manner.

My young adult respondents felt closest to the persons with whom they shared the most multistranded relations and also felt closest to those with whom they had the most frequent interaction. Subjects also felt closer to helpers with whom they had frequent telephone contact. Subjects were apt to feel closer to network members with whom they interacted on the telephone than to network members with whom face-to-face encounters were the dominant mode of interaction. In addition, frequency of contact proved to be positively correlated with geographical proximity. This means that study subjects were inclined to interact most frequently with the persons living closest to them. Comparable studies of adult men and women with visual impairments contain findings very similar to those presented here. In fact, the importance of propinquity to the formation of friendships is well documented in sociological literature. The notion flows from Lazarsfeld and Merton's (1954) thesis that "persons of similar characteristics, attitudes, and lifestyles tend to congregate in similar residential, social, and work environments, which promote interactions and association" (Lin, 1986; p.26).

Fischer has also argued that propinquity has a strong effect on friendship formation among homogeneous populations, but that the effect of propinquity can be overridden by the influences of social class and ethnicity (See Fischer, 1977: p. 49-50). Structural factors such as choice of neighborhood, architecture, access to transportation tend to promote or inhibit the social proximity that can lead to friendship (Pogrebin, 1987). This position has been held for persons with physical handicaps (Schilling and Schinke, 1983).

Schilling and Schinke (1983) have alleged that "handicapped individuals' defining characteristics may prevent them from building and making full use of social networks" (Schilling and Schinke, 1983; pp.395-396). To fully illustrate
their point, Schilling et al. note that blind and visually impaired adults often find themselves physically immobilized or limited by bus schedules, routes and operating times that make it extremely difficult to engage in spontaneous activities with friends. A social activity as inconsequential as having a cup of coffee or a drink may be possible only after "complex logistical machinations" (Schilling and Schinke, 1983; pp.396-397). These points were borne out by anecdotal accounts which were volunteered by at least 30% of the adult Delawareans surveyed for this study.

Study subjects evidenced a variegated pattern of social support provision with respect to physical proximity. Patterns of support provision were, as noted earlier, consistent with Litwak and Szelenyi's (1969) model of primary group structures. Individuals obtained a large measure of their physical assistance from neighbors and other nonkin; 76% of whom lived in the same city. Locals were also the dominant providers of emotional support, affirmation and companionship.

Individuals designated as sources of "negative interaction" also tended to live in close proximity to study subjects. As previously mentioned, co-workers and parents were most frequently identified as sources of negative interaction.

Twenty one percent of the persons who provided social support to study subjects lived in the same neighborhood as the subject. Thirty nine percent lived within the same city. Twenty five percent lived within the state of Delaware. Fifteen percent of study subjects' supporters lived out-of-state.

Interestingly, relatives of study subjects who provided significant supplies of material aid and intimate advice typically did not live as close in proximity as one might have expected, but instead tended to reside in another city, in another Delaware county, or in another state.

These results once again strongly parallel findings reported for healthy,
unimpaired adults. Wellman, Carrington, and Hall (1988), for example, reported that 67% of East Yorkers they surveyed lived 0 to 30 miles from social supporters. Forty-five percent of East Yorkers' helpers lived 1.1 to 30 miles away (within the metropolitan Toronto area); 13% lived in the same province (31 to 100 miles away); and 21% lived 100 or more miles away.

By comparison, 21% of my blind and visually impaired subjects' helpers lived in the same neighborhood; 39% lived in the same city; and 25% lived within the same state (30 to 150 miles).

The Context of Network Ties, and their Duration

Although it is well known that people choose friends who are socially similar to themselves, little is actually known about how dimensions of social structure such as the context of ties and their duration influence other dimensions in shaping network ties, or how networks affect the formation of network links (Jackson, 1977).

Most of what is known about the process of network formation comes mainly from developmental theory and from information derived from a handful of empirical studies concerned with friendship formation. These studies are limiting because they ignore all indications that gender is one of the most important factors leading to friendship variations (Bell, 1981).

Most of the research literature on friendship formation indicates that friendship develops from "a basis of mutual liking and shared activities in early childhood, to include loyalty and mutual aid in late childhood. Intimate self-disclosure becomes a function of friendship in adolescence with certain aspects of intimacy more typical of females than males. Self-referent elements of friendship such as similarity, power and acceptance may decrease in importance during adulthood" (Tesch, 1983; p.266).
The literature on primary relationships ties the process of friendship formation strongly to the family life cycle. In this process, in the early years of life, a child acquires most experience within the strict confines of his/her family. As a child grows, his/her sphere of relationships also grows, yet he/she remains firmly rooted within his/her family tied by his/her dependency and strong emotional bonds to members of his/her family of origin. With the onset of adolescence, peer relations increase dramatically in importance; consequently family relationships change; role relations lose particular functions and take on others. During adolescence and young adulthood family ties typically become less salient. Preoccupation with such non-family pursuits as education, career, and mate selection divert time and attention away from the family of origin. The young adult looks outward, and directs energy toward same age peers who he/she feels share the same sets of issues, passions and concerns.

Pogrebin (1987) has stated that college students and people in their twenties have the largest number of friends, and that "people in their twenties spend more time with friends than does any other age group except the over-seventies". She also notes that young adults often find it necessary to seek new friendships to replace those that have been lost or which have diminished in value. These efforts must be sandwiched between other obligations and responsibilities. Career attitudes and parental status are the major constraints that dictate the amount of time adults have available for friendship. Pogrebin further develops this point in the following passage:

..."old people (forty-three hours per week) have the most free time, childless singles and marrieds come next, then parents with no kids at home, and finally, single or married people doing active parenting who average up to twenty fewer leisure hours per week than the childless" (Pogrebin, 1987; pp.350-351).
What seems clear about the origination of network ties is that people construct relationships in each of their social contexts—in kinship, in work, the neighborhood and so on—and that the origination of individual ties is not only influenced by context, but also reflects the composition of one's existing network constellation.

Studies on friendship and network formation (Shulman, 1975; Stueve and Gerson, 1977) indicate that adult friendships, both old and new, typically match the individual's life stage. This concept is further developed by Pogrebin (1987):

As we move through our twenties and thirties, we take on friends who match our stage of personal development as well as our marital status, class, age, and so on. And we also learn that it is normal to leave some friends behind. Some of us retreat from childhood associates because they remind us of our own immaturity—not to mention our carefree years. Some of us become estranged from friends whose life is unchanged...In the years when we're establishing ourselves and our families we need friends to give us help moving furniture, painting the house, making decisions, borrowing necessities, minding the children; more important, we need them to get us through stressful events...Adolescent friends help us detach from our parents; adult friends help us be better parents (Pogrebin, 1987; pp.352-353).

While adult friendships tend on balance to be age homogeneous, researchers have found some variability in patterns of age similarity among men across the life cycle (See, for example Stueve and Gerson, 1977). Stueve and Gerson have shown that older men tend to have more age-dissimilar friendships that younger men. Their research has revealed that the period when age-similar friends are likely to begin outnumbering age-similar friendships occurs sometime within the 25th to 29th years of a man's life. In addition, Stueve and Gerson have found that adult males' age-similar ties extend back to childhood. The maintenance of longstanding ties did not demand the continuation of a role relationship. Age discrepant friendships, by comparison, tended to be of a shorter average
duration. Ties most frequently originated in adult settings, such as work, or at locations that encouraged voluntary association with others.

An important aspect of friendship formation that is similar to, yet different from propinquity is where new friendships originate; that is, where "singles", young marrieds, and married couples with children position themselves to meet the persons who develop into friends. This is an area that has not received the attention it deserves. It is an issue that has been of interest to only a handful of urban anthropologists and sociologists. 7

When Wellman and his associates (1988) launched their first East York study, one of their primary research objectives was to determine "why the empty streets of East York gave [so] little public evidence of community" (Wellman, et al., 1988; p.130). The researchers hoped to explain why so few outward manifestations of neighborhood and community life could be found in a borough only minutes from downtown Toronto. By using network analytic techniques, Wellman et al. effectively exposed a community structure they subsequently characterized as a "private home society" (Wellman, et al., 1988; p.130). They ultimately detected a preference on the part of their subjects for home based contacts with family and friends. As a general rule, East Yorkers used their homes as meeting places and used the telephone to supplement their face to face contacts.

This is not substantively different from the way in which Detroit men were found to interact with family members and friends. Stueve and Gerson (1977) indicate that young single Detroit males were least likely to meet with friends in their homes and were most likely to socialize in public places such as restaurants, bars and sporting events. By contrast, husbands and fathers (who were not necessarily older) were most inclined to used their homes as meeting places, and were correspondingly least inclined to meet with their friends in
public contexts. From the preceding, Stueve and Gerson concluded that family life tends to bring social interaction into the home.

Perhaps the best generalized explanation of how and where couples make friends has been furnished by social anthropologist Elizabeth Bott (1971). Bott addresses the importance of personality in the choice of friends and also details the relevance of the such factors as "the economic and occupational system, the structure of formal organizations, the ecology of cities, and other factors [that] affect the connectedness of networks by limiting and shaping the decisions that families make" (Bott, 1971; pp.97-98). Bott specifies a number of factors that permit men and their wives to cultivate relationships outside their existing social networks. She asserts that "networks are more likely to be close-knit if members do not have many opportunities to form new relationships with persons unknown to the other members of the network" (Bott, 1971; pp.105-106). In addition, she notes that network-connectedness depends on the stability and continuity of relationships. She states:

A family's network will become more loose-knit if either the family or other members of the network move away physically or socially so that contact is decreased and new relationships are established (Bott, 1971; p.106).

The research literature and popular literature pertaining to network and friendship formation also mention the importance of location in the origination of new network ties (Fischer, 1982; Pogrebin, 1987). Pogrebin has maintained that cities, towns and neighborhoods take on the persona of their inhabitants and then attract others who see themselves as similar to their predominant populations. When neighborhood concentration reaches a "critical mass", inbred social networks develop and perpetuate themselves. She extends the phenomenon of environmental awareness to disabled persons, pointing out the fact that physical accessibility affects social accessibility; that certain locales make
it easier for people to visit and attend parties, movies, and sports events without worrying about structural impediments that frustrate spontaneous friendship (Pogrebin, 1987; p.133).

It is not clear from the social network/social support literature, or from the literature on friendship formation whether there are specific contexts that stand out as best bets for making new friends. What does seem somewhat clear, however, is that all environments have characteristics that draw individuals with similar characteristics together.

Pogrebin has identified several types of places which she believes are good places for meeting potential friends. Such placesWithContexts/environments include schools, the workplace or job-site, bars and lounges, resorts, and other familiar locations. In addition, Pogrebin identified parties, clubs and organizations, concerts and other public and private outings as potential venues for making new acquaintances. She also identified volunteer work as a way of increasing exposure to new people. Planned celebrations and letter writing were examples of still other strategies that adults have been known to use to originate new network ties. Friendships also originate by chance.

I began this research with clear expectation that subjects who were the most severely visually impaired would almost exclusively use activities and programs sponsored or operated by agencies for blind and visually impaired adults to socialize and make new friends. I anticipated finding major differences in the ways congenitally blind and adventitiously blinded adults went about making friends and building support networks.

I also expected to find a difference in the social orientations of study subjects based on degree of visual impairment. I predicted that subjects with residual vision would be more socially integrated into their communities; that
visually impaired adults would more active in programs provided for the general population and less active in activities directed toward blind and visually impaired persons. I also expected the converse to be true; that blind persons would be less knowledgeable and less active in activities and events that were directed toward the community at large - with certain exceptions, such as musical concerts and sporting events such as baseball games, which are broadcast over the radio. My suppositions were generally more correct than incorrect.

