PUBLIC-PRIVATE PARTNERSHIP IN THE TRANSFER OF TECHNOLOGY TO HUMAN SERVICE PROGRAMS

by

Ruth A. Bruer

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APPROVED:

Philip S. Kronenber
Chair

Charles T. Goodsell

Janette Newhouse

Orion F. White, Jr.

Gary L. Wamsley

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(ABSTRACT)

The purpose of this dissertation is to describe the transfer of a specific technology to a program intended to benefit a segment of the older population. The study interprets the implications of this transfer process for human service programs responsive to the public interest. This provides a lucrative realm for examining the process as an outgrowth of public-private partnerships. Analysis of a partnership in five case studies illustrates the dynamics between nonprofit and for-profit organizations and potential tensions related to differing goals, means, and values. Theoretical grounding draws on relevant organization theory that guides the consideration of prominent concepts, such as responsiveness to the public and the potential for cooptation of public goals in public-private organizational partnerships. With this as a base, the dissertation provides implications for the development of theory on technology transfer in the delivery of human services.
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Creativity is, in my mind, one of the most essential ingredients to life. It is not difficult for me to imagine the feeling that must have inspired Mary Parker Follett to state that "I am free when I am creating." To be a creative being, however, one must have the solid grounding that allows for growth. Many people are responsible for the support that has kept me going through my work.

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To my committee members and to the faculty who have shared with me their understanding, I owe much. The journey was difficult but it was made easier by knowing that many of you have been friends and confidantes along the way.

Without the cooperation of the American Red Cross and Lifeline Systems, Inc. my research would have been impossible. Also, one of the most fortunate events in my life was the opportunity to work with Richard Schmidt on the Red Cross contract. His caring and continued support have been invaluable in completing this project.
It has been said that a heart is not judged by how much you love, but by how much you are loved by others. If this is so, then I feel extremely fortunate. There are no friends better than the ones who have taken me into their homes (literally) and into their hearts since I came to the United States. To mention them all is simply impossible . . . and that must be the biggest accomplishment of my life!

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CHAPTER I

INTRODUCTION

Technology plays a role in society that has become a source of innumerable issues causing contentious debate. At the heart of this complex topic are questions and problems that plague any understanding of what constitutes technology and how it affects culture. Technology is not a new phenomenon, despite the subtle insinuations of present discussion. Historical documentation verifies the influence of technology throughout the centuries.\(^1\) More than this, analysis of the past shows that technological developments defy the formerly limited conceptions of time, distance, mechanization, communication, and even nostalgia.\(^2\)

Several of the more broad definitions of technology encompass identifiable linkages to the past. These broad definitions also speak to the inevitability of technology as a part of human functioning. Such definitions entertain

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\(^1\)See Donald M. Lowe, *History of Bourgeois Perception*, (Chicago: University of Chicago Press, 1982), pp. 37, 44 for discussion that ranges from the "proto-technocrats" who capitalized on efficient systems of labor and technology in the middle 19th century, to the "altered urban landscape" of the latter 19th century, and development of plumbing, electricity, sanitation, and other innovations.

\(^2\)Lowe, pp. 35-43.
possibilities for instrumental action intended to reduce uncertainty in cause-effect relationships. Yet, prevailing debate reveals a hesitant demeanor that fails to state the full implications of what technology can mean. A subtle rendering of the term "technology" takes on a contemporary meaning, perhaps best stated as "electronic super-development." At times, modern redefinition foreshadows dangerous threats to unique human characteristics. The connotations belie awareness of past years and even centuries of innovations that provided benefit to people and influenced social development.

The potential for technology to influence the nature of services and programs to the public is at the heart of much current discussion in the field of public administration and public policy. A predominant challenge for the next decade and beyond involves the juxtaposition of public and private means for dealing with societal problems. Alignment of public and private is a controversial direction and reality that transcends political divisions. Private delivery of public services is not a new phenomenon, any more than is

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3See Chapter II REVIEW OF LITERATURE for definitions of technology.

4The indistinct, yet undeniable, link of technology from past to present reflects the import of a recent cartoon that states: "Somehow I can't take seriously an anti-technology diatribe written on a word-processor." Parade Magazine.

technology. Yet the link between public and private provokes clarification of social priorities and decisions about what is acceptable in public service. Entry of the for-profit and private sector in the delivery of public service elicits a spectrum of positions on acceptability. Views on the potential for privatization range from the belief that public service offered in the private realm represents inevitable corruption of public service, to the contrasting view that there is great potential for corporate social responsibility.

Restoring a historical grounding for productive discussions on technology emphasizes a certain imbalance that arises. This refers to an awareness that the entire population does not benefit from the expectations and manifestations of technological development. While many innovations provide material improvement and well-being to upper and middle classes, poor or disadvantaged people often remain untouched by these prospects. The present imbalance between those who understand and benefit from technological development and those who, in one sense, are left behind is a reality that repeats itself from past experiences. How best to benefit society with technological or electronic means at hand remains as much a challenge today as ever.

\footnote{Frederick C. Thayer, "Privatization: Carnage, Chaos, and Corruption," in Carroll, Conant and Easton, pp. 146-170.}

\footnote{Lowe, p. 44.}
The purpose of the study documented in this dissertation is to explore a program that uses electronic technology to benefit those people in the population who are considered "at-risk" or in need of additional social supports. Specifically, the sub-population of immediate concern to this researcher includes aging people in the community who require support to promote independence and a safe home environment. In many instances, these are people who are physically or mentally impaired, yet still capable of remaining in their homes. Others vulnerable people might be those who simply need reassurance for themselves or their families to make their environment safe. For some of these people, appropriate social and medical resources can reduce the need for institutionalization. Most importantly, the development of supports for independent living creates a more humane environment—for all members of a community.

The dissertation study is an attempt to understand a process of technology transfer in an organization that is responsible for providing service to communities and, ultimately, to the aging people who comprise growing proportions of those communities. This study of technology and aging provides a lucrative realm not only for examining a simple process of technology transfer, but for exploring the process as an outgrowth of public-private partnerships. Examination of these partnerships illustrates the tension
between public-oriented and for-profit organizations, along with their corresponding means, goals, and values.

The study design is an extension of theory that proposes linkages with research findings. Theoretical grounding draws on segments of organization theory that inform the current understanding of technology transfer. This grounding guides examination of relevant concepts, such as responsiveness to the public and the public interest. These concepts and theories are informed by several site study experiences in the research. A prominent aspect is the question of what is acceptable when marketing a product or service that must remain responsive to communities and vulnerable groups of people.

The research design incorporates a case study methodology involving several case sites. The case studies illustrate a process of technology transfer along with the problems and issues in social services, specifically in the delivery of service to the aging people in communities; also, the case studies illustrate a topic of discussion more prominent in public administration now, which is public-private partnership. With this as a base, the dissertation provides implications for the development of theory on technology transfer in delivery of human services.
Statement of the Problem

Population aging is a term that is used to reflect the world-wide phenomenon of the rapidly increasing numbers of older people. More people are growing older and older people now constitute a growing proportion of the population. The corresponding challenge to national programs is to provide support to many more vulnerable citizens than in the past. This is not to say that all older people are vulnerable. The real difficulty is that there are now larger groups of older people, especially frail elderly. Despite the impact of better nutrition and medical attention on life span, the reality is that the older people become, the more supports they need to assist them to maintain healthy and safe lifestyles in their home environments.

Adaptation and adoption of a vast range of simple to more complex electronic technologies has a profound impact on increasingly innovative programs and services. In keeping with this activity, expansion of support to the aging becomes more plausible. Yet, this commitment demands a greater investment in the appropriate management and organizational techniques. Investigation of literature indicates several barriers that limit the use of technology in the development of support programs for the older population. The most blatant barriers are lack of attention to and misunderstanding of the organizational processes. This is evidenced by a marked lack of information on these organizational processes
in the literature. Literature on technology-based programs for the aging contains little attention on processes of technology transfer between organizations. As well, there is only limited written about the factors involved in the use of public and private means for accomplishing public goals.

Development of advanced electronic devices and aids holds immense potential for addressing difficult tasks in society. Yet, benefits to the public and to communities are not always readily apparent. The full impact of modern technology on society remains somewhat of a mystery. This mystery includes the processes by which advanced knowledge of technology links services and programs to people who need social supports in the community. The realm of national security and defense is a field that has provoked much research and thought on the topic of technology transfer. However, once beyond this field, researchers pay scant attention to similar processes as they apply to key concerns in the realm of community social services.

A growing body of literature deals with many different applications of technology in aging-related programs, as well as the future for more advanced applications. Yet few of these studies seek a better understanding of technology transfer in the public sector. Technology and issues of transfer are terms that carry a myriad of connotations; researchers and other professionals have their own biases and assumptions about what technology transfer implies.
This dissertation is grounded in the perception from review of literature and professional experience that the theories and models of technology transfer examined in contemporary literature do not necessarily adapt well to the context of public service and nonprofit organizations. This is especially true for those organizations that promote programs of potential benefit to the aging population. Also largely ignored in the literature are programs incorporating technology with programs responsive to the aging and that involve both public-oriented and for-profit entities in the transfer process. It is suggested here that a better understanding must develop to explain the technology transfer process in such settings. Without this understanding, the barriers that currently exist will remain in the way of any further effective applications of technology that might ultimately benefit the aging population.  

While this study is guided by a concern for the independence of aging people in the community setting, the potential should be recognized for applying the understanding gained from this study to programs benefitting other vulnerable groups of people, such as the physically handicapped and mentally retarded who strive to gain independence in community environments.
Purpose of the Study

The purpose of this study is to describe the transfer of a specific technology to a program intended to benefit a segment of the older population and to interpret the implications of this transfer process for human service programs that operate in the public interest.

Technology Focus

The specific technology that is the focus of this study is an electronic auto-dialing and communications system referred to as a personal emergency response system. The equipment transmits an emergency signal initiated by a subscriber from the home (or other community setting). The organizational context is a nonprofit organization guided by two charges: a mission that calls for service to the public and a congressional charter for emergency assistance to communities (within the United States and abroad). The emergency response system described in the study serves as the basis for a program promoting independence for aging people who require assistance to remain alone in their homes. Although the response service was originally designed with the needs of older people in mind, it is to be hoped that the program also provides needed services for other vulnerable

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9Emergency signals are initiated either by the direct contact of the subscriber who presses a button worn on the person, or by the absence of subscriber activity when a timer on the auto-dialing unit is not reset.
members of the community. This technology provides linkages to outside professionals when subscribers require medical or safety assistance. Thus, the intent of the program corresponds well to the emergency-oriented mission of a nonprofit organization; in this case, the organization is the national American Red Cross (ARC), selected as the empirical focus of this study.

Adoption of the program and technology involves development of a relationship with a for-profit organization. This for-profit entity represents potentially different expectations and goals from those accepted within the nonprofit or public realm. The for-profit organization in this study, Lifeline Systems Incorporated (LSI), contributes to the study of public-private partnerships designed to provide community service. Beyond the partnership issues, the LSI organization highlights unique aspects of a private organization founded in response to public-oriented values by a professional interested in issues of aging, Dr. Andy Dibner. Although this is a for-profit organization, development of the product has been responsive to a belief (as asserted by the founder of LSI) in potential public good resulting from the product and service.

Literature and experience guide the dissertation study and indicate that technology transfer in public programs often involves a partnership between a public-oriented organization and a for-profit organization. The dissertation study stems
from the assumption that a relationship between such organizations is characterized by differing values and goals between the organizations involved. These differences emerge in response to the unique component of responsiveness to the public. This illustrates potential conflict and barriers to effective transfer when a for-profit organization becomes allied with a public, nonprofit organization.

**Research Design**

**Guiding Questions**

Based on the purpose of the study as described above, several broad primary questions guide review of the literature. The primary questions provide some focus to the research, while allowing enough breadth of scope to facilitate the emergence of unanticipated elements in the collection and analysis of data. The primary questions and the review of literature serve to guide development of further subsidiary questions for exploration in the study.

Primary research questions are stated below. The reader should reflect on the purpose of these questions. They have been presented as broad questions that allow for the real issues and themes to be identified in the data collection. Some assumptions can be made as to what is expected to emerge from the research. Hence, the primary questions are narrowed later in the dissertation with more specific subsidiary questions extracted from the review of literature:
1. What organizational issues arise from a program that links technology with issues of aging?

The first step in exploring the program selected for this study is to identify organizational characteristics associated with the management and transfer of the technology. Data are sought on prominent experiences that suggest possible stages of transfer, type and influence of leadership, staff responses to the technology, and motivators or inhibitors that affect the transfer process.

2. What are the implications of technology transfer under conditions of public-private partnership?

The public/private partnership illustrated in this study will highlight differences in the two organizations' approaches to the same program. Comparative data will be pursued to establish for each of the organizations the program goals/incentives, the organizational values, commitment to the program, potential for innovation, and the possible barriers arising between private and public interests.

3. What is acceptable in terms of promoting to the public a new service or product of the type described in the case studies?

Public/private partnership in a program responsive to the interests of the aging suggests the need for organizations to maintain a focus on what is acceptable to the community and public. The commitment to the public is brought into question as an organization deals with elements of a program such as
those illustrated in this study: an entrepreneurial approach, 
assurance of continued service, contribution to the community, 
and commitment to the disadvantaged or poor.

Field Research

A qualitative case study approach is consistent with the 
problem addressed in the study and the questions to be 
answered. The methodology becomes a tool for exploring 
perceptions of participants as they identify motivating 
factors and barriers in their experience. In particular, this 
approach assists in determining the participants' priorities--- 
especially public-oriented priorities.

This dissertation research involves several case studies 
conducted during the period 1988-1989. A partnership between 
the public and for-profit organizations could be perceived as 
one case study. However, exploring a model for developing the 
emergency response systems studied here allows for the 
observation of multiple sites. Specifically, several 
different sub-organizational settings illustrate equally 
different ways of adapting the program to suit the needs of 
each of the corresponding communities. Thus, multiple-site 
case study methodology allows for comparing and contrasting 
similar experiences in order to determine possible answers to 
and explanations for the primary and subsidiary questions.

The study examines in-depth the experiences affecting the 
technology transfer process for a community and public 
oriented program offered by a major national nonprofit
organization in partnership with a for-profit vendor. The program is indicative of an entrepreneurial approach that seeks to benefit the organizations involved, as well as the communities served. Five chapters of the American Red Cross have initiated Lifeline personal emergency response programs. Each of these five programs serves as a unit of study for developing the case site studies.

The findings of the case study research proposed in this document should be generalized with caution to other populations with similar characteristics. Explanatory value of the study emerges in relation to theories currently in vogue and generation of postulates useful as working hypotheses to be tested with a much broader population in further research.

Access to Field Research Sites

This study is the culmination of several years of development, surveying the literature of gerontology, technology-related innovations, and human services. Preliminary interviews captured insights from many professionals having an interest in the general area of technology and aging, and those involved in the separate fields of technology and gerontology. The years spent by the researcher in the field of gerontology provide experience on many of the issues, along with observation and interviews with aging "client" populations. In addition, similar experience with the mentally disabled provides the researcher with an
enhanced perception of the potential for technology-based programs and services to benefit a broad spectrum of people with special needs who can function independently in community living.

One principal reason for choosing the emergency response program for the study was the opportunity to conduct the research as a participant-observer through a contract evaluation sponsored by the American Red Cross. The timing of the dissertation study and initiation of a ARC-LSI Pilot Project corresponded perfectly for the purposes of combining research efforts and evaluation.

Separate personal contracts for evaluation of the pilot project involved two external (to the American Red Cross) consultants--Ruth A. Bruer and Richard E. Schmidt. Terms of the contracts allowed the consultants to work together in visiting the five pilot sites, interviewing participants, and gathering data. Although there were several objectives in the program evaluation, the major goal was to determine whether an emergency response program is feasible to be supported as a national Red Cross program. This included determining if the program could bring resources into ARC Chapters and extend subscriber populations beyond those previously targeted for the Lifeline program. A Red Cross senior manager granted permission for the pilot sites to be used in a dissertation dealing with the application of technology to the aging population. Contact persons at each pilot site learned of
this agreement at the time of the consultants' visits to these ARC Chapters.

Although the evaluation involved two consultants, the nature of the working relationship did not infringe on the researcher's latitude in designing this dissertation project. Design of interview agendas and research tools reflected the dual purpose of obtaining evaluation data (a primary goal of the Red Cross project) and learning about processes prominent in a dissertation focus on technology and aging.

Since much of the evaluation data were quantitative, the evaluation process proved to be a forum for supplementing the data originally sought for the qualitative design of the dissertation study. All participants and informants were aware that the two consultants were preparing an evaluation report, and that the information also would be used in the dissertation project. Involvement of the second consultant proved to be helpful in recording interviews, developing insights, and commenting on interactions with informants. Discussions between consultants provided corresponding or contrasting perspectives on the data.

Due to the combined role of researcher and consultant on the evaluation contract, selected internal documents were available for analysis to illuminate issues relevant to the dissertation study. These internal documents relate to the pilot project from the time of inception, although nothing
denoted as being confidential is referenced in the dissertation document.

Contract funding for the pilot project evaluation covered the costs of travel to each of the pilot ARC Chapter sites. The final evaluation report was submitted in January 1989.

At times, the role of external consultant excludes a researcher from some of the complexities of the organizations involved in a study. In this study, the role of external consultant seemed to encourage informants to provide confidential insights about their experiences. In this sense, the process of ethnographic interviewing (as described in the dissertation chapter on methodology) proves to be a highly suitable technique for illuminating these dissertation issues.

Significance of the Problem and Justification for Investigation

Many issues remain to be examined in attempts to understand the relationship between technological and social development. Literature on technology transfer appears incomplete. There is inadequate emphasis on the unique aspects of the process in public service programs, especially those in community settings. Much of the literature and many professionals involved in technology and aging indicate that little coordination has been done of research and activities in this realm. In addition, there is a distinct lack of process and organizational orientation in relevant work.
In terms of the work done in technology and aging, research on emergency response systems relies heavily on quantitative data. Few documents reflect qualitative research that seeks to discover other aspects of these systems. Each of the above fields of exploration represent gaps in the literature which the dissertation study is designed to illuminate.

Insights from the dissertation study can apply to issues of public administration. The case site studies that are presented go beyond a mere illustration of process and issues specific to the ARC-LSI program. These cases inform discussion and theory on responsiveness to the public when public and for-profit organizational agendas interact. Lessons from organization theory imply that issues related to cooptation\textsuperscript{10} are a serious threat to the maintenance of effective public-oriented services when for-profit organizations become partners in the process. Such theoretical implications have an impact on the potential for erosion of values that might result from alliances between private and for-profit sectors serving the public together.\textsuperscript{11} Yet, if public-private partnerships are important in programs adapting technology to meet the needs of vulnerable people in the communities, then it is essential to understand more of these implications. When conflicts and tensions develop between organizations,


\textsuperscript{11}Thayer, in Carroll, Conant and Easton.
barriers that arise must be resolved where possible, while recognizing that it might be impossible to alleviate these tensions completely.

Theory building with a policy and organizational design prescriptive orientation is at the core of the research. The case study is highlighted by going beyond a mere presentation of the process and issues specific to the case. The study considers what the cases represent in terms of a public responsiveness when incorporating private and nonprofit agendas into the process. The link to theory implies that issues related to "cooptation" and other considerations are a serious threat to maintaining public-oriented services when public-private partnerships are developed. This has considerable potential for supporting concerns about the erosion of public responsiveness. This is one of the issues explored in the study.

**Overview of the Dissertation**

This dissertation document is presented in six chapters. In the present chapter, the rationale for the study is discussed. Chapter II highlights critical areas in the review of literature and the most prominent contributions of these areas to the study design. Areas of review include literature relating to technology transfer, human services, and organizational context. These areas serve as the basis for generating subsidiary research questions that become tools for probing in the study.
Chapter III provides discussion of the case study method and its value to public administration; selection of the sample; procedures for collecting and analyzing the data; and methodological issues associated with the case study method.

Chapter IV is a summary of case site characteristics based on the field research. The chapter provides a review of the emergency response system as initiated within the American Red Cross setting; a description of the model used by each of the pilot sites in operating the Lifeline program; and a brief summary of the characteristics of pilot sites to present background to the reader.

Chapter V presents and interprets the case study data collected during the several iterations of field research. The chapter is organized according to themes that emerge from the analysis. Several variables previously considered important to the study appear to have little impact on the experiences reported by informants. Other issues emerge that suggest theoretical grounding to illuminate the public and for-profit partnership experiences, especially in the realm of public responsiveness, entrepreneurial innovation in nonprofit organizations, and aspects of social marketing. Finally, Chapter VI extrapolates the data analysis and findings to bring meaning to the primary and subsidiary research questions presented earlier in the dissertation. This highlights patterns and themes emerging from data analysis and discusses the relevance of these themes in development of theory.
CHAPTER II

REVIEW OF LITERATURE

Probing the literature assists in developing a conceptual background for this research study; the review of literature extends a theoretical basis for designing the study and clarifying linkages between theory and findings. Prominent issues in the literature apparent early in the research process serve as resources for the preliminary stage in designing the study. Specifically, these resources illuminated the nature of the research problem that inspires this study. Relevant theories elicit directions to be taken in the line of inquiry, expectations of possible findings, and the nature of conclusions or generalizations likely to be drawn through the analysis of findings.

Ultimately, a study that is responsive to findings throughout the research process seeks to refine expectations based on emerging concepts and themes--some of these being totally unexpected at the beginning of the study. Review of literature, then, is an enduring component of the study. It allows fresh and innovative ideas to flow from increasing knowledge, understanding, and sometimes new and different linkages to theoretical grounding. In this way, the researcher remains true to the process of exploration in
carrying out the study, recognizing the need to continue incorporating emerging linkages into the work.

This review includes previous theory and research documented in the available literature on technology and organizations. Implications of this work are presented for guiding the study and suggesting the most appropriate subsidiary research questions. The review of literature in this dissertation chapter includes three principle categories of references. The first two categories deal with previous research documented in the available literature; these lead to the third category on the implications of this work for guiding the study and for proposing appropriate subsidiary research questions.

**Synopsis of Literature**

The first area of literature in this dissertation chapter deals with technology. The focus shifts from broad issues of technology to the specific technology used in the case studies. In general, there is a wealth of material related to every conceivable aspect of these topics. The review identifies several approaches for defining technology. These are grounded in the understanding that technology is, first and foremost, a natural outgrowth of human ingenuity and social process. As such, technology has potential in addressing many social issues; this can occur only if there is clarification and increased understanding of the full implications of technological applications. Accepting
technology—whether hardware or knowledge—as rooted in the human experience is an important underpinning to the findings from this case study research. Adaptation and innovation are prominent elements in the findings, arousing many connotations of technology in human services.

Fascination is at odds with caution in the widespread attention attributed to issues of technology. Increasing numbers of articles and studies examine applications of technology that address the needs and issues of an aging population. The field of gerontology is ripe with the same controversies found in so many other discussions on the merits versus the threats of technology. Such controversy is disconcerting, especially when people perceive technology as undermining important human interactions between service providers and clients. Even so, obvious value from medical and environmental applications of current electronic technologies speaks to the need for further confrontation with these issues of aging. According to various professionals working in an aging-related field or specialization, a specific set of theories or models is not evident as a guiding influence on the work in this area. Some professionals define the area of technology and aging as a field. This is perhaps a misleading impression of the scattered pattern of interests and issues; a distinct lack of coordination exists, despite the abundance of work on technology and aging.
A subsection of technology and aging deals specifically with emergency response systems. More articles and studies examine the ultimate effectiveness of PERS networks. The technology-based program described in the case studies represents only one vendor in a market of approximately ten or more such PERS vendors nationwide. Several articles cited in the review of literature do deal specifically with the case study vendor, Lifeline Systems, Inc. Research studies that explore these PERS programs often take a quantitative approach to data collection and analysis. Few of the studies address qualitative issues in the manner of this dissertation. The ramifications of these research studies and articles impress current debate on including PERS services in health insurance policies and Medicare-Medicaid allowances.

The second part of the literature review deals with concepts and processes suggested through consideration of organization and public administration theories. Literature sources from these areas are guides to understanding the problems and relationships at the heart of this study. Much of the theory and research on organizations guides the focus of this analysis to assimilate the influence of several factors. These include mediating technologies, leadership, and especially cooptation when conflicting values and goals surface in multi-organizational processes. Where public-oriented organizations seek to develop technology-based programs for providing new and innovative service,
partnerships with private and for-profit organizations have significant potential. Yet the drawback to these partnerships is the danger that attention to entrepreneurial motivations might detract from commitment to the public good.

Establishing conceptual linkages between the themes from the literature review assists in the logical outcome of the review of literature for an ethnographic case study approach: the development of subsidiary research questions. These guiding questions are based on themes frequently cited in the research literature that assist in illuminating the course of technology transfer in human service organizations.

TECHNOLOGY

Conceptualization of Technology in Society

This section provides an overview of an historical perspective on the conceptualization of technology in human interactions and societies. Ultimately, consideration of technology in an historical framework enhances understanding of the significance of technology transfer processes. Much literature and discussion on diverse topics of technology provide a broad spectrum of opinions—not only of the resulting meaning of the term and understanding of associated processes, but also of the ultimate value of technology for furthering the goals of humankind. Such perceptual diversity leads to uncertainty and lack of clarity; this furthers the misunderstandings surrounding effective use of technology. It
also limits the ability to define common elements in any potentially corresponding processes.

Conceptualizing technology as a part of innovation highlights the importance of process.\textsuperscript{12} Definitions of technology arising from this perspective rely on the vital role of information stemming from the uncertainty-reduction components of technology.\textsuperscript{13} Technology, then, becomes "a design for instrumental action that reduces the uncertainty in the cause-effect relationships involved in achieving a desired outcome."\textsuperscript{14}

The role of technology is implicated in the entirety of human and societal progress; the anti-technology diatribes at times quell this longitudinal perspective. Human beings and technology are inextricably intertwined and cannot be considered one without the other. From the first flame of fire used for warmth and cooking, to the construction of the automobile, society has shared both the benefits and the dangers of technological advancements. "Work and materials, organizations and living are . . . 'extensions of man,' rather than . . . material artifacts and part of inanimate nature."\textsuperscript{15}


\textsuperscript{14}Rogers.

Drawing upon the above discussion, a broad notion of technology shares components of hardware as physical object and software as information base for the tool.\footnote{Rogers.} Further to this dichotomy is a tripartite theory of technology that embodies artifacts and physical objects; adds labor and managerial skills; and becomes a socio-technological phenomenon. Besides involving material and artifact improvements, technology incorporates a cultural, social, and psychological process.\footnote{Charles Stewart and Yasumitu Nihei, Technology Transfer and Human Factors, (Lexington, Mass: Lexington Books, 1987), p. 1; Richard L. Daft, Organization Theory and Design, 3rd Edition, (St. Paul: West Publishing Company, 1989), p. 159.} This statement embodies the essence of the work done in this dissertation research.

Hardware or tool components are currently the most apparent elements of technology and often appear exceedingly complicated. These components are associated most quickly with the term technology. Computer-based tools, especially, are still in a transition period, often regarded with suspicion and perceived an element of mystique about them.

The first component of technology in the tripartite definition—the hardware aspect—has grown rapidly in complexity and visibility. Assessment of the literature and applications of technology suggest that the three pieces of the tripartite definition are addressed differently in research and understanding. The second aspect of labor and
managerial skills is following behind development of hardware at a slower pace. Understanding of the socio-technological phenomenon is lagging at a considerable distance behind the first two aspects. The research environment appears ripe for rising misconceptions in dealing with technology.

All of the above insinuates limitations in defining and understanding the term technology. Not surprisingly, attempts to understand technology transfer, diffusion, and innovation have corresponding weaknesses. In basic terms, technology transfer can be defined simply as the process intended to convey technology from one person or group to another.\textsuperscript{18} Taking this further, transfer can be conceived as "utilization of an existing technique in an instance where it has not previously been used."\textsuperscript{19}

One of the limitations in the above definitions is that they do not fully acknowledge the importance of understanding in the transfer process. Recognition of this important factor brings the search for appropriate definition full circle back to the certainty that technology is a socio-technological phenomenon, incorporating not only hardware (tools) and software (information), but also environment.

A shortened time span between invention and use implies the need for certain precautions. The total consequences of


\textsuperscript{19}Stewart and Nihei, p. 2.
an innovation on people and environment must be anticipated early in the development of new products and production of technologies if harmful side effects are to be avoided. Thinking about technology only as physical artifacts is too limited and portends neglect of the type of planning suggested above. "The basic function of technology is the expansion of the realm of practical human possibility." This is a statement that highlights the natural potential for expanding the use of new and innovative technologies within the realm of human services.

Technology must be dealt with as a sociotechnical phenomenon, rather than technical. This means that a technology must include the managerial and social supporting systems necessary to apply it on a significant scale. The defining feature of technology is that it is public knowledge rather than knowledge of how and why things are as they are; technology is knowledge of how to fulfill certain human purposes in a specifiable and reproducible way. Actual technological systems chosen are without a doubt culture-dependent.

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21 Hannay and McGinn, cited in Stephens and White, p. 15.


23 Stephens and White, p. 16.
In terms of the contribution of ethnographic research case studies to the realm of understanding technology and transfer processes, there are several key points resulting from the literature that should be highlighted. These assumptions influence the perspective given to the case studies and findings. One, technology expands the realm of practical human possibility. Second, it embodies and augments hardware and software to become a socio-technological phenomenon. Third, technological systems chosen are culture-dependent. Finally, avoidance of the information component in transfer processes suggests that, in many cases, "firms sell discrete technologies, not the integration of these technologies into technical and economically efficient production units."24 For research on public-private partnerships in technology-based programs, the latter point highlights the dangers of technology transfer from private firms into the realm of human service delivery. All of these considerations can benefit from the findings of an ethnographic study.

Technology Transfer and Innovation Diffusion

Exploring the processes of technology transfer and innovation diffusion touches upon a theme that is au courant in many facets of both the public and private sectors. Processes involved in transfer, diffusion, and innovation of

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24Feller, p. 320.
technology cut across a multitude of boundaries—cultural, organizational, governmental, industrial, and even individual. At times, similar terms and concepts apply to varied processes that may or may not be of the same genre. Technology and innovation are the earmarks of modern society, whetting the appetites of theoreticians and practitioners alike as they seek to uncover the accompanying changes, structures, and implications that are on the horizon.

While a great deal of activity addresses the enthusiasm surrounding development of technological innovations specific to issues of human and population aging, it is unclear as to whether or not an understanding of specific transfer and diffusion processes is accorded an equally enthusiastic response. It is apparent that a myriad of innovative technological applications confronts the needs or special characteristics of older people. In addition, with the overwhelming social implications of an aging population, the profusion of aging-related organizational and programmatic initiatives creates a rich environment for technological exploration. While the field of aging perhaps has not yet achieved the level of technological sophistication evidenced in other areas, such as defense and medicine, there is no doubt that technology generates much fascination among many people involved in the field of aging. Corollary concerns center on cost issues, ethical dilemmas, and other critical
considerations reflective of a period of limited resources, financial uncertainties, and social insecurity.

Understanding the processes of technology transfer or diffusion, then, poses a unique challenge not only within the realm of aging-related issues but also in bringing sense to a global concept weighed down by varied connotations and ambiguities. Certainly, it is an area that must be visualized in accordance with the demands of a field where applications and implementation of technological devices and programs must be carefully monitored and coordinated in order to maintain an acceptable quality of care or service.


One of the most influential works in this realm is that of Everett Rogers (1983). His publication \textit{Diffusion of}
Innovation is seen to have established the foundation for an appropriate paradigm able to illuminate the elements of the processes being explored.\textsuperscript{26} Rogers contributed an understanding of the interaction of key elements in the diffusion process: channels of communication, time factors, and social systems. Instrumental to the understanding is the recognition of the diffusion S-curve for adoption which indicates the temporal pattern of the diffusion process.\textsuperscript{27}

Numerous models developed portray the patterns involved in the diffusion process. In many cases, diffusion models are seen to have their "roots and analogues in models used to study epidemics in biology or life-death processes".\textsuperscript{28} In addition to development of models, research focuses on the analysis of organizational factors that influence technology transfer and innovation diffusion. In some cases, innovation requires an organization that is specifically designed for that purpose.\textsuperscript{29} Other organizational elements are found in the networks of communication that exist or need to be

\textsuperscript{26}Feller, p. 315.


\textsuperscript{28}Ibid., p. 10.