The majority of adult men and women who were sampled relied heavily upon sponsored programs for the blind and visually impaired, but perhaps more significantly, also identified many of the contexts and strategies that sighted adults use to successfully build new friendships and to fortify or enervate existing friendships. In addition to meeting new friends in their neighborhoods, at work, or through enrollment in educational programs, individuals described chance meetings in such familiar places as beaches, swimming pools, laundromats, parks and hospitals, as well as in shopping malls, and various types of stores. Two subjects used tactics that might be considered less conventional to meet new friends. Both subjects, who happened to be female, used personal ads to meet members of the opposite sex. A male subject similarly noted that he had established a new friendship as a pen pal.

Study subjects indicated that their apartment complexes, their buildings or buildings/apartment complexes of other nonkin (neighbors, co-workers, friends) and their neighborhoods were the best sources of potential friends. These locations provided opportunities for introduction to unknown parties.

Organized programs and scheduled activities sponsored and operated by agencies that serve blind and visually impaired persons were also key contexts used by study subjects to extend ties. Summer camping and recreational programs,
bingo, and other scheduled activities were noted as being important in terms of providing opportunity to make new contacts and to affirm or reinforce existing relationships. Programs sponsored and run by organizations that serve persons without visual handicaps such as the YMCA, or the YMHA appeared to be less important and less frequently utilized by subjects regardless of level of visual impairment. An organization expressly geared to blind athletes proved to be extremely popular with a segment of the study sample.

Work settings also proved to be surprisingly important in terms of their contributions to origination of network ties. Overall, work settings were the third most widely cited origination point of new friendships. Churches and schools were identified slightly less frequently than work as a good place to make new contacts. New contacts were least likely to be made at parties, in lounges or bars.

The duration or durability of a network tie reflects the amount of experience that is shared by two people, and as previously noted, represents how successfully a tie has endured disruption and competition from other sources. When Jackson, Fischer and Jones (1977) re-examined Laumann's Detroit data, they found that Detroit males had the most durable ties to kin and childhood friends while work associates, neighbors, and other friends were known the shortest amount of time. They reported that the workplace contributed 79% of Detroit males' most recent ties (under 3 years), but constituted only 35% of the longest standing ties.

Similarly, when Wellman et al. analyzed the duration of the network ties of their cohort of East Yorkers they found that the majority of all ties were longstanding. Active and intimate ties lasted a median of 19 years. Furthermore, only one quarter of all ties lasted less than 9 years. The median duration of
ties to active nonkin was 8 years. Ties of shorter duration were, without exception, related to frequent disruption caused by a change in residence or by a job change.

Fischer (1982) has reported results that are similar to those noted immediately above. The mean duration of a network tie of an urban Northern Californian interviewed by Fischer was 14.2 years. Subjects residing in more rural areas had ties that averaged 17.8 years in duration.

The average duration of a network tie in this study was 12 years with a standard deviation of 96 months. Network members were known from 2 to 50 years. As might be expected, ties to relatives were of a longer duration than ties to friends, neighbors, co-workers, or professionals. Friends were known an average of 8.7 years, neighbors an average of 6 years, and co-workers were known an average of 4.4 years. Ties to professionals averaged 2.4 years in duration.

**Chapter Summary**

In the preamble to their monograph, Lukoff and Whiteman (1970) note that blindness "is more than a visual deficit that complicates adjustment". They point out that blindness has "in truncated form, many of the attributes associated with a group response" (Lukoff and Whiteman, 1970; p.1). The degree to which blindness/visual impairment influences the structure and function of social network structure and social support provision is an open question few have explored.

Results from this study indicate that level of visual impairment may have less impact on network composition and structure than other vision-related, socio-demographic and psychosocial variables.

Fifty five young adult males and females who were legally blind or visually impaired were found to have configured personal social support networks that
contained an average of ten persons. This figure compares favorably with results reported by Wellman and Fischer, who conducted similar studies of healthy, sighted adults, a percentage of whom were slightly older than the study sample.

Three of eleven study hypotheses predicting relationships between network composition (defined in terms of the proportion of kin to nonkin), network size and salient vision-related variables (functional vision, age of onset of blindness, and residential schooling), and socio-demographic variables (age, gender, marital status, employment status and physical impairment) were confirmed through hypothesis testing procedures. To reduce the possibility of Type II errors, one-tailed tests of significance were used in combination with an alpha level of .05. Hypotheses predicting relationships between age of onset of blindness and network composition (positive); marital status and network composition (positive); and employment status and network size (positive) were supported by study data.

Hypotheses proposing relationships between functional vision and network composition (negative); residential schooling and network composition (negative); age and network composition (positive); gender and network composition (positive); employment status and network composition (negative); level of impairment and network composition (positive); and, level of impairment and network size (negative) were not supported by sample data.

Study findings also contribute some support for Resnick's optimism with regard to the current level of social integration achieved by blind adults. The majority of young adult Delawareans who volunteered for this study showed evidence that they had access to all essential varieties of social support including: companionship, advice, material assistance, physical assistance, affirmation, and emotional support. A relatively small percentage of the total
sample lacked access to all six of the above noted forms of support. In addition only 2 of the 55 subjects interviewed had networks that contained fewer than five persons.

Subjects with the smallest networks or with the poorest access to support tended to share a cluster of socio-demographic and psychosocial characteristics. They tended to be less educated, unmarried/formerly married, and unemployed. This profile was similar in certain respects to the profile of Northern Californians (Fischer, 1982), who had support networks that contained 8 or fewer people. Adults in Fischer's sample who either lacked a confidant, or who had fewer than eight network members were older (65+), male, poor, formerly married or never married, and poorly educated.

While study data failed to produce support for hypotheses linking level of impairment to network composition or network size, important relationships between level of physical impairment and marital status, and physical impairment and employment were confirmed. Study subjects with health problems or physical disabilities (in addition to their blindness/visual impairment) were found to be significantly less likely to marry than subjects without secondary disabilities or health impairments. They were also more likely to be working, albeit in sheltered work settings.

Other interesting results with respect to employment also came to light in this study. Apart from the set-aside positions made available to subjects with multiple handicaps, the young adults participating in the study labored in a wide range of occupations. Subjects were employed in business, technical, scientific, service, and human service fields. The employment rate for the sample (53%) was consistent with the national average for blind and visually impaired adults.

Those who indicated that they were not working included a small number of
men and women who claimed to be unable to work for health reasons, or who chose to forgo employment and receive SSI or other social welfare entitlements. The unemployed group also consisted of individuals who claimed they could not work because they lacked the transportation necessary to get to a job site, or who claimed that lack of child care prevented their entry into the labor force. A small number of unemployed subjects also stated that they did not have the job skills they believed were necessary for obtaining competitive employment.

A small, yet discernable number of unemployed men and women also demonstrated a capacity to circumvent employment barriers. Several subjects indicated that they were active as volunteers in hospitals and libraries. Others developed part-time jobs out of their homes and worked as tutors or babysitters.

Although a handful of study subjects exhibited particular creativity with regard to extending their networks, study data reflect a high degree of dependence on the social and recreational programs that are provided by the two public and private agencies that are mandated to exclusively serve blind and visually impaired persons. Study findings indicate that agency programs continue to play a vital part in meeting the social and affiliational needs of blind and visually impaired persons. Programs with a self-help orientation, such as the Delaware Association of Blind Athletes, also proved to be important support structures in the lives of the subjects who used them.

When subjects were asked to identify the persons they approached for each of the previously named types of social support they overwhelmingly identified their friends. After friends, subjects identified their parents, their spouses and their siblings as primary sources of support. Neighbors, in-laws, co-workers, and extended family members constituted a second tier or line of support.
As for the effects of proximity on network structure and social support provision, study findings include evidence of relationships between physical proximity and network size, and proximity and intimacy. Study subjects with large networks were likely to live in closer proximity to sources of support and typically lived nearest the helpers they liked.

Over three-fourths of all identified social supporters lived minutes away by car from study subjects, meaning that they lived in the same town or city. Slightly more than one-fifth of those characterized as helpers lived in the same neighborhood. One fourth lived in another town or city. A small percentage of social supporters lived in another state bordering Delaware. Frequency of contact and intimacy also proved to be significantly associated.

A series of analyses probing for evidence of relationships between designated network variables and attitudes associated with successful coping (mastery), produced several noteworthy results. Network size and coping were significantly associated in a positive direction; that is, subjects with larger networks typically felt more confident in their ability to shape their destinies than their counterparts with smaller networks.

Proximity was also found to effect coping. A significant positive correlation between coping and proximity suggests that a certain degree of geographical closeness may have a positive influence on individual coping efforts.

The average duration of a network tie was approximately ten years. The duration of ties to kin exceeded the duration of ties to nonkin. Friends were known the next longest amount of time after kin. Relationships with neighbors, co-workers and professionals followed those of friends in the number of years known.
Analyses exploring potential relationships between designated network variables and life satisfaction were also completed. These analyses failed to yield a relationship that was significant at the .05 level.

Multivariate statistical procedures examining the relationship between multiple exogenous variables and life satisfaction identified four significant predictors of life satisfaction. They are: mastery, residential school attendance, acceptance of blindness, and employment. With the exception of acceptance, variables related to vision did not prove to be significant predictors of life satisfaction, nor did such socio-demographic variables as marital status.

By comparison, and by contrast, stepwise regression procedures identified employment, mastery, functional vision, and gender as significant predictors of network size.

Limitations of this Study

When Josephson (1968) studied blind adults residing in seven locations spread throughout the United States, he encountered a panoply of obstacles. In addition to a long list of definitional questions related directly to the measurement of blindness, Josephson faced a formidable array of sampling obstacles. He faced the onerous challenge of locating potential subjects and he faced the equally difficult chore of locating among potential subjects individuals who were willing to participate in his study. His most fastidious efforts to achieve a satisfactory completion rate produced a less than impressive overall response rate of 44 percent.

In one of the locations covered in Josephson's study, thirty one percent of those deemed eligible to participate did so. Josephson blamed "the backward state of blindness registers at the time" for his relatively low response rate;
he also noted that refusals significantly reduced his completion rate. In explaining the cause of refusals, Josephson distinguished between persons who were disinterested in his pending study, and between those who failed to participate because they were unable to read the print letters mailed out by state agencies.

With respect to his second point, Josephson claimed that he could have increased his response rate if he had been able to dispatch interviewers directly to the homes of potential subjects "without being required to correspond with [potential] subjects first" (Josephson, 1968; pp.121-122).

In this study great pains were taken to surmount or avoid a number of difficulties and barriers often associated with studies of blind and visually impaired persons. The most salient of which are delineated in the preceding paragraph. Perhaps the most innovative measure taken to differentiate this study from others that preceded it involved the attempt made to locate the study in a geographical area that furnished convenient and effective access to a well-defined pool of potential subjects.

As the second smallest state in the union, with the added advantage of an accurate, up-to-date blindness registry, the State of Delaware, appeared to be an excellent place to access a representative sample of blind and visually impaired adults. Delaware's relatively small size enhanced the odds of obtaining a representative cross section of young adult men and women with visual impairments. Cooperation promised by the two agencies in the state that serve blind and visually impaired persons lent increased credibility to the study. In addition, the involvement of agency staff added an extra dimension of access to prospective volunteers. Each of the above noted factors, separately and in combination, promised to raise expectable levels of participation among
prospective respondents.

Special measures were taken in addition to those already mentioned to publicize the study so as to reach the group of men and women referred to by others as the "hidden blind". Large print letters and messages on audio tape explaining the intent of the study were mailed to all potential subjects. Audio taped messages were mailed to legally blind and visually impaired persons of all ages who were subscribers to a talking book lending library. The study was also publicized in articles that were included in a large print agency newsletter mailed to clients on a monthly basis.

Postcards expressly designed to make it quick and easy for persons to volunteer for an interview were included in mailings to potential study subjects. These postcards, too, were printed in large type. They required only a check mark to complete. They were also self-addressed and self-stamped.

To accommodate potential subjects who were unable to read print, or who could not write in print, additional response options were developed and extended to prospective subjects. A telephone response option invited persons who wished to learn more about the study or to volunteer to call any of three telephone numbers.