\textsuperscript{29}Galbraith, 1982, in Kolb, Rubin, and McIntyre, 1984: 543).
developed, as well as the existence of technological gatekeepers instrumental in the process.\textsuperscript{30}

Incorporation of models and theoretical grounding for both processes of diffusion and transfer tends to be problematic for many reasons. Understanding of the differentiation between the two processes is limited and it is common to find the terms and concepts used interchangeably in work dealing with the subject or related events. The two can be considered to be a continuum, of which there is no clear point for separation.\textsuperscript{31}

Clearly, the abundance of activity within the realm of technology transfer and innovation diffusion indicates the ability of some researchers and policy makers to adapt the models available and develop appropriate strategies for implementation. Technology transfer has emerged as "a distinctive policy field within the federal government".\textsuperscript{32} Efforts within NASA to disseminate technological innovation to the benefit of the handicapped and the aging are evident of transfer and diffusion models effectively incorporated into the functioning and mission of a public organization. Exploitation of such programs and models suggests great potential for using technology and innovation in ways that can benefit larger numbers of the population.

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\textsuperscript{30}Allen, 1967, in Kolb et al: 564.

\textsuperscript{31}Stewart and Nihei, p. 2.

\textsuperscript{32}Feller, p. 312.
Yet, it is just as clear that there are flaws existing in the development of models for transfer and diffusion. The promise of benefits to accrue from these processes may not hold forth in the realities of priority and responsibility ambiguities. The dramatic title of one article speaks volumes on the implications of inadequate conceptualizations of how transfer and diffusion should come about: "Technology Transfer Isn't Working: The campaign to pass on the fruits of the federal research labs to industry could be a lost cause".  

Emphasis on technology transfer within the defense realm also meets with unanticipated consequences as the intentions of transfer activities clash with the priorities of the national defense mission.

Success or failure of transfer programs are not the only indication of gaps in the development of appropriate models or theories of the process--nor is the emergence of unanticipated consequences. Inherent intricacies of the paradigm emerge as the defining variables and concepts diverge from the experiences and realities of organizations designated to be transfer systems. The case of agricultural extension is one in which the defining variables of the transfer process do not


reflect adequately the nature of the process as it has evolved within this specific structure. Feller (1987) portrays the limited conceptualization of technology transfer as a process for conveying information from one person or group to another; the process in this context does not include or mandate understanding. Interpreting, disseminating, and applying the information is only part of the process. The key is for attaining the information to be accompanied by interaction to interpret the information in a local context. Essentially, Feller's argument is that the role of agricultural extension is one that goes far beyond the defined nuances of a technology transfer organization.

Another dramatic example of the difficulties inherent in the application of transfer and diffusion models is the experience in cultural transfer of technology.

Technology Transfer in Literature on Aging

A great deal of literature and research is available on issues related to technology, transfer, and other related concepts. Concern among some professionals, however, reflects the perception that there is a distinct lack of coordination in these works. "There is an unorganized smattering of technology transfer activities around the country, all in search of a guiding principle."35 Further, some critics call

for a new political agenda that to incorporate a different approach to handling new technology than that taken in the past. "Democratic and humane values have long been less evident in technology policies than elsewhere in the government."  

These same concerns emerge in the realm of technology and aging, as the number of articles on the general topic has mounted through the past ten to fifteen years. Professionals who have followed developments in technology and aging through the years suggest that the increasing work in the area is deterred from full potential by the lack of coordination in the area. Others committed to the bonding of technology with aging issues advocate the need to concentrate on interpretive science in order to extract the most knowledge possible from the work being done.

The current literature on technology and aging covers a spectrum of concerns and issues. Topics range from classifications of hardware (low-end to high-end) used in aging-related programs to futuristic dreams. Such dreams envision computerized technology adapted and made available to aging and disabled people so they can perform anything (or

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37 Paul Haber, "Technology in Aging," The Gerontologist, 26: 350-357.

38 Ibid.
even more than) any able-bodied youthful person could carry out.\textsuperscript{39}

Many practitioners and researchers focus on higher forms of technology with greater potential only in future contexts. Others expend their efforts dealing with vast range of technologies already available,\textsuperscript{40} such as gadgets and devices categorized as ecological technologies.\textsuperscript{41} A national computerized database, ABLEdata, already exists that contains information on over 14,000 products and devices designed specifically to assist the disabled and the aging.\textsuperscript{42} The Office of Technology Assessment prepared a report entitled "Technology and Aging in America" that evaluated various medical technologies available to the older population.\textsuperscript{43}

The American Society on Aging is responsible for convening several conferences specifically relating to technology and aging. This organization also attempts to sensitize those who develop technologies to the needs of an

\textsuperscript{39} Gari Lesnoff-Caravaglia, "Liberation or Repression? What will be the effect of technology on an older population?", \textit{Generations}, (Fall 1986): 12-14.

\textsuperscript{40} Dennis Labuda, "Bringing Gerontologists and Technologists Together: What's the Problem?", \textit{Generations}, (Fall 1986): 8-10.

\textsuperscript{41} Haber.

\textsuperscript{42} Freddi Karp and Mary Lucas, "ABLEDATA: A computerized listing makes product information accessible to consumers and professionals." \textit{Generations} (Fall 1986): 35.

older population through the EASE project (Education in Aging for Scientists and Engineers).\textsuperscript{44}

Architecture plays an important part in adapting the environment for the aging.\textsuperscript{45} Robotic devices are being developed specifically for the needs of older people\textsuperscript{46} Companies seek advice from the older population as they develop new products,\textsuperscript{47} and emphasis is being placed on how to market to the older consumer.\textsuperscript{48} In all, the underlying philosophy is to develop new products for a growing segment of the population—the aging. These people are perceived to have financial resources and increasing political and market clout. All of this leads to articles on issues suggested in this

\begin{flushleft}
\textsuperscript{44}Martha Holstein, "The EASE Project Brings Together Scientists and Engineers," The Aging Connection; In Focus: Technology and Aging, (June-July 1987), p. 5.


\textsuperscript{47}Susan E. Walters, "Dial 'Consumer' for Help: Telephone Company Seeks Older Adults as Advisors for New Products," The Aging Connection; In Focus: Technology and Aging, (June-July 1987), p. 6.

\textsuperscript{48}Helen Harris, "How to Market Products to the Older Consumer," The Aging Connection; In Focus: Technology and Aging, (June-July 1987), p. 8.
\end{flushleft}
aging-oriented headline: "Which Comes First, the Technology or the Need? How Do We Develop New Products?"\textsuperscript{49}

Essentially, most of the program, articles and books deal with the conceptualization of the first and second components of the tripartite technology. They seem to lack the organizational context and philosophical bindings of a comprehensive socio-technological approach. Emphasis on culture-dependent technological systems should not mean considering only the difficulties of altering and adapting hardware and software to address the needs of a specific population group. The socio-technological approach must take into consideration the transfer processes involved and whether these processes might differ from those identified in other fields. In addition, this approach must address other organizational implications for transfer of technology intended to benefit the older population.

Marketing new products and providing public service to an older population suggest the need to explore more fully the demands of a public-private partnership that is only just beginning to emerge. Even when private firms market a product that appears to be of benefit to the older population, there still are numerous public issues that come to the forefront. Not the least of these is the regulation of products and

\textsuperscript{49}Doris J. Rouse, "Which Comes First, the Technology or the Need? How Do We Develop New Products?" \textit{The Aging Connection: In Focus: Technology and Aging}, (June-July 1987), p. 7.
services for the protection of any vulnerable people in the client group. Public-private tension has been experienced by Lifeline, the company involved in the case studies for this research, as the founder has sought support from Congress to incorporate Lifeline/PERS services into the Medicare system.

**Specific Research Associated With Emergency Response Systems**

Many studies seek to determine benefits from emergency response systems for an aging population. These studies estimate average statistics in several areas: number of alerts received through the system, number and types of emergencies, subscriber demographics (living circumstances, disabilities, referrals, responders, duration on PERS), characteristics of people most likely to require emergency services, and general satisfaction with the service. Most importantly, several studies assess whether the use of PERS in combination with appropriate health care actually results in decreases numbers of days spent in institutional care.

Research papers on personal emergency response systems similar to that discussed in this study deal, for the most part, with quantitative aspects of the systems. Very little qualitative analysis enters into the research studies of the programs and the transfer process. Although other researchers have interviewed subscribers and families, reports often present findings in quantitative form. Interviews with families and subscribers determine calculations and numbers to portray subscriber satisfaction with the service and reasons
for subscribing to an emergency response system. In fact, it is possible that most qualitative approaches to PERS programs would focus on the perceptions of subscribers and their families or health service providers, rather than delving into the organizational implications of the transfer process represented by PERS.

ORGANIZATIONS

Research and Theory on Organizations

Although the literature on aging and on technology-related processes is vast, organization theory helps to make sense of it all. Models to explain functioning of complex organizations provide an abundant set of resources and concepts useful to analyzing the problems and relationships focused on in this study. Evidence of coordination as means to action,\textsuperscript{50} moral responsibility,\textsuperscript{51} and social construction of reality\textsuperscript{52} all are evident in the case studies. Most importantly, their contributions allow the researcher to systematically examine the case study processes in a truly scientific manner.

All science is social and there is much to acknowledge in the achievements of social inventions in the culture and


organizational relationships. Theoretical concepts do not provide full explanation for findings from this research. However, they serve as guiding principles to better understand how public-oriented organizations concerned with issues of aging can incorporate the often conflicting demands of technological change.

The open systems view of organizations offers a relevant orientation for analyzing the case studies in this report. Adopting an open-systems view of organizations, leads to the examination of the organization with the environment. Ultimately, a complex environment has a substantial effect on the organizational processes and the ability of organizations to cope with uncertainties. Yet, it also is apparent that some degree of determinateness and certainty must be welded into the open system organization in direct response to the criteria of rationality facing the organization. In dealing with uncertainties, organizations seek to develop specific parts and specializations that can assist in the ability of the organization to cope with the environment.


55See Thompson’s extension of the concepts proposed by Simon in his elaboration of Barnard’s work (p. 6) and Thompson’s critique of the closed-systems approaches taken by Taylor, Weber, and Gulick and Urwick.

56Thompson, p. 10
Selecting a non-profit organization such as the American Red Cross for a series of case studies can be approached in a number of ways. The open systems approach provides a useful lens for considering the many environmental factors that impinge on the actions of the organization itself. Not the least of these is the emphasis placed on mission and goals in compliance with Congressional mandate. Despite the effects of such factors on organizational activities, the tightening belt of financial resources produces tension in the balance between goals and actions. Stiff competition among nonprofit organizations for shrinking funds has forced the Red Cross to adopt more innovative strategies for supplementing the resources available to the organization. At the same time, service to local communities continues, in keeping with the official mission and mandate. While the specific program examined in the case studies is not in itself especially innovative, within the realm of the American Red Cross it becomes an entrepreneurial program; in a way, the program takes on a somewhat radical hue and can be considered to be innovative.

Theory on mediating technology suggests standardization that allows for linking of customers with clients. In this research, the American Red Cross appears as the organization providing the mediating technology linking members of the

57Thompson.
local community with a vendor of hardware and with emergency response providers.

The organization becomes a natural product of social needs and pressures; it is a responsive, adaptive institution. Theory on leadership is a prominent factor, influencing key values and creating social structure to embody those values. Leadership applies to the case studies, highlighting the extent to which ARC Chapters wanted and received leadership and guidance from a central source.

Although the ARC Chapters take a similar machine technology and set of procedures, implementing them in markedly different ways, there is a question of whether the influence of a stronger leadership role would have been positive or negative in terms of program implementation and growth. Differences among the case sites and their approaches to the program are interesting adaptations. Central leadership might have provided more standardization important to mediating technologies; it also could stifle some creativity and innovation that developed naturally from the loosely structured environment. Another consideration here is the view held by some professionals in the field of gerontology that suggests there is little coordination and leadership to provide stability to the applications of technology and aging.

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The concept of cooptation appears relevant to this study as the process by which an organization absorbs new elements in order to arrest threats to its stability.\textsuperscript{59} Research indicates that an organization can allow itself to be coopted by other institutions in the community in order to survive, thereby distorting the original values or goals of the organization.\textsuperscript{60} In many instances where a new or adapted form of hardware technology drives a public-oriented program, original values and goals in the public service program can become distorted by forceful influence from a for-profit organization, possibly the owner of the specific technology. Partnerships between public or nonprofit organizations and private or for-profit organizations as they provide technology-based service to the public highlight complex implications related to cooptation.

Applying this concept to the case study brings into play the questions of whether the ARC as a nonprofit organization has allowed itself to be coopted by LSI from the private, for-profit realm; further, this raises the question of whether the partnership distorts the original public-nonprofit values or goals. In terms of the case studies, ARC Chapters balance the mission of the organization and an entrepreneurial program.


\textsuperscript{60} Ibid.
For many public and nonprofit organizations, competition for limited resources means taking a more entrepreneurial thrust in planned programs and services. What results is potential for successful partnerships between the private and for-profit realms. Yet organizations with mediating technology confront dangers of cooptation and must be prepared to deal with conflicts—especially when the spirit of public service suffers with unwieldy emphasis on for-profit enterprise.

**IMPLICATIONS OF THE LITERATURE**

**Conceptual Linkages Between Themes**

Linkages embedded in the literature reviewed on technology, transfer processes, and organizational context serve to guide this study. Theory and research presented in this section suggest that technology transfer is complex in several ways: 1) it reflects the transfer of technology as a socio-cultural phenomenon; 2) it derives meaning as a system that is culture dependent within an organizational context; and 3) it ultimately involves a process in which there are conflicting goals and values when several organizations become involved. Based on this understanding, the study seeks to explore a socio-cultural experience within a public-oriented organizational environment. The research adopts a qualitative ethnographic process aimed at identifying values and goals pertinent to the selected case studies.

Within the field of public administration, increasing attention reflects interest in public-private partnerships and
the effectiveness of such arrangements for providing social programs and services. Limited resources affect the public and nonprofit sector to the point where organizations identified as not-for-profit now have entered an exceedingly competitive environment. Organizations usually assumed to cooperate with one another in offering needed service and support to the community now attempt to surpass each other in a quest for acquisition of resources to support public services. Nonprofit competition can be a difficult concept to grasp for many people who hold idealized perceptions of what these organizations represent. Nonetheless, it is apparent that nonprofit competition is indeed a reality.\textsuperscript{61}

What emerges, then, in examining programs that seek to promote stronger reliance on technology transfer in a network of public goals is an increasingly entrepreneurial environment. In this atmosphere, strategies often incorporate public with private to secure the means for reaching public ends. This reflects growing areas in the literature that promote discussion of private means versus public ends\textsuperscript{62}, and parallels debate on issues dealing with the potential for third-party governance in American society.\textsuperscript{63}


\textsuperscript{62}Carroll, Conant, Easton.

\textsuperscript{63}Carroll, Conant, and Easton.
Based on common themes in the literature, the study documented here is especially interesting. It provides a portrait of a for-profit organization, with a human service technology product, working with a nonprofit organization. The study also fosters a fascinating scenario of a nonprofit organization attempting to incorporate a for-profit program into the array of services provided by the organization. The issues that emerge relate to clashes among several interpretations by participants of the organizational mission and the nonprofit mentality in marketing and other processes.

The research and popular literature indicate that public-private transfers and partnerships are increasing in technology transfer programs. For some, public laboratories are owners of the technology and transfer it to the private sector for adaptation and marketing to the public. For others, such as the program in this dissertation research, a private sector organization owns the technology and transfers it to the nonprofit realm where the technology provides means for achieving public goals while addressing nonprofit resource limitations. This story undoubtedly will become more common as technology and aging interplay. Findings from the case studies will reflect much of the literature on new products,

54 "Applications of Space Technology for the Elderly and Handicapped," (Washington, D.C.: House Committees on Aging, and on Science and Technology, 19-20 July 1979), Joint Hearings before the House Select Committee on Aging and the House Committee on Science and Technology.
marketing concerns, and consumer response cited in articles on technology and aging.

What emerge as linkages between the themes used for introducing and exploring the case studies are: 1) public-private partnerships in providing technology-based service to the aging population, 2) marketing cultures that exist in nonprofit versus for-profit organizations, 3) organizational philosophy, especially in relation to incorporating entrepreneurial directions, 4) motivators and barriers to technology transfer and innovation in organizational context, and 5) socially-responsible corporations.

Models of Technology Transfer

The environmental context of this research is one in which the application of data portends influence on several decisions made by a large nonprofit organization. Maintaining a focus on the policy issues requires concentration on the implications of policy research. Specifically, structuring the problem can benefit from the process of problem unsolving and the ability to demonstrate that a solution to another problem is the right solution to the problem being focused on at this time.65

The limitations of current models and theories of technology transfer suggest that the research must concentrate on discovering what aspects of transfer have not been given

full attention to this point. Two hypotheses come to light in this effort. The first hypothesis that emerges is one in which the nature of models of technology transfer is being questioned; that is, it is suggested that the views of technology transfer are too simplistic and that factors of education and understanding are being lost in the process. In addition, it is hypothesized that the objectives in technology transfer are inappropriate and may not be possible to achieve. Wildavsky's suggestion that it is appropriate to retreat from these types of objectives provides the guide for assessing the definition of transfer and diffusion and determining where factors of understanding enter in.