In the end, all of the special measures described had no visible impact on the response rate. Thirty percent of the legally blind young adults eligible to participate in this study did so. The majority of persons who responded did so within three weeks of the first call for volunteers.

A financial incentive in the form of a payment for the completion of an interview could well have improved the subject response rate. This option was considered, but was not used because funding for this purpose was not available to the researcher, however it is an option one might seriously consider in
conducting future research of this nature.

The low response rate, the small size of the sample, and the fact that subjects were not selected at random, raise obvious questions about the representativeness of the sample. The fact that the sample for this study is not a probability sample from a larger population, itself, raises a serious problem in statistical validation of the theoretical value implied because theoretical relationships as well as population values are subject to sampling errors.

To control for normal sampling error, standard statistical and procedural controls were used. Study hypotheses grounded firmly in theory and supported by previous research findings were put through a hypothesis testing procedure which involved the use of one-tailed tests of significance. In addition, a conservative level of significance was used. Relationships which, by contrast, were more speculative were subjected to two-tailed tests of significance in conjunction with a conservative .05 alpha level.

As for the matter of interpreting results in view of the aforementioned limitations, the reader should note above all else that the study sample is not a random sample, and that no claim is made that the sample is representative of all blind and visually impaired young adult Delawareans. No attempt has been made to generalize results to the larger group of blind and visually impaired young adult Delawareans, or to blind and visually impaired young adults living elsewhere. At the same time, reasonable efforts were made to procure a broad, unbiased group of young adults, and it would seem that this goal was achieved.

In addition to the limitations associated with sampling constraints, attempts to interpret the precise meaning of study findings were hampered by the lack of uniform procedures and measures across network and social support studies.
(Shumaker and Brownell, 1984; Tardy, 1985). This lack of uniformity made it extremely difficult to compare and contrast network and social support dimensions.

**Application of Study Findings**

Maluccio's (1981) competency-oriented model of social work practice, discussed in the beginning pages of this manuscript, directs the social work practitioner to focus upon and to couple the strengths that people have within themselves with the resources that are available to them in the environment to effectuate enhanced coping. In this model, competence leads to successful adaptation. For Maluccio and other advocates of competency-based approaches to social work practice (Germain and Gitterman, 1980; Meyer, 1983; Whittaker and Tracy, 1989), attempts at helping focus on the person and his/her environment.

Whittaker and Tracy (1989) delineate a tri-partite model of competence. Their model identifies intrapersonal competence, interpersonal competence and environmental competence as the basic dimensions of competence. Each dimension includes an array of skills that enable the person to become more competent. The types of skills associated with intrapersonal competence are skills in mastering impulses, moods and common emotions. Intrapersonal competencies include skills in forming and maintaining a variety of human relationships, such as meeting and making new friends, communicating effectively with intimates, dealing with difficult persons and social situations, and giving and receiving social support. Environmental competencies refer to skills in "mastering proximate and distal environments" (Whittaker and Tracy, 1989; p.29).

Social support networks are an important part of the social environment and play a key role in enabling the person to cope and adapt to changing environments across the life cycle. Personal networks can be supportive environmental
resources in that they provide a mutual aid system for the exchange of instrumental assistance and affective support (Gitterman and Shulman, 1986).

Networks can also be maladaptive. However, when a goodness-of-fit exists between an individual's concrete, social and emotional needs and available resources, functioning is almost always enhanced.

A handful of studies previously reviewed have raised questions pertaining to the impact of disability on social coping. Schilling and Schinke, in particular, have alleged that "handicapped individuals' defining characteristics may prevent them from building and making full use of social networks" (Schilling and Schinke, 1983; p.395-396). This study submits Schilling and Schinke's thesis to a major test as selected attributes associated with blindness and visual impairment were examined in relation to designated dimensions of network structure.

The majority of blind and visually impaired young adults queried identified multiple ties to various others which translated into direct access to social support. But perhaps even more significantly, analysis of sample data led to the conclusion that the amount of vision retained has significantly less effect on the form, shape and composition of personal social networks than such factors as the timing of onset of blindness, residential school attendance, mastery, marital status and employment status.

In the main, study subjects had access to the dimensions of social support that researchers have linked to health and wellness. Study subjects identified an average of ten social supporters/network helpers, of which the majority were friends and parents. Friends constituted slightly over a third of the membership of an average network.

Evidence of excessive dependency upon friends and parents was manifested
in the disproportionately high number of multiplex ties linking subjects to friends and parents. The tendency observed among the majority of subjects to depend most heavily upon small numbers of friends and parents while receiving significantly lesser amounts of assistance from other informal and formal sources (i.e. professionals) raises certain questions with respect to subjects' long-term access to support. The most significant potential threats to support come from burnout and from the loss of support as the result of the death of an aging parental caregiver.

Potasznick and Nelson (1984) have shown that family care givers are especially susceptible to burnout. Evidence of such burnout comes on top of studies that indicate that families with handicapped members often experience social isolation (Gayton, 1975).

Gottlieb (1988) attributes family burnout to a deterioration in support that occurs when family members neglect ties to outside relationships. In Gottlieb's view support wanes "partly because [family helpers] have less time and energy to invest in outside relationships and partly because their associates do not know how they can help, how to help, and how their involvement in helping can affect their own emotional equilibrium" (Gottlieb, 1988; p.14).

If primary providers of support are to be spared the ill-effects of burnout, patterns of care/support provision must be modified. Networks can, for example, be engineered to provide time off for primary care providers. Primary care providers may need to be trained to identify and utilize other formal and/or informal sources of support, or they may benefit from opportunities that enable them to better understand their feelings, positive and negative, around care issues.

Professionals can design programs for natural helpers that teach helpers...
to identify and use the resources that are present within helpers' ecological domain. When plausible, professionals also have the added option of aiding clients in extending the boundaries that effectively limit access to support. These boundaries can be imagined or real. With regard to casework with severely visually impaired clients, extra orientation and/or mobility training can translate either directly or indirectly into access to new sources of support.

Cognitive interventions may similarly extend the client's access to new sources of support by enabling the person to rethink and revise the social boundaries that may artificially limit the scope of his/her social domain. Clients, for example, may not consider utilizing recreational services that serve the community at large because they fear that such agencies have no interest in extending services to blind persons, or expect they will likely be referred back to agencies that service blind persons. Although such fears have roots that can be traced to reality, current law prohibits discrimination on the basis of handicap. Through various advocacy functions, the social caseworker can use the law to help blind and visually impaired persons gain entre to new social environments and thereby open up new potential sources of support. Caseworkers can also assist clients in compiling community resource directories which identify vital supports. Workers can also teach clients advocacy skills to clients, to family members, and to other natural helpers. Workers may also assist clients in their attempts to form mutual aid and self-help groups.

Each of the above-noted interventions is consistent with an integrated social work practice model which above all else promotes client competence. Each intervention serves to inculcate and/or amplify skills that enhance coping and help to mitigate perceptions of powerlessness, or which help to overcome the learned helplessness that so often coincide with feelings of despair, isolation
and depression.

Although burnout is a significant potential consequence of excessive reliance upon a small number of caregivers, it is not the only major consequence. Overdependence upon aging parental caregivers can undermine the long-term security of adult children. As aging caregivers lose their ability or capacity to supply their progeny with various dimensions of assistance, their adult children face the specter of multiple losses. In addition to the loss of specific types of support, clients face the possibility of major structural changes in their support networks. Such formidable questions as: (1) Who, if anyone, will make up the support previously provided by the deceased parent? - and (2) Will the basic structure of the network change in response to the loss of a central network figure? - are particularly relevant to the multiply handicapped young adult, and to the caseworkers who service this population.

The visually impaired adult with a secondary disability may be overwhelmed by the need to replace a central network figure. In those instances where other kin are either unable or unavailable to render suitable levels of support, the caseworker may need to locate institutional resources or formal services that correspond to assessed needs. The caseworker may also consider a number of different types of network-centered interventions that enable the client and/or the natural helpers in his/her existing network to develop indigenous resources to meet support needs (See for example: Gottlieb & Hall, 1980). These interventions may or may not require major alterations in the existing structure of the clients' network.

Successful intervention in the support networks of blind and visually impaired adults requires special knowledge and the mastery of specific skills. These skills are annunciated in an increasing number of social work practice
texts (Whittaker and Tracy, 1989; Gitterman and Shulman, 1986; Germain, 1979). Social workers must learn to systematically assess the supportive and non-supportive features of client networks and use them to enhance competence. They must also learn to effectively assess cognitive functions as they relate to the appraisal and response to stress.

Thusfar, discussion has addressed the circumstances of young adults with reasonable access to support. But what of those with small networks who had less access to support?

Study data indicate that this group is smaller than had been expected. Study subjects with networks consisting of four or fewer helpers constituted approximately seven percent of the study sample. This figure compares very closely to the percentage of adults reported by Fischer (1982) with the smallest networks. The demographic characteristics given for persons in Fischers' study with small networks parallel those of study subjects with comparably sized networks. Subjects with the smallest networks were typically unemployed and/or poorly educated.

Although the presence of a second disability did not markedly influence network structure or access to support, results obtained from the analysis of sample data suggest that women with multiple handicaps (and/or other health impairments) are more likely to lack access to a specific dimension of support, which epidemiological studies have linked to health and wellness (Cohen and Syme, 1985; Shumaker and Brownell, 1984). Disabled women subjects were significantly less likely than disabled male subjects to marry. They thus lacked the ready access to support that often comes from either a marital partner or live-in companion. Unmarried subjects lacked the "attachment providing relationship" (Weiss, 1974) that many have linked to health and wellness.
For women, the possession of a secondary disability or health impairment proved to be less of a disadvantage with respect to work than to marriage. Multiply impaired women subjects proved to have a better chance of finding work than women who were not multiply impaired. This is due to the work opportunities that remain open for severely impaired adults in sheltered work settings. The most common barriers to employment faced by women subjects were lack of suitable transportation and a lack of daytime child care. With respect to the latter, it is not clear whether child care was too expensive and therefore out of reach of those who needed it, or whether subjects did not know how or where to gain access to the resource. With regard to the former barrier, it seems that access to transportation is somewhat more complicated. Individuals who indicated that they needed transportation either needed supplemental orientation and mobility training to have the capability of using public transportation, or they had the skills necessary to use buses but found bus schedules to be unworkable. Other reasons given for unemployment were the lack of suitable job skills and health reasons. Only one subject admitted to not wanting to work. Welfare entitlements did not appear to be disincentives to employment.

Despite the obstacles blind adults face both in finding a job and getting to a job, cause for optimism was evident in the different ways individuals surmounted barriers to employment. A small yet significant number of subjects found work in a wide range of sites as unpaid volunteers. These individuals were typically married and relied on their spouses to furnish financial support. An almost equal number of others, men and women alike, developed small businesses which they operated out of their homes.

In other areas of life, as well, subjects exhibited remarkable adaptability and ingenuity. This was particularly evident in the tactics that subjects used
to extend their range of network ties. Most friendships originated in conventional contexts. Most persons used the places and means most accessible to them to establish new network links. The majority of young adults went no further than their own buildings and neighborhoods to find potential friends. However, a sizeable number of subjects relied very heavily upon regular as well as seasonal programs run by agencies for the blind to meet new friends and to maintain existing relationships. A small number of men and women used self-help/mutual aid/advocacy groups as the fulcrum of their social activity. They viewed and used organizations as an important source of new friendships.

Subjects also turned to less orthodox tactics to extend their networks. Individuals reported using classified ads to meet members of the opposite sex, citizen band radio, and pen pal programs were also identified as means used to meet new people. Volunteer work sites were also specified as good places to meet new friends. Subjects did not view the workplace as a particularly viable location for meeting and making new friends.

Optimistic generalizations pertaining to the study sample must be viewed within the larger framework of the study, specifically the reluctance exhibited by so many to participate in this research. Close to 70% of the young adults eligible to participate in this study chose to ignore all attempts to achieve contact. It is difficult to determine just why this happened. One possible explanation is that a high percentage of young adults just did not wish to be bothered, were too busy, or saw no compelling need to volunteer their time. It is also possible that an indeterminate number of these individuals have resigned themselves to the role that society has delegated to persons with disabilities. To reach those who remain the most disaffected, network interventions appear to hold great promise. Network-centered interventions promote competence and improve
the person-situation fit.

This study represents a systematic attempt to map the significant features of the social support networks of blind young adults. Researchers with an interest in this population might want to consider a replication of this study that includes a comparison group of sighted subjects. This modification would not only create an opportunity to cross-validate the results obtained here, but would also allow more direct comparisons between visually impaired and non-visually impaired subjects to be made.

In addition, other significant network dimensions overlooked in this research need to be studied. Key among such dimensions are network density and reciprocity. These dimensions, however, will be difficult to assess due to the fact that instruments have not been adapted for use with blind persons. The administration of instruments currently available might not be practical (e.g.: their administration would be extremely time consuming).

Finally, additional studies which explore network structure and support provision within other developmental stages within the life cycle should be considered by prospective researchers. Researchers would be advised to consider longitudinal designs in lieu of cross sectional designs. Researchers might also consider the utilization of methods which identify interactive networks rather than exchange networks.
Endnotes

1. Comparisons of network studies are dangerous and must be approached with caution. Care must be taken to consider differences in the purposes of such studies; in differences in boundary specification, and in differences in the populations studied. In addition, differences in sampling methods and procedures must be afforded due consideration.

The studies which I cite for purposes of comparison ask fundamentally different research questions, and utilize different populations; which vary along specific dimensions (e.g. age and place of residence). Claude Fischer's Northern California Community Study entailed the use of random sampling procedures to procure a population of 1,050 men and women. Fischer’s subjects lived in fifty localities of varying urbanism. His stated principal objective was to determine whether individuals in 20th century America felt identified with a community ("loss of community thesis"), and whether the size and type of community in which individuals resided influenced the characteristics of their personal communities. Fischer delineates the purpose of research below:

This is the focus of the present work: describing the kinds of personal networks people have and linking those types to the kinds of places in which they live; or put another way linking the character of individual’s personal communities to the characteristics of their residential communities. (Fischer, 1982; p.2)

To identify the members of the personal communities of his respondents, Fischer invited each of his subjects to nominate "the kinds of people they were involved with and the nature of those involvements" (Fischer; p.36). His basic procedure was to get his respondents "to name the key people and then to ask them about each named person". Names were elicited by asking respondents to name the people who did, would, or could provide them with various kinds of support". Respondents were also asked to indicate how each identified source of support was connected to ego. Social contexts (normative contexts) utilized as response categories included: relative, co-worker, neighbor, member of same organization, friend, acquaintance, and other (e.g. spouse of friend, client, customer, former spouse, former co-worker or neighbor, professionals, etc.).

2. High scores on the adaptive behavior measure (20-27) indicate a willingness and the concomitant ability to handle all of the important tasks of daily life such as shopping, cooking, making change and using bank services, having clothes laundered, using recreational facilities, independent travel, etc. Low scores (9-19) indicate impaired ability and/or motivation to perform the above noted activities of daily living.

3. Low scores proved to be moderately correlated with physical and health impairment. A significant relationship was also detected between marital status and physical impairment. Men and women with physical impairments were significantly more prone to be single than those without such impairments. Severity of impairment was also correlated with marital status. As impairments increased in severity, the likelihood of remaining single and unmarried
increased. Conversely, men and women who were unimpaired were considerably more likely to be married.

4. Pattison, et al. (1979, 1981) found the primary networks of neurotics to be smaller in size than those of non-neurotics. Pattison et al. also found neurotics to have significantly fewer reciprocal ties to their network associates than non-neurotics. In addition, neurotics often rated interpersonal relationships with network associates negatively.

A second study by Pattison and his associates which compared the primary networks of neurotics with a matched group of non-neurotics revealed that neurotics had fewer close friends and had fewer contacts with persons outside their households than non-neurotics.

Irregularities in the structure and functioning of networks of adults with acute psychotic conditions (e.g. schizophrenia) have also been documented. Pattison et al. found a group of psychotic inpatients to have smaller personal networks (4 to 5 persons) than matched comparison groups of neurotics and "normals". The networks of psychotic inpatients also contained the highest proportion of nuclear family members. The networks of the psychotic inpatients were also dense and highly interconnected. In addition, they contained a high proportion of asymmetric ties.

Comparable findings have been reported in the literature by Cohen and Sokolovsky (1978, 1979). Cohen and his associate observed significant differences among psychotic and non-psychotic subjects with regard to network size and interaction. Non-psychotic subjects had significantly larger interactive networks and had significantly more multiplex relationships than psychotic subjects.

Tolsdorf (1976) also found a group of psychiatric patients to have a lower proportion of multidimensional ties than a matched comparison group of adults without psychiatric complaints.

5. The reader is directed to Question 113 found on page 71.

6. In his Northern California community study, Fischer found a positive relationship between network multiplexity and intensity with regard to nonkin helpers. Multistranded ties to nonkin were significantly stronger than uniplex ties to nonkin. However, Fischer also found that "with the exception of siblings among kin, the number of exchanges a [network] associate provided made little difference in felt closeness" (Fischer, 1982; p.144).

When Fischer (1977) re-analyzed Laumann et al.'s Detroit area study data, he detected relationships between frequency of contact and intimacy, and intimacy and duration. Adult Detroit males felt closest to friends seen most often. Longer-lasting friendships were also significantly more intimate.

Fischer also noted evidence of a negative relationship between duration and frequency of contact. In this case, the friends of male Detroiter who were known longer were seen significantly less often. To explain the aforementioned relationship, Fischer emphasized the developmental significance of role supports. He noted that:

...changes that accompany the aging of a close friendship interfere with frequent contact, so that friends can remain intimate but still be prevented by circumstances from getting together frequently. As an intimate relation grows older, it often becomes less convenient for friends to meet, and
convenience is the primary influence on interaction frequency. Over time, people's life circumstances change and so do their [role] relations. Many of the early supports to a friendships—school, jobs, physical proximity, and so on—fall away. The friendships that are maintained in the absence of such role supports are the intimate ones. However, those role relations provided occasions for frequent contact. Therefore, although people prefer to see their most intimate friends most often, the constraints of day-to-day life cause networks to assume a shape where people spend more time with more recent and less intimate friends but feel closest to old friends whom they cannot see easily (Fischer, 1977; p. 47).

7. The related issues of how and where network ties develop appear peripherally in studies that address the broad sociological paradigm referred to by some as the 'decline of community' thesis. At the center of this thesis is the notion that large-scale social changes brought about by rapid industrialization have transformed traditional communities; that communities as they were once known no longer exist. Proponents of this position argue that individuals have become isolated in a highly technological and industrialized world; that identification with community has eroded; that community ties have diminished, weakened and become narrowly specialized. That community ties have become transitory and fragmented. Detractors and opponents of the decline of community thesis argue, by contrast, that people have retained their ties; and that ties are stronger than ever. They acknowledge the advent of technology but argue that large scale specialization and personal mobility have effectively encouraged membership in multiple, interest-based communities which contain large proportions of long-distance friendship ties (See Wellman et al., 1988; p.134).

BIBLIOGRAPHY


APPENDIX A
**PERSONAL SOCIAL NETWORKS INTERVIEW**

**STATEMENT TO INTERVIEWEES:**

As you know, we're doing a study to learn more about how and where blind and visually impaired young men and women meet new friends and maintain old friendships. We hope to use the information to inform social clubs, agencies, and organizations on how they may best meet the social needs of blind and visually impaired young adults. We believe that ours is the first study of its type, and we are grateful for your time and cooperation.

The interview we're about to start should take about an hour and one-half to complete. Please listen carefully to the questions. There are no right or wrong answers. Because the interview is lengthy, you may get tired and wish to take a short break. Please let me know if this happens so that we can pause for a short break.

Because your participation in this study is voluntary, you are free to discontinue the interview at any time. If you have any questions about your rights as a participant, your questions can be answered now, or at the close of our session. Your future questions can be addressed to Mr. Arthur Weiner. I'll leave a card for you with Mr. Weiner's address and phone number. If you're ready now, let's begin.

<table>
<thead>
<tr>
<th>1. CASE NUMBER: (2 digits)</th>
<th>(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. DATE OF INTERVIEW:</td>
<td>(2)</td>
</tr>
<tr>
<td>3. STARTING TIME:</td>
<td></td>
</tr>
<tr>
<td>4. INTERVIEWER INITIALS:</td>
<td></td>
</tr>
<tr>
<td>5. Would you like to RECEIVE a free copy of the results of this study?</td>
<td></td>
</tr>
<tr>
<td>1. Yes</td>
<td>(3)</td>
</tr>
<tr>
<td>2. No</td>
<td></td>
</tr>
<tr>
<td>6. SUBJECT'S GENDER: (Do not ask this question!)</td>
<td></td>
</tr>
<tr>
<td>1. Male</td>
<td>(4)</td>
</tr>
<tr>
<td>2. Female</td>
<td></td>
</tr>
<tr>
<td>7. On what DAY, MONTH, and YEAR were you born?</td>
<td>(5)</td>
</tr>
<tr>
<td>8. What is your racial or ethnic group?</td>
<td></td>
</tr>
<tr>
<td>1. American Indian</td>
<td>(6)</td>
</tr>
<tr>
<td>2. Hispanic</td>
<td></td>
</tr>
<tr>
<td>3. Oriental</td>
<td></td>
</tr>
<tr>
<td>4. Black</td>
<td></td>
</tr>
<tr>
<td>5. White</td>
<td></td>
</tr>
<tr>
<td>6. Other:</td>
<td></td>
</tr>
<tr>
<td>Please specify</td>
<td></td>
</tr>
<tr>
<td>(To be completed before interview begins)</td>
<td></td>
</tr>
<tr>
<td>CURRENT ADDRESS</td>
<td></td>
</tr>
<tr>
<td>9. Number and Street: (Apt. or Room #)</td>
<td>(7)</td>
</tr>
<tr>
<td>10. City</td>
<td></td>
</tr>
<tr>
<td>11. County</td>
<td></td>
</tr>
<tr>
<td>12. Zipcode</td>
<td>(8)</td>
</tr>
<tr>
<td>13. What is your MARITAL STATUS?</td>
<td></td>
</tr>
<tr>
<td>1. single /NEVER MARRIED</td>
<td>(9)</td>
</tr>
<tr>
<td>2. now Married (including de facto, common-law)</td>
<td>Zipcode</td>
</tr>
<tr>
<td>3. Widowed</td>
<td></td>
</tr>
<tr>
<td>4. Divorced or Anulled</td>
<td></td>
</tr>
<tr>
<td>5. Separated</td>
<td></td>
</tr>
<tr>
<td>6. Life-partner (gay, lesbian)</td>
<td></td>
</tr>
<tr>
<td>7. No response</td>
<td>(10)</td>
</tr>
</tbody>
</table>
14. Do you have any children?

1. RECORD ACTUAL NUMBER (from 0 to ___ )

HINT: I AM GOING TO ASK YOU SOME QUESTIONS ABOUT YOUR LIVING ARRANGEMENT, QUESTIONS ABOUT YOUR FAMILY, AND A FEW QUESTIONS ABOUT YOUR RELATIONSHIPS WITH YOUR FAMILY MEMBERS.