In keeping with "the five de's"—deinstitutionalization, demedicalization, deeducation, decriminalization and decentralization—66—and the trend towards moving various functions away from public environments, there also are issues of responsibility in providing specific services. From this observation emerges a second hypothesis that the technology transfer process evidences a confusion over who is responsible for what services. Companies responsible for selling specific technologies do not cater to the integration of these technologies into technically and economically efficient production units.67 When the environment is that of a


67Feller, p. 320.
A nonprofit organization committed (and mandated by Congress) to provision of certain services to clients, this aspect of responsibility begins to take on special importance.

**Primary and Subsidiary Questions**

Based on the literature review, a list of subsidiary research questions were formulated from the primary questions asked in this study. They are as follows:

**Primary Question:**

1. What organizational issues arise from a program that links technology with issues of aging?

**Subsidiary Questions:**

a) **Stages of Technology Transfer:** Are there stages that represent a process of technology transfer in the case studies?

b) **Technophobia:** How do participants define the technology (hardware/equipment, software/information, socio-technological) and what is their response to it?

c) **Leadership:** Where is the central leadership of the program; how does it affect development and maintenance of the program?

d) **Motivators & Inhibitors:** What factors seem to facilitate the process of technology transfer and what factors impede this process?
Primary Question:
2. What are the implications of technology transfer under conditions of public-private partnership?

Subsidiary Questions:

a) Organizational Values: What values influence each organization and how are these manifested by staff and programs/service?

b) Program Goals/Incentives for Partnership: What incentives stimulated the involvement of each organization with the other?

c) Commitment: Is there a sense of commitment on the part of participants to organization, program, community and subscribers; to what extent does staff commitment vary among these various groups?

d) Barriers Between Private and Public: Did issues of conflict arise in initiating and maintaining the programs that can be attributed to a clash between private and public; what is the source of these conflicts (missions, values, profits)?

e) Innovation: To what extent does the technology and the program become innovative when incorporating the public and private emphasis?
Primary Question:
3. What is acceptable in terms of promoting to the public a new service or product of the type described in the case studies?

Subsidiary Questions:

a) Entrepreneurial Approach: How is this program an example of an entrepreneurial direction and how is this perceived by the participants?

b) Insurance of Service/"Escape Clauses": What assurances are available to the subscribers and community to insure that the service will be maintained; unlike the private sector, is it possible for a public-oriented organization to back out of a program or service, for whatever reasons?

c) Community Contact--Contribution to the Community: To what extent does the program reflect the needs of the communities being served?

d) "Creaming" with two classes of subscribers--Commitment to Poor: Does an entrepreneurial program like this one result in an imbalance between those who can afford the service and those who cannot?
CHAPTER III

METHODOLOGY

Persistent controversy affects perceptions of quantitative and qualitative research as they contribute to knowledge. Nonetheless, findings from both approaches serve to increase understanding of the problems and relationships that shape research efforts.

The research described in this dissertation includes both quantitative and qualitative data. Yet it is the qualitative case study approach that best serves to analyze the public-private partnership and technology transfer processes focused on in the study. This methodology allows for the in-depth investigation of the attitudes, beliefs, experiences, and perceived needs of people, groups, and organizations involved in a particular phenomenon.

This chapter addresses the merit of the case study method, given the research questions and design for data collection and analysis. The chapter sections include a description of the case study methodology, along with its significance in public administration. Selection of the sample and methods used for data collection and analysis form a large part of the chapter discussion.
Case Study Method

Qualitative case study methods provide useful means for exploring the development process in a technology-based program targeted to older people in local communities. One part of the debate concerning technology and aging suggests that dehumanization will be inevitable in technology-based programs serving older people. The fear is that technology, enhanced to augment the abilities of caregivers, detracts from personal contact with clients or patients. Emphasis on discovery of meaning in ethnographic case studies produces research to augment quantitative data, illuminating the issues of technological implications in human service delivery.

Research efforts cannot be expected to provide answers to all issue-related questions. Standard quantitative research methods define specific variables and attempt to establish relationships for theory confirmation and building. There are definite limitations to these approaches. Yet, the overriding value of these efforts is apparent in the process; that is, engaging in research facilitates discovery of the right questions. This is important if research findings are to have any bearing on effective policy and program development. Success in these directions comes from "finding the right solution to the right problem."\(^{68}\) Entering the inductive process to discover information brings understanding.

\(^{68}\) Dunn, p. 97.
The relevance of process in understanding guides the researcher to the philosophical underpinnings of the qualitative case study research approach. Most quantitative research approaches emphasize outcomes, specific variables, and confirmation. The qualitative approach allows the researcher to pursue an interest in process, context, and discovery. Insights from qualitative case studies directly influence policy, practice, and future research in many ways that should not be underestimated in the field of public administration.

Qualitative methods enhance understanding by allowing for the inclusion in research of context-based meaning; this entails uncovering tacit knowledge that is not always evident to the researcher without the use of inference. Designing the research study rests on the ethnographic principles of learning from people, rather than studying subjects—the discovery knowledge from the insider's view, rather than the outsider's. The qualitative case study is "an intensive, holistic description and analysis of a single entity,

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71 Ibid., p. 1.
phenomenon, or social unit...[that] relies heavily on inductive reasoning in handling multiple data sources."72

This dissertation study incorporates methods from an ethnographic case study strategy. Knowledge is sought from the people involved in the identified program and transfer processes. The ethnographic approach aids in determining informant-established meaning for actions and events.

Naturalistic inquiry73 and inductive reasoning74 encourage the acknowledgement of multiple realities. Defining fully all the variables present in a situation is impossible prior to research efforts. Case studies allow concentration on as many variables as possible that might be present in the units of observation. Presentation of qualitative findings embraces several forms for portraying and communicating the nature of the case study. The researcher relies more on words and pictures, than numbers that claim to represent concrete realities; at the same time, numbers and quantitative data

72Merriam, p. 16.

73Naturalistic inquiry is defined as an inductive approach that documents "slice-of-life" episodes in "natural" language, with minimal investigator manipulation of the study setting and no prior determination of outcomes, in E.G. Guba & Y.S. Lincoln, Effective Evaluation, (San Francisco: Jossey-Bass, 1981), p. 78.

74Inductive reasoning begins with observations about a phenomenon in the real world and from them extracts conclusions about uniformities or relationship. Contrary to deduction, which derives conclusions from propositions based on prior observations, the inductive process produces "a generalization about a set of observed facts." Robert T. Mayer and Ernest Greenwood, The Design of Social Policy Research, (Englewood Cliffs, NJ: Prentice-Hall, 1980), p. 34.
have a part supplementing the case study presentations, building the most illustrative portrayal possible.

Research methodologies include several types of case studies.\textsuperscript{75} Descriptive case study forms a data base for comparison and theory building; evaluative case study offers description, explanation and judgement. Interpretive case study serves as the most useful format for this dissertation research study. The interpretive case study is sometimes called analytical because of the greater amount of analysis carried out. This approach contains plentiful description that assists in creating conceptual categories. Information obtained on the phenomenon provides description to address theoretical assumptions based on prior observations.\textsuperscript{76}

Use of the case study approach provides a methodology that contributes to knowledge, leading to empirically developed hypotheses. These hypotheses develop in the research study documented here through the identification of cultural, analytical themes. Researcher flexibility in data collection paves the way for a detailed contextual-based analysis representative of the complexity of human interactions and organizational processes.\textsuperscript{77} In this dissertation research, the case studies inform culture-bound

\textsuperscript{75}Merriam, pp. 23-27.

\textsuperscript{76}Ibid. pp. 27-28.

theories by documenting the existence of alternative realities and describing these realities on their own terms.\textsuperscript{78} Specifically, the case studies seek to address the theories of technology transfer that might not represent the cultures of public nonprofit organizations.

Case Study in Public Administration and Policy

The potential for discovery of meaning in human behavior and in-depth understanding of a specific situation support the utility of the case study method in public administration research. The 1989 Theory Symposium of the American Society for Public Administration included several papers supportive of case study and the need to enhance practitioner-oriented components of the field of public administration.\textsuperscript{79} Specific philosophical positions must gain prominence for this to occur, such as recognizing the need for naturalistic inquiry and phenomenological methods.

Use of analytic techniques grounded in ethnography demand that systematic and rigorous methods provide a clear picture of data collection and concept development. This is part of the task accomplished in achieving a more practitioner-oriented field. "Public administration must embrace its practitioner orientation, rather than apologizing for it, and

\textsuperscript{78}Spradley, pp. 10-13.

\textsuperscript{79}Mayer and Greenwood.
develop a scientifically rigorous research methodology appropriate for the field.\textsuperscript{80}

Public administration benefits from research that can have bearing on real-world problems. Ethnographic case studies are intended to respond to the needs of humankind. In this type of research, knowledge is aimed at facilitating practical applications of understanding and brings the research as close as possible to these applications. This is an approach that bridges whatever gap professionals might have perceived between theory and practice. "Cultural descriptions can be used to oppress people or to set them free. Ethnographers must consider the potential uses of their research."\textsuperscript{81} Perhaps, then, ethnographic case studies represent the ideal research methods for public administration and policy development. This could be the motivation for the recent resurgence of these research methods in the field of public administration.\textsuperscript{82}


\textsuperscript{81}Spradley, p. 13.

Selection of the Population

Criticisms of the qualitative case study approach to research accentuate the need to verify each step of the research process. Appropriate sampling, data collection, and analysis must ensure a high standard of rigor by proponents of case study methodology.\textsuperscript{83} Identification of appropriate case study settings for qualitative research can be idiosyncratic. The researcher rarely sets up a truly controlled environment demanded in much of the quantitative research efforts. At the same time, it is necessary to establish that the selected setting is conducive to exploration of specific phenomena. This ensures that any new understanding emerging from case study research is reflective of a close link between theory and practice.

Theoretical sampling engages the researcher in strategic selection of people, groups, or organizations representative of the theory and conceptual units being explored.\textsuperscript{84} Through the use of comparison groups and control over similarities and differences, theoretical sampling facilitates identification of conceptual categories and theoretical properties that impinge on theory building.

\textsuperscript{83} Bailey, p. 47.

Exploring organizational and technology transfer issues related to technology and aging requires identification of an appropriate setting for research. For this dissertation, the desired setting was one in which electronic technology (for instance, computers and communication networks) addressed community needs and assists independent community living for the older people. Specifically, the goal entailed identification of a sample of instances illustrating the experiences of simple technology-based aging programs, preferably in several different organizational or sub-organizational settings. Multiple sites allow for comparison of differences and similarities in facilitating organizational transition and developing an innovative, technological solution to a community problem. More than one setting or organizational climate provides a better picture of consistent findings across cases. Locating a sample of programs illustrates community-based solutions that desperately are needed currently. This is especially true with the trend towards decentralization of federal services to the aging and the limited capacity of non-profits to fill the gap left by shifting responsibilities.

The demands of the sampling procedure require selection of a sample with the most theoretical relevance to the concepts being examined. Various local, independent, and federal organizational settings held potential for providing suitable research settings. Illustrations of the technology
transfer process addressing aging issues are to be found in a number of agencies. This includes NASA and other government-sponsored transfer of research laboratory knowledge to community-based programs. In addition, several options were considered in which a technology-based service could respond to aging issues, through electronic bulletin boards or computer programs. Many of these settings represent study potential that could prove to be considerably more complicated and expensive for research purposes.

In the course of considering the possibilities, an offer was extended by a larger nonprofit organization attempting to incorporate more innovative programs into the range of community services. Organization staff suggested a range of programs that could fit the research specifications.

One program provided a suitable sample, filling the requirements of the research and holding promise for being an interesting study. The organization was entering a new phase of restructuring and responding to a rapidly changing nonprofit and volunteer environment. Especially important in these transitions was awareness of limited resources unable to match increasing demands. Part of the organization's response to local community needs involved recognition of the challenges in the trends of an aging population.

The program identified for the study was in its infancy within the organization; a proposal for a pilot project would determine how successful the service could be and whether
support was necessary over the long-term. The nature of the research study was explained to the director of the department initiating the pilot project and permission obtained to include the entire population of sub-units involved in the pilot project into the study. Although anonymity was not promised in the context of this discussion, the various sub-units are not identified by name in the study. Anonymity, wherever possible, is a technique to enhance the potential of the research and findings. It facilitates extracting as much information as possible to describe the case studies and to prevent assumptions about these sub-units based on the characteristics of geographical locations.

The national American Red Cross (ARC) is the organizational setting for the case studies presented and analyzed in this research. The national mission of ARC as mandated by Congress and accepted by the organization is "to improve the quality of human life; to enhance self-reliance and concern for others; and to help people avoid, prepare for, and cope with emergencies. It does this through services that are governed and directed by volunteers and are consistent with its congressional charter and the principles of the International Red Cross."\(^\text{85}\) Details about the emergency response program chosen for examining the research issues are provided in the following chapter of the dissertation.

\(^{85}\text{ARC Cue-In, Vol. } 17, \text{ No. } 25; \text{ October 24, 1986.}
The national organization is divided into chapters\(^8\) that serve communities and maintain financial and authority ties to the national headquarters. The national ARC approached many of the ARC Chapters in order to encourage them to participate in an ARC Lifeline pilot project. Five of these ARC Chapters agreed to participate in the pilot project in which ARC Chapters would provide a personal emergency response service (PERS) to community members, especially the aging and handicapped. For the purposes of this study, these five ARC Chapter PERS programs were defined as case sites. They developed programs using the model for operation supported by the organizational owners of the technology, a model which for many years has been used successfully in hospital settings for discharge planning.

**Procedures for Data Collection**

Several methods for collection and analysis of data create appropriate data for the purposes of this research: a) life history interviews, capturing participants' perceptions

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\(^8\)The American Red Cross has approximately 2,280 chapters in the U.S.; this number changes each quarter with chapter mergers. Chapters can be Center chapters that have paid employees, such as Los Angeles, and then numerous surrounding chapters operated solely with volunteer personnel. There are 282 Field Stations internationally that serve veterans and military personnel and 176 domestic Field Stations. ARC chapters are divided between active and reserve categories, further divided by key resource chapters (KRC's) and territorial chapters. There are 184 active KRC's and 2,097 active territorials. There are 484 territorial chapters in reserve status. Fifty-six Blood Regions operate in the country and all but 2 of these are affiliated with chapters.
of their experiences; b) journals, recording the researcher's own account; c) participant observation, in which the researcher also participates in the observed events and records experiences; and d) document analysis, to determine "official stances."  

Creating clear descriptions of case studies requires adequate data for analysis. Several cycles and sources of data collection are discussed below in this chapter section. Each cycle draws more data to elaborate on the technology transfer issues and public-private partnership implications. Defining cycles separates each distinct wave of data collection and clarifies the assumptions that go on to affect subsequent data collection and analyses.

A preliminary cycle in this research entailed interviews during September and October 1987 with professionals from several organizations engaged in or concerned with the field of technology transfer, technology and aging, and gerontology. Their comments provided background on the issues and appropriate settings for research. This preliminary cycle also included initial contacts with the American Red Cross national headquarters and the negotiations for selecting an appropriate program for the research. Finally, after negotiations and contract arrangements, letters were sent to each of the ARC Chapters serving as case study settings.

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87 Denzin; Spradley.
introducing the external consultants involved in evaluating the program.

First Data Collection Cycle: In-Person Interviews (June-August 1988)

This cycle consisted of in-person interviews with the informants at the two major organizational headquarters—the American Red Cross national office in Washington, D.C. and Lifeline Systems, Inc. in Watertown, Massachusetts—and the five Red Cross Chapter pilot sites. All of the interviews took place in the home location for all of informants; that is, the researcher traveled to each of the physical locations of the PERS programs, as well as the central LSI office and the American Red Cross national headquarters.

The ethos of ethnographic inquiry placed the emphasis on the value of informants describing their own experience in familiar words and phrases, rather than subjects being manipulated in a controlled environment. In this way, the researcher strives to enter into the informant experience and understand the culture and concepts used to bring meaning to the phenomena being studied. An effective dichotomy showing the difference between questions asked by the researcher when using subjects versus using informants appears below: 88

88 Spradley, p. 30
RESEARCH WITH SUBJECTS

1. What do I know regarding a problem that will allow me to formulate and test a hypothesis?

2. What concepts can I use to test this hypothesis?

3. How can I operationally define these concepts?

4. What scientific theory can explain the data?

5. How can I interpret the results and report them in the language of my colleagues?

RESEARCH WITH INFORMANTS

1. What do my informants know about their culture that I can discover?

2. What concepts do my informants use to classify their experience?

3. How do my informants define these concepts?

4. What folk theory do my informants use to explain their experience?

5. How can I translate the cultural knowledge of my informants into a cultural description my colleagues will understand?