15. Do you live alone?

1. Yes
2. No *

16. If no, with whom do you live?

1. Spouse/companion
2. Other relative(s) (other than spouse, parent)
3. Other handicapped person(s)
4. Parents
5. Group home
6. Other non-handicapped person(s)
7. Other: * Please specify

17. Please tell me WHO lives with you, each person's RELATIONSHIP to you, and each person's AGE. Let's start with the oldest member of your household. (* List names... then start with... What is your relationship to ________ )

<table>
<thead>
<tr>
<th>Person</th>
<th>Person</th>
<th>Person</th>
<th>Person</th>
<th>Person</th>
<th>Person</th>
<th>Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

A) RELATIONSHIP (use code)

B) AGE (Record 9 years)

C) GENDER (M or F)

D) IS PERSON BLIND OR VISUALLY IMPAIRED (Y or N)

E) DOES ANY DISABILITY OR LONG-TERM HEALTH PROBLEM LIMIT THE WORK, SCHOOL, OR PHYSICAL ACTIVITY OF THIS PERSON (Y or N)

F) DOES THIS PERSON REQUIRE SPECIALIZED CARE OR MEDICAL TREATMENT ON A WEEKLY BASIS? (Y or N)

G) IS THIS PERSON EMPLOYED? (Y or N)

RELATIONSHIP CODES (PLEASE USE ABOVE, WHEN POSSIBLE)

- Self: 01
- Companion/spouse: 02
- Son: 03
- Daughter: 04
- Step-son: 05
- Step-daughter: 06
- Brother: 07
- Sister: 08
- Aunt: 09
- Uncle: 10
- Grandfather: 11
- Grandmother: 12
- Niece: 13
- Nephew: 15
- Other child: 14
- Other adult friend: 32
- Other: 00

CODES: 7777 - DON'T KNOW 8888 - REFUSED 9999 - NOT APPLICABLE

PAGE 2
18. Are your parents alive or deceased?
   1. Mother and father alive
   2. Only mother alive
   3. Only father alive
   4. Both deceased
   5. Don't know
   (62)

19. Are you presently engaged or going out steadily with anyone?
   1. No
   2. Yes
   (63)

20. If YES...
   Is this person sighted?
   1. Yes
   2. Partially sighted
   3. Legally blind
   (64)

21. Does this person have a disability, or is this person bothered by any of the following health impairments?

<table>
<thead>
<tr>
<th>Condition</th>
<th>NO</th>
<th>YES</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seizure disorder</td>
<td>(65)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning problems</td>
<td>(66)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td>(67)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cerebral palsy</td>
<td>(68)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiple sclerosis</td>
<td>(69)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>(70)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polio</td>
<td>(71)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hearing impairment/Hearing loss</td>
<td>(72)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty walking</td>
<td>(73)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difficulty speaking</td>
<td>(74)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss of one or more limbs</td>
<td>(75)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Serious Emotional difficulties</td>
<td>(76)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Or any other disability or health impairment which hasn't been mentioned? (Please specify)</td>
<td>(77)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

22. Are you currently employed?
   1. No
   2. Yes
   (78)

IF YES, ASK ITEMS 23 AND 24

23. How many hours per week do you work?
   1. RECORD HOURS
   (79)

24. How long have you been at your present job?
   1. RECORD ACTUAL # OF MONTHS ON-THE-JOB
   (80)

CODES: 7777 - DON'T KNOW 8888 - REFUSED 99999 - NOT APPLICABLE
20. What full-time, part-time, or volunteer work do you do?

1. Higher executive or major professional position, large proprietor (i.e. CPA, physician, corporate officer)
2. Junior executive, lesser professional, business manager or medium proprietor (i.e. executive assistant, pharmacist, or teacher)
3. Minor professional, administrative personnel, small proprietor (i.e. actor, private secretary)
4. Clerical and sales worker (i.e. bookkeeper, dental technician)
5. Skilled manual worker (i.e. butcher, carpenter, electrician)
6. Semi-skilled worker, machine operator (i.e. bus driver, hospital aide, practical nurse)
7. Unskilled manual worker, domestic
8. Housewife or househusband

21. If subject is unemployed (or between jobs, etc)

26. Which of the following reasons best explains why you are not working right now?

1. unable to work for health reasons
2. attending school
3. needed to take care of children
4. lack of transportation
5. lack of job skills
6. can't find job/no work available
7. no interest in working
8. Other:

22. How I would like to ask you several questions about your vision:

<table>
<thead>
<tr>
<th>Question</th>
<th>NO</th>
<th>YES</th>
<th>REFUSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>27. Do you see anything at all?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
<tr>
<td>28. Do you have light perception--that is, can you tell if a light is on, or whether it is day or night?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
<tr>
<td>29. Can you make out moving objects, such as cars, people walking, and so forth?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
<tr>
<td>30. Are you able to recognize people you know if they are close enough?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
<tr>
<td>31. Can you read regular print?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
<tr>
<td>32. Do you have trouble reading a telephone book?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
<tr>
<td>33. Do you have difficulty recognizing faces?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
<tr>
<td>34. What do you think is your chance of regaining normal vision?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
<tr>
<td>35. How old were you when you first began to experience loss of sight?</td>
<td>(0)</td>
<td>(1)</td>
<td>(8888)</td>
</tr>
</tbody>
</table>

23. Record actual age (rounding up to closest year)
36. How did you come to be visually impaired? That is, what caused your blindness or visual impairment?

1. Glaucoma
2. Injury
3. Diabetes
4. RLP (fernmur: Retinopathy)
5. Retinitis Pigmentosa
6. Other:
7777. Don't know (92)

37. I am going to read a list of disabilities and long term health problems that people can have. Please let me know if you have any of the health problems that I will mention, or whether you have any health problems that I may have overlooked?

<table>
<thead>
<tr>
<th>Disability/Problem</th>
<th>NO</th>
<th>YES</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Seizure disorder</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Learning problems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Cancer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Cerebral palsy</td>
<td>(92)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Multiple sclerosis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Diabetes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Polio</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Hearing impairment/Hearing loss</td>
<td>(100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Difficulty walking</td>
<td>(101)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Difficulty speaking</td>
<td>(102)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Loss of one or more limbs</td>
<td>(103)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Serious Emotional difficulties</td>
<td>(104)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Any other disability or health impairment which hasn't been mentioned? (Please specify: (105)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

38. Do you use any mobility aids, such as a cane, guide dog, or glasses?

<table>
<thead>
<tr>
<th>Aid</th>
<th>NO</th>
<th>YES</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No/None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cane only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Glasses only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Guide dog only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Guide dog and glasses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Cane and glasses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Other: (Please specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

39. Which of the following describe your religious affiliation?

<table>
<thead>
<tr>
<th>Religious Affiliation</th>
<th>NO</th>
<th>YES</th>
<th>DON'T KNOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Catholic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Protestant (Lutheran, Baptist, Episcopal, Methodist, Assembly of God, etc.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Jewish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Seventh Day Adventist</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Church of Jesus Christ of Latter Day Saints (Mormon Church)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. No religious affiliation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Atheist, Agnostic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Religious Society of Friends (Friends)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Other: (Please specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

40. During the past week, approximately how many times did you leave your home to go somewhere (for any purpose)?

<table>
<thead>
<tr>
<th>CODES: 7777 - DON'T KNOW</th>
<th>8888 - REFUSED</th>
<th>9999 - NOT APPLICABLE</th>
</tr>
</thead>
</table>
41. If the PAST WEEK was not typical, then approximately how many times would you say you leave your home or apartment during a TYPICAL WEEK?

1. RECORD ACTUAL NUMBER OF TIMES

42. About how much money do you spend for local transportation during an average week? (For buses or taxis)

- Less than $1.00
- $1.00 to $4.99
- $5.00 to $9.99
- $10.00 to $14.99
- $15.00 to $19.99
- $20.00 to $24.99
- $25.00 to $29.99
- $30.00 to $34.99
- $35.00 to $39.99
- $40.00 to $44.99
- $45.00 to $49.99
- $50.00 to $54.99
- $55.00 to $59.99
- $60.00 to $64.99
- $65.00 to $69.99
- $70.00 to $74.99
- $75.00 to $79.99
- $80.00 to $84.99
- $85.00 to $89.99
- $90.00 to $94.99
- $95.00 to $99.99
- $100.00 to $104.99
- $105.00 to $109.99
- $110.00 to $114.99
- $115.00 to $119.99
- $120.00 to $124.99
- $125.00 to $129.99
- $130.00 to $134.99
- $135.00 to $139.99
- $140.00 and over

43. How long does it take to walk from where you live to the closest bus stop?

1. RECORD TIME IN MINUTES

44. Approximately how many visually impaired and blind persons do you know who live in Delaware?

1. RECORD ACTUAL NUMBER

45. Approximately how many visually impaired and blind persons do you know who live OUTSIDE of Delaware?

1. Record actual number

IF SUBJECT HAS ONE OR MORE OUT-OF-STATE FRIENDS, FOLLOW-UP WITH THE NEXT QUESTION...

46. Where did you meet your three-closest OUT OF STATE friends?

【PERSON 1】

【PERSON 2】

【PERSON 3】

47. In general, do you prefer to do things alone, or with other people?

- Alone
- With others
- Both
- Makes no difference

Don't know

48. Can you read Braille?

- No
- Yes

49. Can you write Braille?

- No
- Yes

50. If you had a choice, which of these would you rather do?

- Watch T.V.
- Listen to the radio
- Read or listen to a book
- Visit with friends
- Talk on the phone with friends
- Other:

CODES: 7777 - DON'T KNOW 8888 - REFUSED 9999 - NOT APPLICABLE
51. How do you do most of your reading?
   1. in ordinary print
   2. in braille
   3. with records or cassettes (tapes)
   4. with the help of a sighted reader
   5. in large print
   6. Other: ________________________________ (Please specify) (121)

52. Do you know how to type in print?
   1. Yes
   2. No (123)

53. Do you have a telephone?
   1. Yes
   2. No (123)

54. Which of the following best describes how you spend most of your time on a TYPICAL day?
   1. Looking for work
   2. Attending school
   3. Keeping house
   4. At my job
   5. Hanging out with friends
   6. Attending organised program
   7. Other: ________________________________ (124)

55. How long have you lived in your present community?
   1. RECORD ACTUAL TIME IN MONTHS (125)

56. Generally speaking, do you think of your neighborhood as:
   1. a very safe place
   2. a somewhat safe place
   3. not a very safe place
   4. Don't know (126)

57. Do you ever find you want to go some place nearby, but don't go because you have trouble getting there?
   1. Yes*
   2. No (127)

   *IF YES...

58. How frequently does this occur?
   1. Rarely or never (once every few months)
   2. Occasionally (monthly)
   3. Frequently (weekly)
   4. Constantly (almost daily) (128)

   ASK ONLY IF SUBJECT IS NOT LIVING WITH PARENTS!

59. At what age did you stop living with your parents?
   1. RECORD ACTUAL AGE, (ROUND UP TO CLOSEST YEAR) (129)

60. Are you the youngest, oldest, or just where do you rank in your family with regard to age?
   1. Oldest
   2. Youngest
   3. Second oldest
   4. Third oldest
   5. Only child
   6. Other: ________________________________ (130)

61. Who usually takes care of you when you are sick?
   1. Spouse
   2. Brother or sister
   3. Parent
   4. Other relative (or in-law)
   5. Neighbour
   6. Friend
   7. No one
   8. It varies
   9. Other: ________________________________ (131)
63. What was the highest grade in school that you completed and got credit for?

1. No formal education
2. 1st to 5th grade
3. 6th grade
4. 7th grade
5. 8th grade
6. 9th grade
7. 10th grade
8. 11th grade
9. 12th grade
10. Some college
11. 1yr. college degree (i.e. AA degree)
12. 4yr. college degree (baccalaureate degree)
13. Some graduate work
14. Masters' degree
15. Doctorate or senior professional (M.D., J.D.)

How often do you...

(Please use code)

<table>
<thead>
<tr>
<th></th>
<th>Does Freq.</th>
<th>Does Occas.</th>
<th>Seldom/Sever Does/Can Do</th>
<th>Can't Do</th>
</tr>
</thead>
<tbody>
<tr>
<td>66. Identify money &amp; make correct change? (135)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>67. Obtain a use bank or credit services? (136)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>68. Prepare and cook your own meals? (137)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>69. Select for yourself the clothes you wear each day? (138)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>70. Either launder your dirty clothes, or make arrangements to have your clothes professionally laundered? (139)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>71. Shop for groceries, and personal hygiene items such as toothpaste, soap, etc.? (140)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>72. Make use of recreational facilities in your community? (141)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>73. Travel independently (without the help of another person)? (142)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>74. Clean your apartment, home, or room without assistance? (143)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Which of the following statements BEST DESCRIBES your attitude about your visual difficulties or visual impairment?