The interview design included a set of broad open-ended questions to gather information from the informants. Questions pertained to the process of initiating a PERS program within the Red Cross Chapter setting and the interactions between the organizations and sub-units involved in the process. Open-ended questions allowed the participants and informants to prioritize the information important to them in the process. These priorities guided the structure of interview notes recording each meeting and discussion.

When broad questions did not elicit all of the desired information, additional questions became probes. The complete interview process encouraged informants to provide the information they felt necessary to an understanding of their
experience, while still providing certain core pieces of data for effective comparison between case studies.

The interview schedule used at each of the pilot sites was formulated based on factors suggested by the literature review relating to PERS programs, technology transfer and diffusion, and the use of technology in aging issues.\(^{89}\) Careful consideration went into each question designed so that the information obtained would assist in responding to research questions. During the interview process, the questions were presented in such a way as to encourage the informant to provide relevant information that would not be limited to categories suggested by prevailing theory. Factors and findings such as the above provides valuable data for theory building, even though it is not anticipated when the interview structure is designed.

Informants responded to questions providing information that related to the purpose of the Pilot Project. The leading question was whether or not the PERS program would serve as a feasible *National Program* for the American Red Cross. Each pilot site participated in interviews as part of an evaluation effort designed to see whether the ARC Chapters could operate the PERS programs in an (economically) efficient and effective manner deserving of further support from the organization's national headquarters (NHQ). At the same time, however, the

\(^{89}\)A copy of the instrument used to guide structural and contrast questions appears in appendix A.
informants learned that the information would pertain to a dissertation and further contact would be necessary. None of the informants indicated that this posed any problems. Each of these participants appeared eager to assist NHQ with the overall evaluation component of the pilot project.

Descriptive questions elicited from the informants specific kinds of information about the Chapter PERS programs. The use of these questions encouraged informants to talk naturally about their experiences, describing phenomena in their own words. Structural and contrast questions led to the tacit meanings associated with information provided by the informants. What follows is an excerpt from a typical interview used in the study that illustrates what would constitute an ethnographic explanation leading into a descriptive question:

Let me explain briefly. What I would like you to do is to tell me about your experience with the PERS program, including as much detail as you wish about the issues you feel most important to this experience. First of all, describe your ARC Chapter PERS program for me, helping me to understand how you got involved and where you are right now in operating the program.

Categories of information referred to as domains began to emerge from responses to these descriptive questions. These domains led naturally to structural questions, providing alternate ways to verify the existence of these domains.

\[90^{Spradley}\]
The following excerpt from a typical interview structure used in the study indicates the nature of a structural question:

You have described several stages that you went through in initiating the ARC Chapter PERS program. Are there other steps that have been necessary in developing an operational PERS program within your Chapter?

Contrast questions were those that went beyond the initial inquiry to seek differences or similarities between domains and concepts emerging through discussions. This comes closer to the full essence of naturalistic inquiry, seeking tacit knowledge representative of cultural patterns explaining human interactions. The following excerpt from a study interview structure illustrates the use of a contrast question:

You have described in detail all of the stages and steps that you have gone through in developing this PERS program. What are the aspects of your program that make it unique for your ARC Chapter and community—that is, what are the similarities or differences, if any, between your program and other ARC Chapter PERS programs?

Tapes and transcripts from informant discussions are the most reliable means for analyzing data. It was not possible to introduce a machine recording device into the interview environment in this research. Issues discussed by informants were recorded by the researcher in written note form. Two reasons influenced this choice of recording technique. First, while informants expressed willingness to assist in the evaluation process for ARC headquarters, there still is a certain amount of tension between ARC Chapters and NHQ, with
some caution about what is said and how it will reflect back on the other party. Taped recordings would have augmented this difficulty. Second, since the researcher and the other evaluator were outside consultants in the process, informants were at times more open in offering their thoughts on the process, at times indicating that certain comments were to remain confidential. This proves both a hindrance and a help in the research process.

Two complete records of each interview were prepared and available to the researcher for analysis. These consisted of a series of "Meeting Notes" written by the researcher based on notes recorded at the time of the interview, including some observations of nuances of the informants' behavior. The structure of these Meeting Notes followed carefully the issue priorities, introducing each new issue in the order of discussion. The second set of records was based on the same interview data but written by the other evaluator in the process (see p. 15); these followed the structured outline for questions that had been prepared prior to the interviews. In this way, data were recorded within each category in the original interview design, allowing for comparisons between case studies. Typed copies of all interview notes were prepared shortly after each meeting with informants.

Interviews were reviewed and discussed between the two evaluators immediately following each of the meetings that took place. This made it possible to clarify points and
discuss impressions that may or may not have been captured through strict recording of each interview session and the words of the informants. As well, other interactions with informants occurring outside of the interview environment were recorded in journal files for each of the pilot sites. These added insights and additional perceptions of the informants that were not apparent during interviews.

Information gathered in the interviews related to Chapter PERS programs also was compared with that information gained from discussions with the key people involved in each of the headquarter of the two main organizations involved in the study--the American Red Cross and the Lifeline Systems, Inc. Since these two organizations were involved in initiating, negotiating and coordination of the ARC Chapter PERS programs, they were able to provide alternate perspectives and insights into the operations and experiences at each of the Chapter sites. This form of data collection allowed for triangulation of data, the checking of data gathered in each of the Chapter interviews against a third source.\(^\text{91}\)

\(^{91}\)Guba \& Lincoln; M.B. Miles \& A.M. Huberman, Qualitative Data Analysis: A Sourcebook of New Methods, (Beverly Hills, CA: Sage, 1984); M.Q. Patton, Qualitative Evaluation Methods, (Beverly Hills, CA: Sage, 1980).
Second Data Collection Cycle: Written Surveys (Sept-November 1988)

After interviewing participants at each of the pilot sites, the evaluators recognized most of the issues important to informants and the type of documentation available at each of the ARC Chapter sites. Based on this information, a draft of an evaluation survey went to each of the pilot sites. After agreeing by telephone to review the draft, Lifeline Program Managers (LPM) at each ARC Chapter sites provided comments on the availability of the data being requested and how valid the data were for evaluation of the pilot project.

Two written surveys requested evaluation data--the first on the progress being made in each of the ARC Chapter PERS programs and the second on degree of subscriber satisfaction with the service. In order to complete the first survey, ARC Chapters produced calculations related to number of subscribers, demographics, response calls, and financial components of the program. The second survey required that the ARC Chapter subscriber population, or a sample, be asked a few simple questions about their satisfaction with the PERS service, the type of response to emergencies, as well as the reasons for any dissatisfaction.\(^{92}\)

It is important to distinguish here between survey research as a genre and using a survey to gather data.\(^{93}\) For

\(^{92}\)Copies of the program survey and subscriber satisfaction survey are contained in appendix B and C.

\(^{93}\)Merriam, p. 7.
the purposes of this study, the survey was simply a tool intended to enhance the case studies. Much of the survey data were of a quantitative nature, intended to be the core data for creating the evaluation report on the progress and success of the pilot project. While this quantitative data allow for neat comparisons between ARC Chapters and status accounts for each of the PERS programs, the most valuable data came from the ethnographic inquiry used in the series of interviews. The latter data allowed for identification of unanticipated concepts useful in theory building.

Third Data Collection Cycle: ARC Chapter Lifeline Meeting (November 1988)

An observation made during the site visits was that ARC Chapter pilot sites had little contact with one another, and with the key people at the American Red Cross National Headquarters (NHQ). At the suggestion of the two evaluators, an internal meeting of Red Cross staff involved in the PERS pilot project was held at NHQ in Washington, D.C. All but one of the ARC Chapters sent one or two representatives to the meeting. The purpose of the meeting was threefold:

1. To allow ARC Chapter PERS staff to interact with one another and with NHQ staff involved in the pilot project.
2. To update NHQ and ARC Chapters on each site's progress in developing a successful PERS program.
3. To provide ARC Chapters with information on the status of development of a National ARC PERS Program; as well as
information on potential funding support from NHQ to the ARC Chapters attempting to build a stronger PERS program.

For the purposes of the study, this meeting with participants in the process was an interesting forum for data gathering. Again, it was not appropriate for tape recorded meeting notes. A summary of the meeting was prepared by the researcher based on written notes taken during the discussion. Preparation of the agenda by the two evaluators ensured that some of the critical issues important to the study were addressed.94 ARC Chapter representatives gave accounts of their own programs in their own words, as well as questioning each other about their progress. Following the meeting, the two evaluators again discussed the meeting content and any fine nuances that were observed.

Fourth Data Collection Cycle:
Follow-up Interviews (December 1989)

After preliminary analysis on the information obtained through these first three data collection cycles, a fourth cycle was completed. This included in-person interviews with four ARC staff affiliated with the ARC Lifeline program, one telephone interview with the Lifeline representative, and five telephone interviews with each of the ARC Chapter LFM's. Since a relationship already existed with each of the pilot sites, telephone interviews were an appropriate means for this cycle of data collection, allowing the researcher to obtain

94Appendix D contains a copy of the meeting agenda.
valuable data within the study's financial and time restrictions.

These follow-up interviews filled in some of the gaps in data or understanding. Interview emphasis focused on themes and issues emerging through preliminary and interim data analysis, following up on the prevalent patterns. Specific questions related to items that either had not been covered adequately in previous discussions or had only recently emerged as important factors through the initial analysis. Other broad questions allowed for a simple update on each ARC Chapter's progress with the PERS program, because several months had passed since the evaluation report was submitted.

**Document Collection (May 1988-December 1989)**

Sources of documents include files on development and progress of the pilot program obtained from the ARC National Headquarters and ARC Chapter pilot sites, as well as the final evaluation report submitted at the end of the pilot period. Some documents are confidential and reflect "behind-the-scenes" initiation and development of support for the programs. Multiple waves of document collection reflect the continuing emphasis on compiling as much data as possible for the case studies and organizational interactions, so that representative presentations of the cases are available for analysis.
Techniques for Data Analysis

Analysis begins with the concrete "world" and moves to the theoretical and analytic aspects. Specifically, the analysis in this study is intended to take the available data and identify emerging patterns and themes. This form of analytic induction extracts categories of information relevant to the concepts being studied. "Domain analysis" is a term used to describe this process of analysis. Domain analysis follows the patterns emerging from the organizing of data according to categories of meaning and research concepts. Careful inspection of data allows for identification of common themes and assumptions about where differences arise between cases. Cover terms are the names applied to the domains, included terms are the items included in domains, and semantic relationships link the cover terms and included terms.95

Coding of Data

All interview notes were coded using a computer program called The Ethnograph, designed specifically for analysis of qualitative data. This software is one of several programs on the market for qualitative analysis and is referenced in literature on case study research.96

The purpose of The Ethnograph is assist the researcher in the coding and organizing of data items and segments so that

95Spradley.

96Merriam.
they make sense in terms of the concepts being studied. It is assumed that the researcher has a relationship with the data collected. The researcher listens to the data and brings analytical and theoretical understanding to the analysis.  

The central function of The Ethnograph is to allow the researcher to engage in "code mapping" of data, "reading and noticing" interesting things and marking them for later retrieval. In code mapping, the researcher marks segments, consisting of series of lines in the transcripts or notes; overlapping segments, which share one or more lines of the data file; nested segments, where a complete segment is contained within another segment; and, code words, attaching an identifying tag to a specific segment.

Levels of Coding

Files created by importing interview and field notes into The Ethnograph program appeared in numbered format for coding purposes. Coding involved careful reading of each file, marking data segments that corresponded to informants' priority issues or research concepts.

The first level of coding examined the data on their own terms, extracting raw coding concepts taken directly from

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\textsuperscript{98} Ibid. p. 7-1.

\textsuperscript{99} Ibid. pp. 7-2, 7-3.
informants' words and language in interview notes. This raw coding actually entailed several steps. Marked data produced too many words and codes to be useful for a consistent analysis. Recording each term, then, formed a long list of codes; these were grouped according to similar terms so that a shorter list emerged. A final review of files involved using the shortened list of codes for remarking the data segments.

Second and third levels of coding were necessary. The second level involved the use of codes corresponding to each of the research questions posed earlier in the dissertation; these were called analysis codes by the researcher. The third level of coding involved the use of code words that corresponded to the potential linkages between the findings in informant experiences and theory from the review of literature; these were called conclusion codes by the researcher. In this way, segments became marked with several codes overlapping and nesting each other. Once coding had been completed by hand, the segments identified were entered into The Ethnograph numbered files of interview notes.
Pattern and Theme Identification

The various levels of coding illustrated numerous relationships in the data between experiences, issues, and concepts. Ethnographic research aims to discover the patterns and themes that reflect a cultural system of meaning. Comparison across cases serves as the best approach to recognizing any patterns that might appear in the data. Writing summaries of the cases is the first step in this process; these are presented in the following dissertation chapter. Differences and similarities become evident to the researcher.

Frequency listings from coded data were useful tools for comparison. These listings indicated the number of times code words appeared in each data file. This is not a perfect method for identifying patterns; some codes include many lines of data while other codes refer to only a few lines but appear several times throughout a file. However, with cumulative frequencies of code words for all data files, certain patterns appear. A large spreadsheet of all the frequencies resulted from a laborious process of color-coding the various levels (raw codes, analysis codes, and conclusion codes) of code words for each file. Frequencies were examined between each file; examination also focused on totals for concepts from initial interviews, follow-up interviews, grouped LSI interviews, grouped ARC interviews, grouped ARC Chapter interviews, and all files. Using indications from these
comparisons and knowledge of site experiences, eight themes were selected for further analysis. It is important to emphasize that the spreadsheet was simply one more tool used in combination with the case site summaries and other interpretations to arrive at the eight themes.

Data Search

Coded interview notes presented a lucrative resource for searching the data to extract segments of information related to any combination of concepts, terms, or relationships. After extracting prominent themes from the comparison of cases, relevant data searches provided all of the information corresponding to those themes that had been coded in the files. Selected searches included each of the themes and any relevant combinations of terms or codes that potentially add to the analysis and interpretation.

Output from a data search provided the researcher with each data segment marked by the search code entered in to the computer program. Output also indicated other codes or concepts that identified the data segments. Date and time of output, as well as the name of the file being searched, appeared at the top of each sheet of output. This allowed the researcher to consider each data segment not only in the context of the search criteria, but also as the data fit within the entire pattern of the interview or field notes.
Theme Papers

Data searches provided the information for writing theme papers reflecting on the patterns that appeared to emerge from the data. Presentation of these themes appears in dissertation Chapter IV as part of the analysis of data. With the completion of each theme paper, the original code word that was used for searching through the data was deleted from the theme caption. The themes are taken to a different level of interpretation as a more concise theme statement is written. Theme statements are drawn from the data presentations and represent generalizations that hold potential for contributing to theory and research.
CHAPTER IV

PRESENTATION OF CASES:
ARC EMERGENCY RESPONSE SYSTEMS

This chapter of the dissertation describes the American Red Cross (ARC) Personal Emergency Response System (PERS) program. Based on field research, this chapter presents background on the organizational arrangements leading to the establishment of a program to test the feasibility of an ARC PERS service—the ARC Lifeline Pilot Project.

The ARC Chapter PERS programs are the units of analysis for the field research case studies. A preliminary section summarizes the characteristics of the ARC PERS programs across all sites. The summary describes to the reader the general model for operation that would be used by any of the ARC Chapters initiating a PERS program. The model so described

100The generic system referred to in these case studies as a Personal Emergency Response System (PERS) also is known under a number of different yet similar labels. It is important to recognize this, in order to understand the relationship other research studies, articles, and vendors have to the process described in this dissertation. Several labels that appear in literature referenced in bibliographic notations by this author are as follows: Electronic Call Device (ECD), Emergency Alert and Response System (EARS), Emergency Response System (ERS), and Emergency Response Service Systems, Inc. (ERSS). Since PERS is the term connected with the operational model and technology owned by the Lifeline Systems, Inc. (LSI) examined in the case studies, PERS is the accepted term adopted throughout this document.
reflects the experiences in the units of analysis for the case studies in this dissertation.