1. It's a fact of life that I have learned to accept.
2. It's an inconvenience.
3. It's a source of frustration.
4. It's probably the worst thing that could have ever happened to me.

76. How many brothers and sisters do you have?

1. Record actual number (146)

Codes:
7777 - Don't know
8888 - Refused
9999 - Not applicable
I AM NOW GOING TO READ YOU FIVE STATEMENTS WITH WHICH YOU MAY AGREE OR
DISAGREE. AFTER I READ EACH STATEMENT, PLEASE TELL ME WHETHER YOU
STRONGLY AGREE, AGREE, NEITHER AGREE NOR DISAGREE, DISAGREE, OR
STRONGLY DISAGREE. (PAUSE) LET ME REPEAT THE QUESTION... PLEASE TELL ME WHETHER
YOU STRONGLY AGREE, AGREE, NEITHER AGREE NOR DISAGREE, DISAGREE, OR
STRONGLY DISAGREE WITH EACH OF THESE QUESTIONS.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>Nor</th>
<th>D</th>
<th>S.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

77. I have little control over the things that happen to me. Do you strongly agree,
agree, neither agree nor disagree, disagree, or strongly disagree?

NOTE: ASK QUESTIONS 78 TO 83

78. There is really no way I can solve some of the problems I have.

79. There is little I can do to change some of the important things in my life.

80. I often feel helpless in dealing with the problems of life.

81. Sometimes I feel that I'm being pushed around in life.

82. What happens to me in the future mostly depends on me.

83. I can do just about anything I really set my mind to.

84. In most ways my life is close to ideal.

85. The conditions of my life are excellent.

86. I am satisfied with my life.

87. So far I have gotten the important things I want in life.

88. If I could live my life over, I would change almost nothing.

INTERVIEWER: PLEASE CONTINUE TO THE NEXT PAGE.

(IF THE SUBJECT APPEARS TIRED, YOU CAN TAKE A 5 MINUTE BREAK AT THIS POINT)
### Part II: Social Network Questions

#### Opening Statement

In the next few minutes, I would like to get an idea of the people who are important to you in a number of different ways. These people might be friends, family members, teachers, ministers, doctors, neighbors, or other people you might talk to. In the next series of questions, I will be writing descriptions of ways that people are often important to us. Please tell me the names of the people who fit each description.

<table>
<thead>
<tr>
<th>R. Private Feelings</th>
<th>S. Material Aid</th>
<th>C. Advice</th>
<th>D. Positive Feedback</th>
<th>E. Physical Assistance</th>
<th>F. Social Help</th>
<th>G. Interaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2. If you wanted to talk to someone about things that are very personal and private, who would you talk to? Please give me the names of the people you would talk to about personal and private topics.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q9. During the last month, which of the people you listed did you talk with about things that were personal and private? (Assess each person only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q11. During the last month, would you have liked:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. A lot more opportunities to talk to people about your very personal and private feelings.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. A few more opportunities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Fewer opportunities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Was it about right?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q12. During the past month, how much do you think you needed people to talk with about very personal or private things?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Not at all</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. A little bit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Quite a bit</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**(Code:)**
8. Material Aid

94. During the past month, which of the people that you listed actually earned or gave you some money over $25.00, or gave or loaned you some valuable object that you needed? (Use same spaces as above)

95. During the past month, would you have liked people to have loaned or to have given you...
   1. A little more
   2. A little less
   3. or, was it about right?

96. During the past month, how much do you think you needed people who could give or lend you things that you needed?
   1. Not at all
   2. A little bit
   3. Quite a bit

**PROBE: Is there anyone else that you can think of?** (Use spaces at right)
<table>
<thead>
<tr>
<th>Q. Positive Feedback</th>
<th>104. Who are the people that you could expect to let you know when they like your plans or the things that you did? These might be people you've already mentioned, or new people. (179–185) PRIME: Across rows (use space at right)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>105. During the past month, which of these people actually let you know that they liked your ideas or liked the things that you did?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>106. During the past month, would you have liked people to tell you that they liked your ideas or things that you did?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>107. During the past month, how much do you think you needed to have people let you know when they liked your ideas or things that you did?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
|                     | | | | | | | | | (130)
### E. Physical Assistance

105. **We are the people that we could call on to give up some of their time and energy to help make things better.** Things like helping you do things around the house, or going to the store for you. Things like that. Remember, you might have listed these people before or they could be new names. (Rev. Side)

**PROBE:** Anyone else you can think of?

<table>
<thead>
<tr>
<th>A. PRIVATE FEELINGS</th>
<th>B. MATERIAL SUPPORT</th>
<th>C. ADVICE</th>
<th>D. POSITIVE FEEDBACK</th>
<th>E. PHYSICAL SUPPORT</th>
<th>F. SOCIAL SUPPORT</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

106. **During the past month, which of these people actually pitched in to help you do things that you needed some help with?**

107. **During the past month, would you have liked...**

   1. A lot more help with things that you needed to do.
   2. A little more help.
   3. About the same.
   4. Less help.

108. **During the past month, how much did you feel you needed people who would pitch in to help you do things?**

   1. Not at all
   2. A little bit
   3. Quite a bit
### F. Social Participation

<table>
<thead>
<tr>
<th></th>
<th>A. PRIVATE FEELINGS</th>
<th>B. MATERIAL SUPPORT</th>
<th>C. ADVICE</th>
<th>D. POSITIVE FEELINGS</th>
<th>E. PHYSICAL ASSISTANCE</th>
<th>F. SOCIAL PARTICIPATION</th>
<th>G. INTERACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 109. Who are the people that you get together with to have fun or to relax? These people can be other persons who you have already named, or others who you haven't mentioned to this point.

**PROBE:** Anyone else?

#### 110. During the past month, which of these people did you actually get together with to have fun or to relax.

#### 111. During the past month, would you have liked

1. A lot more opportunities to get together with people for fun and relaxation.
2. A few more opportunities to get together with people for fun and relaxation.
3. About the same opportunities as usual.
4. Fewer opportunities

#### 112. How much do you think that you needed to get together with other people for fun and relaxation during the past month?

1. Not at all
2. A little bit
3. Quite a bit
4. **(256)**

---

*(Note: The image contains a table with columns for different types of social participation and a column for interaction. The table is partially filled with responses, but the text is not clearly visible.)*
### C. Negative Interactions

113. Who are the people that you can expect to have some employment disagreements with or people that you can expect to get you angry and upset? These could be new names or names you listed before.

**PROBE:** Anyone else? (188-192)

114. During the past month, which of these people have you actually had some employment disagreements with or been actually made you angry and upset?
### PART III: CHARACTERISTICS OF EACH NETWORK MEMBER

**Questions:** I will ask you how you will complete my interviews. I am interested in how people you have met interact with the people you have met. For each of the people you have met, please answer the following questions.

**Instructions:** Start with the first name alphabetically and work left to right.

<table>
<thead>
<tr>
<th><strong>115. What is your relationship to the person?</strong></th>
<th><strong>116. Name of person?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Walker/Sister</td>
<td><strong>231</strong></td>
</tr>
<tr>
<td>Doctor/Cousin/Relative</td>
<td><strong>232</strong></td>
</tr>
<tr>
<td>In-law (related to you by marriage)</td>
<td><strong>233</strong></td>
</tr>
<tr>
<td>Professional relationship (e.g., insurance, lawyer, doctor, etc.)</td>
<td><strong>234</strong></td>
</tr>
<tr>
<td>Other (e.g., landlord, hairdresser, etc.)</td>
<td><strong>235</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>117. What is the name of person's CHERN?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
<tr>
<td>Place</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>118. What is the name of person's CHERN?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
<tr>
<td>Place</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>119. How long have you known the person?</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
</tbody>
</table>

**Codes:** 7777 - DON'T KNOW 8888 - REFUSED 9999 - NOT APPLICABLE
### Occupation

<table>
<thead>
<tr>
<th>Code</th>
<th>Occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Professional or semi-professional</td>
</tr>
<tr>
<td>2</td>
<td>Clerical or sales</td>
</tr>
<tr>
<td>3</td>
<td>Craftsmen, foremen</td>
</tr>
<tr>
<td>4</td>
<td>Service workers</td>
</tr>
<tr>
<td>5</td>
<td>Farmers</td>
</tr>
<tr>
<td>6</td>
<td>Students</td>
</tr>
<tr>
<td>7</td>
<td>Other Specified</td>
</tr>
</tbody>
</table>

### Marital Status

<table>
<thead>
<tr>
<th>Code</th>
<th>Marital Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Single</td>
</tr>
<tr>
<td>2</td>
<td>Married (with children)</td>
</tr>
<tr>
<td>3</td>
<td>Widowed (with children)</td>
</tr>
<tr>
<td>4</td>
<td>Divorced (with children)</td>
</tr>
<tr>
<td>5</td>
<td>Other Specified</td>
</tr>
</tbody>
</table>

### Where do you live?

<table>
<thead>
<tr>
<th>Code</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>House room</td>
</tr>
<tr>
<td>2</td>
<td>House or apartment</td>
</tr>
<tr>
<td>3</td>
<td>House or building complex</td>
</tr>
<tr>
<td>4</td>
<td>House in city</td>
</tr>
<tr>
<td>5</td>
<td>House on non-metropolitan area (out of</td>
</tr>
<tr>
<td>6</td>
<td>House in state</td>
</tr>
</tbody>
</table>

**Codes:**
- 7777 - Don't know
- 9999 - Not applicable
123. Who did you first meet (Name of person)?

- 1. School
- 2. Club/organization (sighted)
- 3. Club/organization (for blind)
- 4. Friend
- 5. Relocation
- 6. Family member/relative
- 7. At site of an organized event
- 8. Other (Please specify) (CCP 1.20)

124. Approximately how much EDUCATION has (Name of Person) received?

- 1. 0 years or less (elementary school)
- 2. 6 to 8 years (elementary school)
- 3. 10 to 12 years (high schooldropout)
- 4. 13 to 15 years (high school graduate)

7777 = Don't Know

125. At what time of day did you FIRST MEET (Name of person)?

- 1. In the morning
- 2. Afternoon
- 3. Evening
- 4. At a bar or restaurant
- 5. In church
- 6. At the site of an organized event
- 7. Other (Please specify) (CCP 1.20)

---

CODES: 7777 = DON'T KNOW 8888 = REFUSED 9999 = NOT APPLICABLE
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>126. How often do you visit (face to face) with (name of person)?</td>
<td>A. Few times per week</td>
</tr>
<tr>
<td>127. How did you last travel to meet with (name of person)?</td>
<td>1. Written form provided transportation</td>
</tr>
<tr>
<td>128. How often do you talk with (name of person)?</td>
<td>1 to 13</td>
</tr>
</tbody>
</table>
INTERVIEW COMPLETION SHEET

HAS INTERVIEW BEEN FULLY COMPLETED? (circle)  YES  NO

TIME INTERVIEW COMPLETED:

TOTAL TIME OF INTERVIEW (HOURS AND MINUTES):

IF INTERVIEW TERMINATED BEFORE COMPLETION, PLEASE EXPLAIN:

WERE THERE ANY CIRCUMSTANCES THAT MAY HAVE INFLUENCED THE QUALITY OF
INFORMATION OBTAINED? (e.g. Interview cut short, person uncooperative,
pets, crying children, fire, etc.)