Organizational environment and local communities exert a significant influence on the type and quality of emergency response program that is developed. Each ARC Chapter site that participated in the ARC Lifeline Pilot Project is introduced to the reader, in order to acknowledge some of the environmental factors that impinge on program development. Following this is a general overview of each ARC Lifeline program initiated during the Pilot Project and selected as a unit of analysis for the dissertation study. These case studies are presented in the order in which the sites were scheduled for interviews.

**PERS in a Nonprofit Environment**

The general concept of emergency response systems, such as those systems employed in the case studies, promotes community linkages among various health and social service agencies. The incorporation of PERS into the American Red Cross array of services represents a striking example of innovation. Organizational and ARC Chapter investment into PERS programs dramatizes a changing mood within the Red Cross. Currently, there is a move towards a more entrepreneurial stance that adapts to the limitations and responsibilities of a public-oriented organization. As indicated in Chapter II of the dissertation, entrepreneurialism is an important and growing trend among nonprofit and public organizations.
ARC: The State of the Organization

The mission of the American Red Cross is to improve the quality of human life; to enhance self-reliance and concern for others; and to help people avoid, prepare for, and cope with emergencies. It does this through services that are governed and directed by volunteers and are consistent with its congressional charter and the principles of the International Red Cross. 101

Recent organizational changes typify the internal environment of the American Red Cross. Most nonprofit organizations are faced with extensive financial cutbacks coupled with shrinking access to resources. One of the major goals for these organizations, including the Red Cross, is to exploit every available avenue for resource expansion. In the case of the Red Cross, Congressional mandate secures the mission of the organization but not necessarily the corollary funding. Consequently, the American Red Cross has suffered from lack of resources over the past years in much the same way as has the rest of the nonprofit community. This is clearly evident at the ARC Chapter level, especially for smaller ARC Chapters. Accepting the reality of financial constraints in the context of the organization's mission is a critical hurdle to be overcome as planning is carried out for the organization.

ARC effort emphasizes the strengthening of the organization's position with the United Way and with the most significant donors. Active examination of the ARC Mission

Statement began in 1986 in support of this goal. Volunteer and paid staff explored the difficult issue of how best to use limited resources to carry out the organization's mission. Discussion centered on questions concerning perceptions of the organization by staff and communities, as well as the nature of the organization's role.

A strategic plan emerged in response to the debate on the Mission Statement and its meaning to the organization. Reorganization in recent years involved the development of a new field service model. This model is characterized by incorporation of a stronger volunteer participation in field service management and monitoring of local program delivery.

A grass-roots study at the national level concentrated on the degree of receptiveness to new planning features. Within the organization, strategic focus emphasized discovery of the strengths in the Red Cross as a national organization. This focus could allow for concentration on these strengths and expanding the potential for the organization.

Essentially, ARC strengths lie in the organization's public image as the primary resource in an emergency. The organization promotes its role such that the Red Cross is perceived as the best place to turn to before, during, and after an emergency. The underlying concept remains that of "emergency": the Red Cross strives to assist people as they avoid, prepare for, and cope with emergencies related to
disaster, blood, tissue, health and safety, or social supports.

Highlighting a united sense of purpose, the common standard in organizational questioning and planning is: *does this activity help people deal with emergencies?* For the purposes of the case studies, deciding on the fit between organizational mission and program development involves similar questioning. *Does a Red Cross PERS or Red Cross Lifeline program help people deal with emergencies?*

Strategic focus does not suggest constraining the interpretations of the Mission Statement. Autonomy remains a critical component for the separate units of the organization that deal with communities and people. ARC Chapter response continues to reflect local needs, regardless of any immediate connection to emergency. Most importantly, innovation and change endures as an important aspect of the organizational's functioning, especially as this takes shape at the ARC Chapter level.

In the national sector, the Strategic Focus will lead to entrepreneurial activities and change within the context of an emergency framework. Research and development is important in order to stay current in terms of technology and social change relative to our emergency-related services. New programs could still be developed to address new emergency needs—programs such as those for the homeless, latchkey kids, suicide prevention, AIDS education, and so on.
Chapters, of course, will still be free to develop programs based on community needs, even if they fall outside the emergency focus.\textsuperscript{102}

**ARC Office of Special Projects**

The above framework of organizational questioning and strategic focus is the background upon which the potential for a Red Cross personal emergency response program stood. The organization stressed the emergency nature of service programs and the need for an entrepreneurial thrust to innovative programs. In this context, an ARC PERS program sounds like a "natural."\textsuperscript{103}

The ARC Lifeline program beginnings stem from commitment on the part of specific staff members in the Office of Special Projects. The director of this office maintained a personal interest in the program, believing that an ARC PERS program coincided appropriately with the organization's long-term mission. In addition, he perceived the program to be a strong component implementing the goals of the new strategic focus adopted by the American Red Cross.

Financial incentives influence the appeal of initiating ARC PERS programs. These programs represent a model for providing income to the ARC Chapters for operational purposes. In addition, the programs generate profits for placing service

\textsuperscript{102}American Red Cross, "New Strategic Focus Proposed for Red Cross," *Cue-In: Special Issue* 17, no. 25 (24 October 1986): 4.

\textsuperscript{103}Preliminary interview comment made by an ARC staff member.
back in to the local communities. ARC involvement in a PERS program addresses issues of growing importance in the organization. Specifically, this type of program responds to the needs of an increasing population of older people in the local communities that are served by ARC Chapters.

ARC PERS programs hold potential for a broadened scope of beneficiaries of emergency response services. These could include physically and mentally disabled people, and people who are considered within the realm of social services to be disadvantaged or vulnerable in the community setting. For some local communities, vulnerable people might include latch-key children, victims of crime or violence, and medically at-risk patients.

**PERS Programs at the ARC Chapter Level**

**ARC Chapter Pilot Sites**

Red Cross National Headquarters (NHQ) encourage the involvement of ARC Chapters in the ARC Lifeline PERS programs. During the Pilot Project, active promotion took place at ARC organization conferences and through direct ARC Chapter visits by NHQ and LSI personnel. It was hoped that between six to eight ARC Chapters would participate in the Pilot Project.

Five sites were chosen, based on interest and initiative within the ARC Chapters. Of these, each pilot site represents a different stage of program development and corresponding activity. Not all of the pilot ARC Chapters signed the contract that had been prepared by NHQ for the Pilot Project.
Even this seemingly insignificant aspect of the process proves to be an important piece in the analysis of research findings.

One of the most interesting aspects of the ARC-LSI pilot project is the range of comparison dimensions among the case studies. The ARC Chapters that chose to be involved represent contrasts in environmental and organizational characteristics. Some of these include geographic location (rural versus urban), population ranges, staff size, volunteer involvement, board support, budget allocations, operating philosophies, technological capabilities, and client characteristics.

The considerations discussed in the preceding paragraph indicate that the case sites present an appealing range of analytical characteristics. This research study incorporates data from the entire population of ARC Chapter participants in the ARC Lifeline Pilot Project and, at the same time, has a variety of ARC Chapter and program characteristics by which the site experiences can be compared.

Program Development

For the most part, the ARC Chapters are the front-line promoters of the ARC Lifeline programs. Despite the fact that initial negotiations involved ARC NHQ and LSI, ARC Chapters shoulder the greatest responsibility for building operational programs within their organizational environments and local communities. ARC Chapter staff deal with implications of budgetary factors in program functioning, especially the profit and debt projections. These budgetary considerations
vary greatly from the initial expectations for surplus generation versus experience with actual costs to the programs.

ARC and LSI headquarters' staff members and ARC Chapter staff work together to market the program, encourage positive community response, develop effective volunteer involvement, and address relevant issues or problems as they arise. This activity is not a minor investment for the ARC Chapters. It involves financial risks and continued belief in the efficacy of an entrepreneurial ARC program. In addition, ARC Chapters' investments and commitment reflect uncertainties about their relationships to ARC NHQ, especially during the pilot phase while NHQ reviewed the potential for developing a National Red Cross Lifeline Program.

**Equipment and Operations**

For most of the ARC Lifeline programs, the ARC Chapters are the response centers for the emergency system. LSI makes the electronic technology available to the ARC Chapters in the form of hardware and software. As well, LSI provides the basic organizational model for operating the system. It is the ARC Chapter itself that serves as the intermediary between subscribers in the local communities and appropriate emergency responders, such as neighbors, ambulances, hospitals, and other designated assistants. Figure 1: Lifeline Operating Model (on the next page) illustrates the operation of an ARC Lifeline program in an ARC Chapter environment.
Figure 1: Lifeline Operating Model
Subscribers are clients of the ARC Lifeline program who receive emergency response service for a fee or, for those who qualify as low-income, through a subsidized waiver. Generally, subscribers pay an installment fee and a monthly service fee, subject to ARC Chapter variations in costs and subsidizations. An automatic dialer attachment is installed in the home of a subscriber, an emergency call button provided to be worn around the neck or on the wrist, and 24-hour emergency response service is then accessible through the response center.

In the event of a serious accident, medical crisis, or home safety concern, the subscriber pushes the personal button, initiating the automatic dialing system. This system can be activated from a distance of several yards. The newest home units have speakerphones that project the voice of the response center staff in order to communicate with a subscriber unable to reach the telephone. In addition, an inactivity monitor on the home units registers an emergency alarm at the response center if the reset button is not pushed regularly by the subscriber. Subscribers decide whether they require this monitoring and, if so, how often the button is reset.

Computerized operation of the response center varies by case site. Each ARC Chapter Lifeline program has at least one RC400 base unit that evokes a ringing alarm to register an emergency call from a subscriber's home unit system. The
RC400 simultaneously prints a tape sheet similar to a cash
register tape. Recorded on the tape is response information
with the subscriber's identification (ID) number and the time
of the alarm. This process takes only a few seconds, so that
multiple alarms can be processed rapidly at the response
center. In multiple emergencies, the holding pattern in home
unit equipment produces a redial every ninety seconds until
the response center receives and acknowledges the emergency
call.

Base units (RC400s) are monitored around the clock,
providing continual assurance of emergency response to
subscribers. In most of the ARC Lifeline programs, ARC
Chapter staff and some volunteers monitor the RC400, rapidly
processing each alert that comes through. Records maintain
subscriber files organized according to identification
numbers, allowing for immediate retrieval of information in
the event of an emergency.

Both manual and computerized record-keeping systems work
in the operational model designed by LSI. ARC Chapter
programs with a manual record-keeping system document client
files in a simple index card set-up. These systems are
important for smaller ARC Chapters that do not have funds for
computer equipment and software, especially in the initial
stages of program development. In all programs, a manual
system is updated regularly for back-up records in the event
of problems or breakdowns in the computerized system. It also
helps staff or volunteers providing monitoring service but who are unfamiliar or uncomfortable with the computer systems.

Computerized systems require appropriate hardware and software. At the advice of LSI, ARC Chapters with available funds purchase IBM/PS2 computers to run Lifetrac software programmed and sold through LSI. Lifetrac automatically accesses a computer screen with the appropriate client file when an alarm emits from the RC400 base unit.

Records contain subscriber information, demographics, medical, or safety characteristics and, most importantly, preferred response protocols in the event of an emergency. Often, the depth to which this information delves into the subscribers' medical and economic profiles depends on the ARC Chapter. Program staff members who coordinate these records decide what information is necessary for emergency response in their local community.

**Emergency Response Protocols**

Individualized response protocols reflect each subscriber's living circumstances. In response to an alarm, the first call placed by monitoring staff at the response center is to the subscriber's home. The response center staff attempts to establish communication with the subscriber in order to verify the nature of the emergency.

Once the response center establishes the need for assistance, the second call is to the person or persons chosen by the subscriber, usually a nearby friend or neighbor who has
access to the dwelling. This person is referred to as the "first responder." Even when further emergency care is necessary, the first responder plays a critical role. Access to the home eliminates the need to enter forcibly, possibly causing unnecessary damage. In some areas, emergency personnel are constrained from entering a residence until policy assistance is on hand.

For emergency calls that reflect serious situations, the third call from the response center is to 911 or possibly a designated ambulance service. Decisions on which of these services to contact depends on the nature of the response in the local communities. For some ARC Chapters, local 911 does not bring immediate response.

Throughout the process of emergency response, Red Cross Lifeline program monitoring staff are trained to remain with the emergency situation. This means that, wherever possible, a staff person remains in contact with the subscriber by telephone until completion of appropriate response.

As mentioned earlier in this section, the responsibility for the system's functioning goes beyond this simple model of emergency response. LSI encourages the hiring of a full-time Lifeline Program Manager (LPM) responsible for the majority of administrative tasks. For many ARC Chapters, the LPM shares these responsibilities with another ARC Chapter administrator.

Administrative tasks include maintaining subscriber records, compiling program statistics, billing subscribers,
providing subsidized service, and facilitating communications with both LSI and NHQ. The LFM often trains staff and volunteers, promotes the program internally, and markets the service in the local community through group presentations and demonstrations. In addition, other tasks involve installation of units and servicing equipment, especially for smaller ARC Chapters that do not have additional resources or staff to carry out such activity.

For the most part, the ARC Chapters with Lifeline programs do not communicate much with one another. Some program staff did encourage other ARC Chapters to visit their program and consider initiating ARC Lifeline programs of their own. ARC Chapter pilot sites express openness about their experiences and favor the development of more ARC Lifeline programs.

Case Site Profiles

Site One Profile

This ARC Chapter is well known for its size and the propensity to flaunt its power by virtue of this size. The nature of the situation is reflected in a joke told at one meeting of the ARC Lifeline program staff. This joke insinuates that there are two ARCs in this country—the National Red Cross and the Red Cross Chapter of this case study.

Certainly, the advantaged position is enjoyed by staff in the ARC Chapter. Some staff members feel confident in
exerting limited forms of rebellion against the ARC National Headquarters (NHQ). Even in the case study of this ARC Chapter, such rebellion plays an important role influencing the extent of participation and cooperation in the ARC Lifeline Pilot Project.

Compared to the other case site environments, this is undoubtedly the largest ARC Chapter involved in the ARC Lifeline experience. With eleven local offices and five neighborhood burroughgs, staff describe the ARC Chapter as operating "like a little NHQ."\textsuperscript{104} Within ARC categorization, this Key Resource Chapter (KRC)\textsuperscript{105} has a Group Size Designation of "1," meaning that the largest population concentration within the ARC Chapter jurisdiction exceeds 500,000.\textsuperscript{106}

The ARC Chapter staffing patterns for this site include 470 full-time employees (FTE) and 9,999 documented volunteers. Annual ARC Chapter budget (based on 1988 data) is approximately $28,000,000; fifty percent of this is United Way funding and thirty percent contracts and grants.

\textsuperscript{104}Interview with ARC-Chapter staff (SITE1_RAB: 11. 106-108).

\textsuperscript{105}In order to be designated as a KRC (key resource chapter), the ARC-Chapter needs to have at least ten paid staff and a budget of $5,000 or more.

\textsuperscript{106}Group size designation refers to the largest population concentration within the ARC-Chapter's jurisdiction: 1 = 500,000+ ; 2 = 100,000 - 499,999; 3 = 25,000 - 99,999; 4 = 10,000 - 24,999; 5 = 4,000.
All of the above indicates the size, power, and influence that is characteristic of ARC Chapter case site one. Board approval is still important to program development but staff members are able to accomplish substantially more than the majority of ARC Chapters with fewer resources and supports.

Site One Case Report

Program development reflects the character of the ARC Chapter. Staff connected with the ARC Lifeline program attempted to maintain the upper-hand in the Pilot Project by claiming not to be an official pilot site, refusing to sign the contract with NHQ and LSI. However, documentation included this ARC Chapter as a pilot site and, for all intents and purposes, the staff expressed a desire to participate as if they were an official pilot site.

Absent the official signed contract, the ARC Chapter is not kept from operating a PERS program. Both NHQ and LSI were eager to have this large ARC Chapter involved in the ARC Lifeline Pilot Project. Even more so, NHQ and LSI were eager to have a successful ARC Lifeline program in such a highly populated area. This is a key to generation of profit and brings benefits to both organizations. As well, prominent ARC Lifeline programs that appear successful encourage other ARC Chapters to develop their own programs.

Again emphasizing staff likeness to other ARC Chapter characteristics, the only explanation deemed worthy to explain the unsigned Pilot Project contract was the self-proclaimed
"attitude" on the part of the Director of Emergency Services. More recent staff additions to the ARC Chapter's Lifeline program might be unaware of the absence of official contractual arrangements. Staff attitudes do not necessarily have negative connotations; the same confident manner plays an important role as the staff fights for necessary financial and internal operational arrangements in the initial stages of program development. Even among the smaller ARC Chapters operating Lifeline programs, similar instances of commitment facilitate the arrangements necessary for developing these systems for emergency response. Staff and ARC Chapter commitment overcomes numerous barriers to program development.