YES  NO

PLEASE EXPLAIN YOUR ANSWER:

DOES INTERVIEWEE NEED TO BE CONTACTED?:  YES  NO

FOR WHAT PURPOSE:

SUBJECTS COMMENTS, CRITICISMS, REMARKS OR SUGGESTIONS:

FINAL CHECKLIST

HAVE YOU:

1. INSPECTED YOUR COMPLETED INTERVIEW SCHEDULE, QUESTION BY
   QUESTION TO CHECK FOR ANY ERRORS OR OMISSIONS.

2. CHECKED FORM TO INSURE THAT EACH ITEM HAS BEEN CODED.
   (This will make it possible for data to be entered into
   computer immediately)

3. FULLY COMPLETED THIS PAGE.
APPENDIX B
DEAR

THIS LETTER IS BEING MAILED TO YOU BY THE DELAWARE ASSOCIATION FOR THE BLIND ON MY BEHALF. I AM WORKING ON A STUDY TO LEARN MORE ABOUT HOW BLIND AND VISUALLY IMPAIRED DELAWAREANS MEET NEW FRIENDS. I ALSO HOPE TO LEARN HOW PEOPLE MAINTAIN THEIR RELATIONSHIPS WITH FRIENDS OVER TIME. I HOPE TO FIND PRACTICAL WAYS TO HELP BLIND AND VISUALLY IMPAIRED ADULTS WHO WISH TO MAKE NEW FRIENDS TO DO SO.

TO GET THE MOST ACCURATE INFORMATION POSSIBLE, I WILL NEED TO MEET WITH YOU FOR A LITTLE MORE THAN ONE HOUR, AT WHICH TIME YOU WILL BE ASKED A SERIES OF QUESTIONS. YOU WILL NOT NEED TO READ OR WRITE ANY ANSWERS, AS THIS WORK WILL BE DONE BY ME, OR BY ONE OF MY TRAINED INTERVIEWERS. OUR MEETING CAN TAKE
PLACE AT YOUR HOME, OR, AT ANOTHER LOCATION THAT IS CONVENIENT TO YOU. THIS CAN BE DONE DURING THE DAY OR EVENING, DURING THE WEEK OR ON A WEEKEND, WHICHEVER IS MORE CONVENIENT FOR YOU.

YOUR PARTICIPATION IN THIS STUDY IS COMPLETELY VOLUNTARY. YOUR DECISION WILL IN NO WAY EFFECT THE RELATIONSHIP YOU HAVE WITH THE DELAWARE ASSOCIATION FOR THE BLIND. IT WILL HAVE NO EFFECT WHATSOEVER ON THE SERVICES YOU MAY NOW RECEIVE, OR EXPECT TO RECEIVE FROM THE ASSOCIATION.

PLEASE KEEP IN MIND THAT ALL THE INFORMATION THAT YOU PROVIDE WILL BE KEPT STRICTLY CONFIDENTIAL. YOUR ANSWERS WILL BE CODED SO THAT NO ONE WILL BE ABLE TO IDENTIFY WHAT YOU AS AN INDIVIDUAL HAVE SAID. YOUR NAME WILL NOT APPEAR IN ANY PART OF THE PUBLISHED REPORT. IT IS ALSO IMPORTANT FOR YOU TO KNOW THAT YOU CAN REFUSE TO ANSWER ANY QUESTIONS YOU CHOOSE, AND THAT YOU ARE FREE TO TERMINATE YOUR SESSION WITH AN INTERVIEWER AT ANY POINT, OR TO WITHDRAW FROM THE RESEARCH STUDY AT ANY POINT.

IF YOU WOULD LIKE TO BE INTERVIEWED, AND TO PARTICIPATE IN THIS IMPORTANT STUDY, I MUST ASK YOU TO FILL OUT THE CONSENT FORM THAT
IS ATTACHED TO THIS LETTER. IF YOU NEED HELP IN FILLING OUT THE FORM, OR, IF YOU HAVE ANY QUESTIONS, PLEASE PHONE ME AT ONE OF THE NUMBERS PRINTED HERE, AND WE'LL EXPLORE WHAT CAN BE DONE. IN WILMINGTON, I CAN BE REACHED AT: (302) 658 - 0218. I CAN ALSO BE REACHED OUT-OF-STATE AT THE FOLLOWING NUMBER: (718) 636-9429.

WE HAVE ENCLOSED A PRE-ADDRESSED ENVELOPE, WITH POSTAGE, FOR YOUR CONVENIENCE. ONCE I HAVE RECEIVED YOUR UNSIGNED CONSENT FORM, I WILL PHONE YOU (PLEASE INCLUDE YOUR PHONE NUMBER ON THE CONSENT FORM!), OR, I WILL WRITE YOU IMMEDIATELY TO SCHEDULE A PLACE, DATE, AND TIME FOR THE INTERVIEW. WE HOPE TO BEGIN INTERVIEWING EARLY IN AUGUST.

THANKS SO MUCH FOR TAKING THE TIME TO READ THIS LETTER. I THINK THAT YOU WILL ENJOY PARTICIPATING IN OUR SOCIAL NETWORK STUDY. I LOOK FORWARD TO HEARING FROM YOU.

SINCERELY,

ARTHUR WEINER
DOCTORAL CANDIDATE
COLUMBIA UNIVERSITY,
AND NATIVE DELAWAREAN
DEAR FRIEND,

SEVERAL WEEKS AGO, THE DELAWARE ASSOCIATION FOR THE BLIND SENT YOU A LETTER ASKING FOR YOUR HELP WITH A STUDY THAT CONCERNS HOW AND WHERE VISUALLY IMPAIRED ADULTS MAKE NEW FRIENDS AND MAINTAIN OLD FRIENDSHIPS.

I AM WRITING YOU A SECOND TIME TO REPEAT MY REQUEST FOR YOUR SUPPORT. IF YOU HAVE ALREADY RESPONDED TO MY FIRST LETTER, PLEASE ACCEPT MY APPRECIATION FOR YOUR COOPERATION.

THE PURPOSE OF THIS RESEARCH IS TO GIVE YOU, AND OTHERS, THE BENEFIT OF HOW YOUNG ADULTS GO ABOUT ENLARGING FRIENDSHIPS, AND HOW INDIVIDUALS DEVELOP SOURCES OF SOCIAL SUPPORT. I AM ALSO HOPING THAT THIS RESEARCH WILL PROVIDE AGENCIES AND ORGANIZATIONS THAT SERVE THE PUBLIC USEFUL NEW IDEAS FOR PROGRAMS THAT WILL HELP TO BRING YOUNG ADULTS TOGETHER.

THE AMERICAN FOUNDATION FOR THE BLIND, IN ADDITION TO THE DELAWARE ASSOCIATION FOR THE BLIND, IS VERY ENTHUSIASTIC ABOUT THIS RESEARCH. YOUR COOPERATION WILL HELP TO MAKE THIS STUDY POSSIBLE.

IF YOU AGREE TO PARTICIPATE IN OUR STUDY, A QUALIFIED INTERVIEWER WILL CONTACT YOU WITH THE PURPOSE OF COMPLETING A QUESTIONNAIRE. THE INFORMATION THAT YOU GIVE US WILL BE USED ONLY FOR RESEARCH PURPOSES, AND YOUR ANSWERS WILL BE KEPT STRICTLY CONFIDENTIAL. YOUR PARTICIPATION IN THE STUDY IS ENTIRELY VOLUNTARY, AND YOU CAN CHOOSE TO WITHDRAW FROM THE RESEARCH AT ANY TIME.

I HOPE THAT YOU WILL CHOOSE TO BE A PART OF THIS INTERESTING STUDY BY COMPLETING THE ATTACHED FORM. A POSTAGE FREE ENVELOPE HAS BEEN PROVIDED FOR YOUR CONVENIENCE.

WE LOOK FORWARD TO HEARING FROM YOU AS SOON AS POSSIBLE. THANKS SO MUCH FOR YOUR HELP.

VERY TRULY YOURS,

ARTHUR WEINER, MSW
DEAR FELLOW DELAWAREAN,

AN IMPORTANT STUDY, ONE OF THE FIRST OF ITS KIND, IS CURRENTLY UNDERWAY IN DELAWARE. SOME OF YOU, IN FACT, MAY KNOW OF THIS RESEARCH, WHICH EXPLORES HOW AND WHERE BLIND AND VISUALLY IMPAIRED YOUNG ADULT MEN AND WOMEN (18 to 44 YEARS) ENLARGE AND EXTEND THEIR NETWORK OF FRIENDS AND ACQUAINTANCES.

WITH HELP FROM THE DELAWARE ASSOCIATION FOR THE BLIND, APPROXIMATELY 40 YOUNG ADULTS HAVE VOLUNTEERED AS STUDY SUBJECTS. PARTICIPATION IN THE STUDY INVOLVES ANSWERING A SERIES OF QUESTIONS IN AN INTERVIEW. THE INTERVIEW, WHICH CAN BE ARRANGED AT YOUR HOME, OR AT ANY OTHER LOCATION, AT A TIME THAT IS CONVENIENT TO YOU, TAKES ABOUT AN HOUR AND FIFTEEN MINUTES TO COMPLETE.

ALL INFORMATION WILL BE CODED BY THE INTERVIEWER ON THE SPOT SO THAT NO ONE WILL BE ABLE TO IDENTIFY INDIVIDUAL RESPONSES. YOUR IDENTIFY AND YOUR ANSWERS WILL BE KEPT CONFIDENTIAL. ALL DATA WILL BE USED FOR RESEARCH PURPOSES ONLY.

THIS STUDY IS BEING DONE UNDER THE AUSPICES OF THE COLUMBIA UNIVERSITY SCHOOL OF SOCIAL WORK AS DOCTORAL DISSERTATION RESEARCH. WHEN COMPLETED, THE RESULTS WILL BE MADE AVAILABLE IN LOCAL LIBRARIES IN PRINT, TAPE AND BRAILLE. IN ADDITION, VOLUNTEERS WHO WISH TO RECEIVE A SUMMARY OF THE STUDY RESULTS WILL BE SUPPLIED WITH THIS INFORMATION AT NO COST. I HOPE ULTIMATELY TO USE THE INFORMATION THAT IS COLLECTED TO FIND PRACTICAL, EFFECTIVE WAYS TO HELP INDIVIDUALS EAGER TO MEET NEW PEOPLE TO DO SO.

THIS STUDY, HOWEVER, CAN ONLY BE COMPLETED WITH YOUR HELP!

IF YOU HAVEN'T ALREADY VOLUNTEERED, PLEASE CONSIDER VOLUNTEERING. ATTACHED TO THIS LETTER YOU WILL FIND A CONSENT FORM ALONG WITH A PRE-ADDRESSED, STAMPED ENVELOPE. IF YOU'D LIKE TO PARTICIPATE PLEASE COMPLETE THE FORM, AND DROP IT IN THE ENCLOSED ENVELOPE. YOU CAN ALSO PHONE ME (COLLECT) IF YOU HAVE ANY QUESTIONS OR DOUBTS (718) 636 -9429. IF YOU'D LIKE YOU CAN ALSO VOLUNTEER BY PHONING THE SAME NUMBER. PLEASE ACCEPT MY THANKS FOR YOUR HELP.

VERY TRULY YOURS,

Arthur Weiner, MSW
DOCTORAL CANDIDATE, COLUMBIA UNIVERSITY SCHOOL OF SOCIAL WORK
1968 Graduate P.S. DUPONT High School
Dear NFB Member,

An important study, one of the first of its kind, is currently under way in Delaware. The study I mention explores how and where blind and visually impaired young adult men and women (18 to 44 years) enlarge and extend their network of friends and acquaintances.

With help from the Delaware Association For the Blind, and with the assistance of the Delaware Association of Blind Athletes, approximately 40 young adults have volunteered as study subjects.

Participation in the study involves completion of a personal interview that takes a little more than one hour. The interview can be arranged at your home, or at any other location, at the time that is most convenient for you.

All information that is obtained will be computer coded so that no one will be able to identify individual responses. All information will be kept strictly confidential. All data will be used for research purposes only.

This study is being done under the auspices of the Columbia University School of Social Work, (New York, New York) for dissertation purposes. When completed, the results of this research will be published in a thesis. Copies will be made available to local libraries in print, tape and braille.

In addition, those who volunteer will be furnished with a personal summary of the study results, at no cost. The study will ultimately be used to develop practical, effective techniques
that will help individuals who are eager to meet new friends to do so. The study, however, can only be completed with the help and cooperation of blind and visually impaired men and women who consent to be interviewed. If you have not already volunteered, please, I need your help. If you haven't already volunteered for an interview, would you please consider doing so. You can volunteer by phoning one of the following numbers: (302) 655-2111, (302) 658-0218, or (718) 636-9429, call collect.

Every effort will be made to contact you, for the purpose of scheduling an interview within a matter of days.

I hope that you will consider volunteering for my study. Please accept my thanks for your help.

Sincerely,

Arthur Weiner
DEAR DABA MEMBER,

AN IMPORTANT STUDY, ONE OF THE FIRST OF ITS KIND, IS CURRENTLY IN PROGRESS IN DELAWARE. SOME OF YOU MAY ALREADY KNOW ABOUT A STUDY, WHICH BEGAN IN AUGUST, THAT EXPLORES HOW AND WHERE BLIND AND VISUALLY IMPAIRED YOUNG ADULT MEN AND WOMEN (18 TO 44 YEARS OF AGE) ENLARGE AND EXTEND THEIR NETWORK OF FRIENDS AND ACQUAINTANCES.

WITH THE HELP AND SUPPORT OF THE DELAWARE ASSOCIATION FOR THE BLIND, APPROXIMATELY 35 YOUNG ADULTS HAVE VOLUNTEERED FOR MY STUDY. HOWEVER, MORE VOLUNTEERS ARE URGENTLY NEEDED TO COMPLETE THE STUDY. THIS IS WHY I HAVE COME TO YOUR ORGANIZATION. I AM HOPING THAT DABA MEMBERS BETWEEN 18 AND 44 WILL HELP ME TO COMPLETE AN IMPORTANT STUDY THAT WILL PRODUCE USEFUL INFORMATION. I HOPE TO USE THE INFORMATION THAT IS COLLECTED TO FIND PRACTICAL WAYS TO HELP INDIVIDUALS EAGER TO EXTEND THE RANGE AND SCOPE OF THEIR SOCIAL CONTACTS TO DO SO.

PARTICIPATION IS ENTIRELY VOLUNTARY. ONLY AN HOUR TO AN HOUR AND A HALF IS NECESSARY. PARTICIPATION IN THE STUDY INVOLVES ANSWERING A SERIES OF QUESTIONS. IF YOU VOLUNTEER, A QUALIFIED INTERVIEWER WILL CONTACT YOU TO SCHEDULE AN INTERVIEW, WHICH CAN BE ARRANGED AT YOUR HOME, OR AT ANY OTHER LOCATION, AT A TIME THAT IS MOST CONVENIENT FOR YOU.

YOUR IDENTITY AND ALL ANSWERS WILL BE KEPT STRICTLY CONFIDENTIAL. FURTHERMORE, ALL INFORMATION THAT YOU SUPPLY WILL BE CODED BY THE INTERVIEWER ON THE SPOT SO THAT NO ONE WILL BE ABLE TO IDENTIFY YOUR ANSWERS.
THIS RESEARCH IS BEING DONE INDEPENDENTLY BY ME, AS PART OF A DOCTORAL DISSERTATION FOR THE COLUMBIA UNIVERSITY SCHOOL OF SOCIAL WORK. THE STUDY HAS RECEIVED PARTIAL FUNDING FROM THE AMERICAN FOUNDATION FOR THE BLIND. WHEN COMPLETED, THE RESULTS WILL BE PUBLISHED AND MADE AVAILABLE IN LOCAL LIBRARIES. IN ADDITION, THOSE WHO VOLUNTEER WILL BE PROVIDED WITH A SUMMARY OF THE RESULTS OF THE STUDY, AT NO COST, IF THEY CHOOSE.

IF YOU HAVEN'T ALREADY VOLUNTEERED, PLEASE CONSIDER GIVING A LITTLE MORE THAN ONE HOUR TO THIS WORTHWHILE PROJECT. I HAVE PROVIDED YOUR PRESIDENT WITH FORMS THAT WILL PERMIT ME OR ONE OF MY INTERVIEWERS TO CONTACT YOU. EVERY POSSIBLE EFFORT WILL BE MADE TO ACCOMODATE YOU.

PLEASE ACCEPT MY SINCEREST THANKS FOR YOUR TIME, YOUR INTEREST, AND FOR YOUR SUPPORT.

VERY TRULY YOURS,

ARTHUR WEINER, MSW
DOCTORAL CANDIDATE, COLUMBIA UNIVERSITY SCHOOL OF SOCIAL WORK
1968 Graduate P.S. DuPont High School, Wilmington and,
Native Delawarean
Social Network Study

The Delaware Association for the Blind is assisting Arthur Weiner, a doctoral candidate at Columbia University, to obtain subjects for a study of how blind and visually impaired people meet friends. The American Foundation for the Blind is sponsoring this study, which should yield some very interesting findings. If you are between the ages of 18 and 44 and are interested in being interviewed for this project, please call 655-2111. An interview lasting about 1 1/2 hours will be scheduled in your home. Thank you for any help you can give us.

DART bus route Hearings

Would you like to see a change made in a current DART bus route or a new route established? A public hearing is being held on September 21st, 12:00 noon in the City Council chambers, City-County building, 8th & French. If you cannot attend, written comments may be submitted to DART Winter Schedule, P. O. Box 1670, Wilmington, DE 19899

Guide Dog Fund

If you would like to get a guide dog but need financial help to do so, The Delaware Association for the Blind can help. If you already use a guide dog and need help with medical or food expenses, funds are also available. Call 655-2111 for more information.
PLEASE COMPLETE THIS FORM IF YOU WISH TO PARTICIPATE IN THE STUDY AND RETURN IT IN THE ATTACHED PRE-ADDRESSED ENVELOPE.

CONSENT FORM
SOCIAL NETWORK STUDY

I HEREBY CONSENT TO BE INTERVIEWED FOR THE SOCIAL NETWORK STUDY BEING CONDUCTED BY MR. ARTHUR WEINER. I UNDERSTAND THAT MY PARTICIPATION IS ENTIRELY VOLUNTARY, THAT I AM FREE TO TERMINATE MY PARTICIPATION AT ANY TIME, AND THAT THE DATA GATHERED WILL BE KEPT CONFIDENTIAL, AND USED FOR RESEARCH PURPOSES ONLY.

NAME:________________________________________

LAST, FIRST

ADDRESS:_____________________________________

NUMBER, STREET

CITY, COUNTY

HOME PHONE:_________________________________

BUSINESS PHONE:________________________________

(IF YOU HAVE NO PHONE, PLEASE WRITE: NO PHONE)

SIGNATURE:_________________________________

DATE:________________________________________
DEAR DVI PROGRAM PARTICIPANT,

A STUDY IS NOW UNDERWAY IN OUR STATE WHICH MAY BE OF INTEREST TO YOU. THE STUDY AIMS TO FIND THE WAYS BLIND ADULTS MAKE NEW FRIENDS. IT ALSO SEeks TO DESCRIBE THE SOCIAL RELATIONSHIPS OF BLIND MEN AND WOMEN. WE BELIEVE THAT THIS STUDY WILL PRODUCE INFORMATION THAT CAN HELP AGENCIES LIKE OURS ACROSS THE COUNTRY TO PLAN PROGRAMS FOR BLIND MEN AND WOMEN.

YOU CAN VOLUNTEER FOR THE STUDY BY AGREEING TO AN INTERVIEW WHICH CAN BE SCHEDULED AT YOUR CONVENIENCE, AT YOUR HOME, OR AT A LOCATION THAT IS MOST ACCESSIBLE TO YOU. ARTHUR WEINER, A DOCTORAL STUDENT AT COLUMBIA UNIVERSITY, WHO IS CONDUCTING THE STUDY, HAS ASSURED THE DVI THAT THE INFORMATION THAT YOU SUPPLY WILL BE KEPT STRICTLY CONFIDENTIAL, AND WILL BE USED FOR RESEARCH PURPOSES ONLY. IN ADDITION, YOU MAY REFUSE TO ANSWER ANY QUESTIONS YOU WISH, AND ARE FREE TO TERMINATE THE 75 MINUTE INTERVIEW AT ANY INSTANCE.

YOUR PARTICIPATION IN THIS RESEARCH IS COMPLETELY VOLUNTARY. YOUR DECISION WILL IN NO WAY EFFECT THE RELATIONSHIP YOU HAVE WITH THE DIVISION OR EFFECT THE SERVICES YOU MAY NOW RECEIVE, OR EXPECT TO RECEIVE FROM THE DVI.

MR. WEINER'S STUDY HAS BEEN ENDORSED BY THE AMERICAN FOUNDATION FOR THE BLIND, AND IS TAKING PLACE IN DELAWARE ONLY. WE HOPE THAT YOU WILL CONSIDER HELPING MR. WEINER WITH THIS IMPORTANT PROJECT.

PLEASE FILL OUT THE ATTACHED POSTAGE-FREE POSTCARD AND DROP IT IN THE CLOSEST MAILBOX, SO THAT MR. WEINER WILL KNOW WHETHER YOU ARE INTERESTED IN BEING A PART OF THIS STUDY.

THANKS VERY MUCH FOR TAKING THE TIME TO READ THIS LETTER, AND THANK YOU FOR YOUR ASSISTANCE.

VERY TRULY YOURS,

VIRGINIA A. GETTINGER
SOCIAL SERVICE ADMINISTRATOR
DELAWARE HEALTH AND AND SOCIAL SERVICES
DIVISION FOR THE VISUALLY IMPAIRED

PLEASE FILL OUT THIS CARD AND DROP IN THE NEAREST MAILBOX:

NAME: _____________________________________________________

ADDRESS: __________________________________________________

PHONE: (HOME)________________ (WORK):____________________

PLEASE INDICATE YOUR PREFERENCE (CHECK ONLY ONE BOX)

☐ I WISH TO PARTICIPATE IN THE SOCIAL NETWORK STUDY

☐ I PREFER NOT TO PARTICIPATE IN THE STUDY

FREE MATTER FOR THE BLIND AND HANDICAPPED

DIVISION FOR THE VISUALLY IMPAIRED
305 W. 30TH STREET
WILMINGTON, DEL. 19801
Research positions, Columbia University Doctoral Candidate seeking interviewers for interesting short-term study to begin immediately. Perfect opportunity for college student or college graduate with social science background to gain paid research experience, college course in research methods or interviewing preferred, will train. Excellent communication skills, attention to detail necessary. Must provide own local transportation. Some night and weekend work.

Arthur Weiner, MSW
c/o George J. Weiner Associates
300 Delaware Avenue, Suite 914
Wilmington, DE 19801

Phone: 658-0218
AN EXAMINATION OF THE SOCIAL NETWORKS OF BLIND AND VISUALLY IMPAIRED YOUNG ADULT DELAWAREANS

Interviewer Training Workshop
July 30, 1988
4102 West Street
Wilmington, Delaware 19802
(302) 764-2505

AGENDA:

1. Description of Study/ Goals of Study
2. Selection of Subjects/Informed consent
   Delaware Association For the Blind
3. Data collection method: Structured Interview
4. Blindness and Visual Impairment
5. The Interview Schedule (129 items)
   A. Social and demographic items (Part 1)
   B. Items which construct the social network of each subject. (Part II)
   C. Items which describe the characteristics of each network member. (Part III)
6. Using the Interview Schedule: simulation
   A. Scheduling interview session
   B. Beginning interview
   C. Ending interview
7. Anticipating problems:
   A. What to do if problem comes up?
8. Confidentiality, Storage of Materials
9. Completing interview form (blue page): Payment
10. Followup training/ debriefing in 2 weeks.