Staff affiliated with this ARC Lifeline program believe the ARC Chapter itself to be of major importance to the National Red Cross and to other ARC Chapters. There is no hesitation in describing the functioning of the Lifeline program and sharing insights with others involved in the process--NHQ staff, evaluators, and other pilot sites.

Staff response to the involvement of private consultants in the evaluation of the Pilot Project was favorable, with no evident concerns that the ARC Chapter itself was being evaluated. The program staff was fairly confident that any evaluation would turn out positive for them and they shared confidential information about the process of ARC Lifeline program initiation.
Assessments by staff of the program's progress in acquiring subscribers highlight the prominence of this ARC Chapter in the local community and among local human service associations. People subscribe to the program in increasing numbers without the ARC Chapter employing active marketing techniques. Rather, the majority of the program's marketing is through promotion and referrals by other agencies and aging-related groups or committees in the local community.

Experience, as well as ARC Chapter size, is a determinant in the ability to initiate, develop, and effectively operate an ARC Lifeline program. In case site one, the ARC Chapter provides monitoring service for another Lifeline program administered through a local social service association with subsidized service to older people. This program and the monitoring subcontract with the ARC Chapter have been in operation for several years. The subcontract funding provides a job line to the ARC Chapter; the annual fee received by the ARC Chapter is sufficient for funding a full-time night person to monitor calls.

The connection with the social service organization described in the preceding paragraph is a continuing piece of the ARC Chapter's own Lifeline program. This original organizational partnership is a no-growth government subsidized program, while the ARC Lifeline program strives for maximum growth in terms of subscriber numbers, service provision, and profits. Experience in monitoring for an
emergency response systems remains, however, the key ingredient of this organizational relationship. It encourages more substantial ARC Chapter investment, tapping the potential of a PERS program.

In addition to ARC Chapter experience, manipulation of resources and organizational authority facilitate involvement in ARC Lifeline programs. Key staff members in this ARC Chapter initiated the process of developing a Lifeline program prior to formal approval by the board. Delivery of twenty-five home units took place months before permission was granted for funding the program. The ARC Chapter staff accepted the units, along with the condition that they would be marketed and installed in subscriber homes.

Within the organizational structure, the Lifeline program resides in Emergency Services and falls under the supervision of the Director of Emergency Senior Services. Full 24-hour monitoring is accorded the Lifeline program, incurring little strain on the current activities within the ARC Chapter. Due to the resources available in this ARC Chapter, other internal programs share numerous staff members and volunteers with the Lifeline program. Additional expenses are consequently restrained in the Lifeline budget. Documentation shows four Lifeline paid staff during the pilot phase: one full-time and three shared. For this same period of time, there were two Lifeline volunteers. Record keeping is computerized, with computer equipment and software obtained specifically for the
ARC Lifeline program. In-house expertise on the part of other staff was used to further develop the capabilities of the computerized system.

LSI markets the Lifeline service as a life-saving emergency response system. For this ARC Chapter, there is concern that the local environment does not support such a concept and that the service in this environment is not always life saving. Promotion of the ARC Lifeline program reflects this concern.

Within the ARC Chapter's jurisdiction, many local bureaucratic barriers inhibit capacity for providing life-saving response. Third-party involvement establishing contact with 911 ensures lower priority in the queue for emergency attention. Police involvement is mandatory for gaining entrance to the residence of a subscriber; without the assistance of a first responder who has access to the home, emergency attendants await the arrival of police. All of these factors culminate in a more limited perception of the ARC Lifeline program than the LSI model promises.

Uncertain response from 911 and other complexities in the emergency response system change the nature of this ARC Chapter's program. Staff refer to the program as a simple personal assurance system. This differs from the position and active promotion of the program at other pilot sites.

At the same time, personal assurance as the service description does not necessarily connote personal attention in
this ARC Chapter. Response provided to subscribers is markedly less personal than that rendered at some of the other pilot sites. Such disparity has cause problems in one instance where this ARC Chapter provides monitoring service to another smaller ARC Chapter Lifeline program that promises more personal service for their subscribers. Local response protocol and ARC Chapter philosophy is a barrier to developing partnerships between ARC Lifeline programs and communities for the purposes of providing PERS services.

In terms of subscriber numbers, monitoring capability, and possibly staff involvement, this ARC Lifeline program---like the ARC Chapter itself---is the largest of those included in the Pilot Project and case studies. Inquiries from potential subscribers continue to inundate the program, resulting in a steady stream of installations for Lifeline program.

Site Two Profile

As in site one, this ARC Chapter has the advantages of size and resources to boost initiatives. This includes development of a Lifeline program. The ARC Chapter Blood program generates resources and United Way funds accrue at the beginning of the calendar year. Cash for program development is readily available, especially for the ARC Lifeline Pilot Project.

An industrial area ripe with union and employee concerns surrounds this ARC Chapter and affects the local community.
Union demands ensure that tasks within the organization are planned for and carried out in methodical ways. Program development involves measured steps and careful anticipation of any possible barriers in the process. Dedication to detail characterizes much of the ARC Chapter activity. Staff consider this to be the strongest feature of their operation, ensuring a more successful implementation stage in program development compared to most new endeavors.

As in the case site one, the KRC designation of "1" indicates that the largest population concentration within the ARC Chapter's jurisdiction exceeds 500,000. The tri-county area served by the ARC Chapter includes a population of approximately three million people. Population for the general area is over eight million people.

Chapter staffing patterns include 89 FTE and 16,720 volunteers. Annual ARC Chapter budget (based on 1988 data) is approximately $5,605,115; eighty-four percent of this is United Way funding and one-half percent is contracts and grants.

Site Two Case Report

Extreme caution and attention to detail distinguishes the development of the ARC Lifeline program. ARC Chapter staff members express pride and confidence in the success of this program. Their opinion is that no other program is as well administered as is theirs and that they took every precaution
to have the program fully operational before making service available to subscribers.

Attention to detail costs time and money. However, the staff claims that the process was well worth the investment, stating in front of staff from other pilot sites that theirs is the best program around. Consequently, the staff from this ARC Lifeline program encourages other ARC Chapters interested in starting a PERS or Lifeline program to come visit their site and learn more about how they initiated their own Lifeline program. Unfortunately, another ARC Chapter that visited during the pilot phases was overwhelmed by the process and felt it was far too much of an investment. Efforts by staff connected with this case site discouraged the other ARC Chapter and had the opposite effect of staff intentions. Emphasis on the many details to be addressed in program development can prove to be a disincentive, even though it might ensure successful implementation.

Response to the Pilot Project was positive in this ARC Chapter. Staff welcomed the negotiations for a trial period and the associated subsidies for equipment and support. In addition, they provided as much information as possible for the NHQ and LSI evaluation of the Pilot Project.

In all likelihood, the ARC Chapter staff sees their program as being the model after which other programs should be fashioned. Contrary to the experiences in other pilot ARC Chapters, this case site wants only limited involvement by NHQ
in the development of their Lifeline program. Some ARC Chapters chose to get involved in the Pilot Project under the assumption that NHQ would provide ongoing support and resources for the program. This ARC Chapter is independent enough to forego such support and prefers only minimal involvement on the part of NHQ staff.

Inherent in design and operation of the ARC Chapter's Lifeline program is the adherence to stated philosophies and values. These beliefs form the guidelines for each and every direction taken in establishing a successful program—especially a program that will maintain the high reputation embedded in the functioning of the Red Cross. Several key phrases used by staff reflect these values as they portray the thrust of their program. *Competence before marketing* ensures that a high-quality system is in place before offering the service to subscribers. *No-pressure marketing* is the rejection of a hard-sell approach in gaining subscribers, so that only those people who really need the service will be sold it. *No false alarms* illustrates that the system responds to any calls that subscribers make, even if they are not of an emergency nature. *Stretching the human factor rather than the technology* promotes the program as a local service, rather than a technological innovation. Twelve PERS vendors promote emergency response services nationwide. All of these vendors have programs in the locality of this ARC Chapter. Yet, program marketing is not aggressive and it is acknowledged by
staff that this could be the *Achilles Heel* in the ARC Lifeline program.

Taking an entrepreneurial stance in the ARC Chapter's Lifeline program is admittedly difficult for the staff. Program and ARC Chapter administrators see potential benefits from their Lifeline program, especially to justify regaining 24-hour Service to Military Families (SMF) internal response. Yet, the development of a quality program using ARC Chapter money was the primary consideration for initiation, rather than creation of a means for generating immediate pay-back dollars. Dependence on a variety of established guiding values clashes in this case study with the perceived demands of an entrepreneurial, resource-generating program.

Location of the Lifeline program is divided between two separate departments, with several staff members sharing responsibilities for daytime monitoring and response. Both departments, Blood Distribution and Services to Military Families (SMF), want to be affiliated with the program. It is perceived to be a positive addition to the ARC Chapter's range of community services. Although daytime response was described by staff as a volunteer system with staff backup, there was only one FTE Lifeline Program Manager (LPM) and .5 FTE program volunteers documented during the Pilot Project. This aspect of program functioning necessitates the commitment of all Chapter staff in the vicinity of the RC400 to respond to incoming emergencies.
Despite the fact that the Red Cross is a volunteer-based organization, the LPM during the Pilot Project was not receptive to increased involvement of volunteers. She felt that it was difficult to define what these participants should be doing and that her job did not include training volunteers. Initial contact with the LPM suggested a heavier volunteer involvement in operation of the program than was documented in the Pilot Project evaluation.

Night response is subcontracted to an answering service, until the time when internal 24-hour response is established. Computer equipment was obtained for the Lifeline program so that it could be operated in the two settings--both within the ARC Chapter Lifeline office and at the answering service. Although the Lifetrac software is considered user-friendly and appropriate for operational and administrative aspects of the program, the Lifeline program is not dependent on technological tools. Records for manual operation of the system are kept current, with instructions to people monitoring the system to rely on manual records if they are at all uncomfortable with the computers or software. This is consistent with the LSI model for operation.

In response to the union demands in the area, the LPM prepared four volumes of detailed instructions describing in full the tasks required of any person working in the Lifeline program. This adds to the ARC Chapter staff's belief that the staff members have covered every conceivable aspect of the
Lifeline program's functioning. This experience also highlighted the limitations of both NHQ and, especially, LSI in terms of their ability to provide detailed training support. Although LSI presents a polished performance showing the ARC Chapters how they to get a program running smoothly, the videos and presentations are considered insufficient supports by this ARC Chapter.

Reassurance to subscribers is an important aspect of the ARC Lifeline program at this case site. The external network of response is considered to be stronger than that available in all cities. Since 911 has a poor reputation in the local area, there is no reliance on this as a means for life-saving response. Instead, subscribers select specific hospitals, private ambulances and police stations that are capable of more reliable attention to the emergency calls placed through the Red Cross response center.

The most marked aspect of this ARC Chapter's program, and the feature that they consider to make them unique, is the emphasis on response to any call that is placed through the system. The program's orientation, different from all other pilots in the case studies, exceeds by far the emergency nature of this service. Response is based on the belief that all alarms are valid, hence, the statement that there are no false alarms. As such, the emphasis on reassurance to the subscriber includes the responsibility of staff to respond to
every call, even if it is simply to talk to a lonely subscriber.

While other PERS programs penalize subscribers for setting off an alarm in a non-emergency situation, this ARC Chapter actively promotes their open posture—a position received well by subscribers and their families. ARC Chapter ability to maintain this type of posture might diminish as more subscribers receive service and the number of calls (both emergency and non-emergency) begin to rise.

Site Three Profile

As a smaller Red Cross Chapter, this site uses creativity in developing resources and efficiently providing services to the community. Perhaps due to the Chapter size, staff are modest about their abilities and resources. Yet, they present a personable impression and appear to seek innovative strategies that can meet the needs of their community members.

A large proportion of the population consists of older residents. In addition, there is a nearby Red Cross Chapter that has only one staff person and serves an area with numerous senior citizen communities. Consideration has been given to a merger between these two ARC Chapters. However, the board in this case site resisted such action. This situation does create potential for the ARC Chapter to serve communities outside of its jurisdiction without infringing on another ARC Chapter’s territory. The county within the ARC Chapter jurisdiction has a population of approximately
520,000; the neighboring county with numerous retirement communities has a population of 380,000. The ARC Chapter is designated as a KRC, with a group size designation of "3" indicating the largest population concentration within its jurisdiction to be between 25,000 - 99,999.

ARC Chapter staffing patterns include 5 FTE and 478 volunteers. The annual ARC Chapter budget (based on 1988 data) is approximately $538,000; twelve percent of this budget is United Way funding and none of it is attributed by the ARC Chapter to contracts and grants. Obviously, the staff is very aware of their limitations in terms of staffing and resources. Their involvements in the local community and their experiences with the Lifeline program indicate that, in many ways, they can compensate for their limitations.

Site Three Case Report

As evidenced in the other case site reports, this Lifeline program reflects the character of the ARC Chapter site. Despite staff perceptions, program statistics during the Pilot Project indicate that the program measures favorably with programs from considerably larger ARC Chapters. Program staff are modest in terms of describing their program and during the pilot phase were seemingly unaware of how well they were doing in relation to the progress in other ARC Lifeline programs. While the staff expressed insecurities about the rate of growth in their program, they actually were keeping pace with the other larger ARC Chapters.
The ARC Chapter's Lifeline program, as with each of the case studies, illustrates how a single model can be implemented within a Red Cross Chapter and oriented to the organizational characteristics, environment, and needs of the local community. All of the pilot ARC Chapters illustrate unique aspects in their programs and have many innovative applications of a system shared with other ARC Chapters.

Other ARC Chapters in the pilot project eagerly share many of their ideas. This ARC Chapter expressed the feeling that their own ideas were simply part of every ARC Chapter's experience and that other Chapters likely have more innovative ways of implementing the program. Yet, in this particular ARC Chapter, there are many examples of ways to expand on the program and incorporate other important services.

This ARC Chapter responded initially to the concept of a Pilot Project as described and presented to all Red Cross Chapters by NHQ. The initiation of the ARC Chapter's program came about in direct response to the perceived benefits of becoming a part of a project sponsored by NHQ. Original motivations for becoming involved are described by staff as including the following: need for expansion of staff; expanded service to the community; minimum aggravation in administering the program; and added exposure and public relations opportunities for the ARC Chapter.

With increasing involvement in developing the program, it was felt that the program benefits in relation to ARC Chapter
investment were misrepresented by NHQ (and possibly LSI) at the beginning of the Pilot Project. That is, there is substantially more investment necessary than originally was anticipated for developing a quality Lifeline program responsive to the needs of the local community. At the same time, however, the staff continues to believe that the program represents positive growth for the organization. The ARC Chapter decision was to stand behind the ARC Lifeline program over time, whatever position was taken by NHQ in considering ARC Lifeline as a National Program.

Limited staffing did not permit the ARC Chapter to create a full-time position for an LPM until later in the program's development. This most likely was a factor that slowed down progress made in administration and operation of the program at the beginning. For the first few months of operation, the LPM shared time between Lifeline and Health & Safety.

Positive growth in the Lifeline program is attributed by staff to the transition point when the LPM took full-time responsibility for coordinating Lifeline service. By the time Pilot Project evaluation was complete, the original LPM had left and another person employed in that same position. Such turnover can be detrimental to the development of the program, simply due to the transition period required for another person to become invested in the program and continue the efforts of the previous LPM.
As with several other pilot sites, prior experience provides momentum for ensuring more successful growth of the ARC Chapter Lifeline program. The original LPM coordinated a PERS program at another ARC Chapter site. This connection likely influenced the ARC Chapter's interest in the ARC Lifeline Pilot Project. In addition, the LPM's experience allowed the Chapter to capitalize on a limited amount of resources and minimal experience in starting up such a venture. Prior to the pilot project, Chapter staff explored the possibility of developing a PERS program through another local vendor but chose Lifeline, anticipating the supports available under the auspices of the Pilot Project. Even though these supports did not meet the expectations of staff, Lifeline is an acceptable vendor to the ARC Chapter.

Within organizational structure, the Lifeline program is situated in Program Development. Staffing for the program during the pilot phases included one FTE LPM. Shared secretarial staff served as monitors for the RC400 in the main reception area. Volunteer participation was documented as one FTE and an average of 20 hours per month. Even in terms of attracting volunteers, the ARC Chapter experienced major constraints. Volunteers currently involved in ARC Chapter activities were absorbed fully in training activities. Acquiring increased volunteer support for the Lifeline program is not considered to hold much potential.
For the duration of the pilot period, the ARC Chapter operated their Lifeline program with a manual system. Monitoring response provided by the secretarial assistants was adequate; however, these staff members were inexperienced at the time and had difficulties adjusting to their new roles. ARC Chapter resources were insufficient at the time for establishing a computerized response system. By the time of evaluation, the ARC Chapter had plans for obtaining computer equipment and software.

Despite the limited staffing connected with the Lifeline program, strategies for capitalizing on hospital and senior center connections aimed at acquiring the maximum number of subscribers from a minimum effort. Partnerships were sought with all area hospitals and it was hoped that this could be accomplished within the 6 months following the pilot project. Staff perceived that area hospitals using PERS for discharge planning (all but two hospitals were using Lifeline) were responsive to developing such partnerships. Part of this favorable reception was in response to the good ARC reputation within the local community.

Arrangements for after-hours monitoring of the ARC Lifeline system highlight the differences between ARC Chapter philosophies in providing emergency response services. Despite the modest attitude taken by this ARC Chapter's Lifeline staff, they are committed to the type of service they believe should be offered within the local community. Local
response and personal service are components of this commitment. It is important to staff that subscribers believe that their emergency calls are handled by the local Red Cross. In addition, the ARC Lifeline program is an emergency response system, with a distinction between assurance and alarms. Only emergencies are dealt over Lifeline networks and all other calls are transacted over regular ARC Chapter phone lines.

Commitment to personal service was compromised through an incident in which emergency response provided after-hours was not in keeping with this ARC Chapter's protocols. This response monitoring was provided by the larger ARC Chapter described in the Site Profile and Case Study Report for Site One. Site One takes over the monitoring for Site Three during the evening and night-time hours. Since emergency response in the large urban environment of Site One is markedly different from emergency response in the rural context of Site Three, it is understandable that the staff monitoring the alarms during after-hours might take a different and less personal approach than would usually be taken in the local environment.

Site Four Profile

The initial visit to this case site was postponed due to important ARC Chapter activities—the ARC Chapter sponsored a yard sale to raise money for its programs. Inquiries at the time of the interview indicated that the event involved all members of the staff and the funds raised from this annual event amounted to approximately $1200. The incident described
above illustrates vividly the extremely limited resources available within this ARC Chapter and the heavy reliance on the local community for support.

The rural county served by the ARC Chapter is rich with social issues that complicate service delivery. At the same time, the ARC Chapter experiences provide fascinating scenarios for developing social programs responsive to local community needs.

During the pilot phase, political and media attention focused on the ARC Chapter as staff dealt with an influx of refugees into the local area requiring shelters and emergency assistance. This situation brought increased funding. Growing recognition of the issue facilitated development of expanded initiatives for dealing with the corresponding problems. Increasing numbers of agencies and heightened cooperation between those organizations reflected a positive response to the work of social service entities in the community.

This ARC Chapter was the smallest of all the pilot sites in terms of budget and staff, although not the smallest case study in terms of subscribers and program staff. Population for the county served by the ARC Chapter is approximately 82,000, spread over a vast distance in an extremely rural environment. Local residents include many very elderly people with low incomes but who are perceived as being highly independent.
ARC Chapter staffing patterns include only 3 FTE and 400 volunteers. Annual Chapter budget (based on 1988 data) is approximately $136,000; thirty-three percent of this is United Way funding and forty-one percent is attributed to contracts and grants. Despite the small size of the ARC Chapter and its resources, it has a wealth of experience dealing with the local community in an intimate and rewarding manner.

Site Four Case Report

Despite the fact that this is a small ARC Chapter, many people follow the progress of the Lifeline program. Yet, this ARC Chapter limits growth of the Lifeline program. The environment is characterized by innovative social programs and potential for Lifeline program growth is enhanced through the efforts of the director of the Office for the Aging. This ARC Chapter, though, does not market the program in order to gain greater numbers of subscribers.

The subscriber waiting list for the program remains stable as long as there are medically-needy subscribers being referred to the program. Only a limited number of units are available and the program operates on the assumption that the ARC Chapter cannot afford to invest in any more units. This approach is contrary to the rationale for the Lifeline program that suggests the acquisition of subscribers covers the costs of obtaining more units.
This ARC Chapter expressed more concerns about the implications the pilot project evaluation would have for them. Specifically, they seemed to be under the impression that the evaluation was to assess the progress of each individual pilot site operating a Lifeline program. Those involved in the program were especially interested in how they compared with other ARC Chapters and were surprised to hear that they were, in fact, doing as well as or somewhat better than other larger ARC Chapters.

This ARC Chapter Lifeline program has been operating with dual sponsors since the local Office for the Aging (OFA) sought to broaden the subscriber base. Due to lack of hospital interest in the program, the Council for Community Services (CCS) became the OFA partner in offering PERS to area residents. With the demise of the CCS in September 1987, the OFA entered into an agreement with the area Red Cross Chapter. Under their contract, the LPM who had been coordinating the program over the past years continues to perform the same functions within the context of the ARC setting. A primary motivating factor in the ARC Chapter decision to enter into the agreement was the ARC Lifeline Pilot Project proposed at the same time OFA began negotiations with the ARC Chapter.

In terms of the ARC Lifeline Pilot Project, the ARC Chapter was accorded special pilot status. The terms for this status provide equipment discounts and support, without requiring that the ARC Chapter agree to the goals promoted by
LSI. ARC Chapter staff feel that the goals suggested by LSI during the pilot phase were far too high for their capacity and represents quantity at the sacrifice of quality.

The rural environment is described by staff as one in which any program failure would reflect directly onto the reputation of the Red Cross Chapter. Program staff feel that it has taken over four years to get the program to the point where local community organizations donate to and support Lifeline; to rush along towards an unrealistic goal denigrates the reputation of the program.

ARC Chapter staff members seem to have the impression (as did most of the pilot sites) that their program is far behind other pilot sites' progress. Ironically, despite the limitations they have set on their ability to expand, the numbers and activity in their program indicate that they are quite competitive with the progress among other pilot sites.

**Site Five Profile**

In contrast to the other ARC Chapters serving as pilot sites for the ARC Lifeline project and this research, ARC Chapter site five is in an area that poses more difficulties to provision of community service. Unlike the other ARC Chapters visited for developing case studies, this ARC Chapter is housed in a building that is contained by barred windows and doors, along with a visible security system. It is apparent in other ARC Chapter locales that economic barriers limit the ability of community members to obtain required
services. Such limitations were a prominent consideration for this ARC Chapter, even though their response to it in the Lifeline program did not appear to be appropriate.

Site Five Case Report

This site represents an unusual contrast to the models adopted by the other pilot sites. At the time of evaluation and developing case study scenarios, this ARC Chapter was only beginning the process of acquiring subscribers and offering the PERS service to the community. Instead of marketing the service along the lines of the other ARC Chapters, this program was to be operated by selling the units directly to the subscribers or encouraging family members to purchase one for an older relative, then paying a smaller monthly fee for the monitoring service that would be carried out through the Lifeline Central station in Boston. This arrangement would mean substantially less commitment on the part of the ARC Chapter for staff involvement and appeared to be developed with the sole purpose of providing a new financial resource to the ARC Chapter.

Involvement from the Board has been critical to this ARC Chapter, and the Board took responsibility for creating a Lifeline committee to actively monitor development of the program. Board involvement resulted in volunteered services of a local PR firm that developed a comprehensive marketing plan for the Lifeline program, intended to assist the ARC Chapter in reaping the most rewards (financial) from this type
of program. Program initiation was defined by the development of this plan—that is, although discussion and planning of the program began months earlier (prior to the evaluation process), staff indicated that the starting date for the program corresponded to the implementation of the marketing strategy.

Although many ARC Chapters began their programs with a "shared" LPM—that is, a staff member dividing time between Lifeline activities and another position within the ARC Chapter—the LPM eventually became a full-time position, in most cases requiring the services of another assistant. In this ARC Chapter, the LPM still was only 40-50% devoted to program activities. It was hoped that in time this could be increased to 75%, with the LPM still active in other activities.

Local environment proved to be a limit to the network established by the ARC Chapter with other organizations. Office on Aging funds for the program were assumed to be unavailable for this ARC Chapter. In the past, vendors of PERS services have been known to take advantage of the elderly. Consequently, the Office on Aging did not respond favorably to this ARC Chapter's involvement and would not advertise the program service in their newsletters.

Although the professional involved in developing the strategic marketing plan claimed that it could "guarantee" success in terms of achieving the goal for sales of units by
the end of the year, this did not appear to be the case. By the time the official evaluation report was submitted to the National ARC headquarters, the ARC Chapter had indicated that they had decided to adopt a model similar to what the other pilot sites were already following.

**Summary**

Each of the case site studies has been presented to accentuate the characteristics of the ARC Chapter programs and the values that motivate staff to make the operational and administrative decisions they feel are necessary for their specific programs. These ARC Chapter profiles and reports are extremely important in analyzing the actions and progress within each case study.

Selection of relevant program highlights undoubtedly is a relative concept, highly subjective to the interpretations of the interviewer. It is important to the analysis and interpretation of findings, however, to include an understanding of how each case study stands on its own, perhaps unique from all the other case sites. Each program bears a different philosophical thrust and staff present themselves and their program in a distinct manner.

Program characteristics represent ARC Chapter response to the pilot project, evaluation and other ARC Chapters; the attitude taken by staff as they approach the developmental issues for the program; and the commitment found within the ARC Chapters and among staff to the program goals. Brief
summaries of the functioning of each program include reference to organizational structure, monitoring arrangements, staff and volunteer participation, and technological support to the system. This discussion incorporates prominent philosophical issues that have a direct bearing on the protocols taken by each ARC Chapter and staff in providing emergency response or other defined services to Lifeline subscribers.
CHAPTER V

ANALYSIS OF DATA:

INTERPRETATION OF FIELD RESEARCH FINDINGS

Presenting research data is a difficult task, often inhibited by the desire to give the reader as much as possible. Information and interpretations abound in qualitative research. This proves a tantalizing obstacle to the effective analysis of data. Subtle details and implications suggest lucrative avenues for exploration. Focus and narrowing of the sphere for interpretation, however, add to the presentation of a coherent report. Concentration on a limited number of important themes within the context of the data is the most effective manner for organization and presentation of findings.

Analyzing data in ethnographic qualitative research implies the search for prominent cultural themes. Ideally, these themes represent informant-established priorities, reflective of the case site experiences. Consistent with this type of analysis, presentation of data flows from attempts to define and understand the analytic themes. Only after organization of data in this manner can the research questions be addressed.
Ultimately, answers to research questions derive from the data already presented and organized around themes. In this way, the researcher maintains the integrity of the research process. The researcher must deal with the data on its own terms, before molding it to fit *a priori* notions that influence the researcher’s questioning. Previously established assumptions cannot be completely circumvented; otherwise, there would be no research. Yet, it is possible for analysis and presentation to remain true to the process and data in the study.

Consistent terminology and extrapolation of meaning enhance the researcher’s ability to code and assess the field research data. This means that the researcher extracts the words used by informants to describe their experiences. The researcher then searches the data to find all segments related to these experiences. The informants’ use of familiar words and "jargon" are important to the research, helping the researcher understand what such terms mean to the phenomena being studied. Such a process of discovery also acknowledges that the jargon in its original form is open to different interpretations by other researchers or participants. As the data pertains to a particular research study, however, the researcher works from the terminology in order to find all related data segments. Data segments are integrated with the literature and theory development that drives the research.
The interpretation presented in this chapter of the dissertation differs from the use of research data in the previous chapter. The presentation of cases in Chapter IV simply allows the researcher to present to the reader a picture of the case sites and the relevant environments influencing research phenomena. As such, data is taken on its own terms and no attempt made to assess comparative experiences, searching for common or unusual experiences relevant to analytic themes. Presentation of cases is helpful to furnish the reader with background on which to lay the data describing processes and experiences in the case studies.

The interpretation of field research findings presented in this dissertation chapter involves interpretation of the data. Analysis of data includes selection of relevant cultural themes and inclusion of process sources of data. The process sources of data are represented by two sections with discussion of the dynamics of interactions with informants in data collection and the relationship between the two major background organizations in the case studies.

Theme discussions capture the most prominent priorities expressed throughout interviews with informants. Key points for discussion are illustrated with the use of extended direct passages or quotations from the data. Passages from data and quotations from informants are extremely powerful tools that pull the reader as close as possible to the experiences in the case studies. For this reason, extensive use is made of these
tools in an attempt to make the data as real as possible for the reader.\textsuperscript{107}

Data passages are provided in this dissertation chapter that highlight or illustrate analytical themes. These passages are sections taken directly from interview notes. As such, they represent the researcher's paraphrasing of informants' comments. By providing these glimpses at the data through the blocked sections or passages, the reader is allowed the opportunity not only to follow many of the interpretations made in the analysis but also to generate other interpretations from that same data.

**Dynamics of the Data Collection Process**

Interpreting the research process itself is a part of the analysis and presentation of data. Interviewer interactions with informants reveals much about the research process. The nature of these interactions provides comment on credibility of the means used for obtaining information in the research study. Building rapport with other participants and informants establishes validity, especially for interview data.

\textsuperscript{107}Field research notes and interview sources are cited in coded footnotes. Footnoting techniques include pseudonyms for computer files in order to preserve anonymity of sources; line numbers correspond to the numbered \textit{Ethnograph} files used for coding and analysis. A reader familiar with the organizations and the research study might assume the identity of sources but, for the most part, these assumptions are avoided in the presentation of data.
At the same time, these interactions constitute additional sources of data. That is, the researcher's reflections on the way informants' responded or interacted during data collection tell a story about the experiences being studied. That story in itself becomes another form of data.

Criticisms of qualitative research entail concerns about the subjective nature of findings and interpretation. This never discounts the full value of such research as it contributes to an encompassing picture of research phenomena. Research findings and data from this dissertation study clearly reflect a good portion of the case experiences. Support for this assertion stems from the nature of interactions with ARC Chapter staff. These particular informants spoke openly in the interview forums about their experiences. As well, follow-up contact reinforced many of the interpretations made earlier during the research process.

One of the most striking aspects of the data collection process was the willingness with which ARC Chapter staff engaged in the discussion of their PERS programs and their interactions with each of the major organizations involved. In many ways, this is consistent with the character of the ARC Chapters. Their involvement with local communities and people is a possible contributing influence to this open approach.

Positive ARC Chapter interactions are often a part of Red Cross experiences. ARC Chapter contacts can be the most
enjoyable aspect of contract work on ARC projects. The ARC Chapters exhibit the most innovative and refreshing aspects of the Red Cross organization's functioning. Along with this is a willingness at this level to talk about what is being done in ARC Chapters.\textsuperscript{108}

Establishing rapport and continuity throughout the data collection process is an important aspect of the research, especially in terms of validity. One of the critical, although not insurmountable, difficulties associated with this research study was the degree of staff turnover from the time of initiation of the ARC Lifeline Pilot Project, through the time of follow-up dissertation interviewing. Staff turnover occurred at all organizational levels--from ARC National Headquarters, LSI headquarters, right to ARC Chapter level.

Staff turnover at ARC NHQ hindered initiation of the Pilot Project and the partnership between ARC and LSI. At times, new staff proved to be beneficial to the program, bringing with them fresh insights or replacing other ineffective staff. However, such turnover also "limited the involvement of staff through the project's lifetime."\textsuperscript{109}

Effects from staff turnover on ARC Lifeline program development carried over into the research process. Changes in staffing affected the degree to which the researcher

\textsuperscript{108}Follow-up interviews with ARC staff; file: ARC4_FU.

\textsuperscript{109}Initial interview with LSI project staff; file: LSI_RAB, 11. 19-27.
maintained a continuing dialogue on the issues identified by informants. In particular, contact in follow-up interviews involved several new staff members who had not been involved in the original ARC Lifeline Pilot Project and evaluation. Three new Lifeline Program Managers (LPM's) responded in follow-up telephone interviews—for case sites one, two, and three. Only two follow-up ARC Chapter interviews involved the original LPM's.

The problems and difficulties of staff turnover affected both the research process and the nature of the phenomena being studied. Three factors helped to counteract the effect of this turnover on collection of data. These are 1) the willingness of ARC Chapter staff to talk about their experiences, 2) the approval or blessing from ARC NHQ for the collection of dissertation data, and 3) previous contact by the researcher with ARC Chapter staff prior to initiation of the follow-up interviews. Despite the fact that new staff appeared from time to time, the commitment to the project appeared to remain, along with the willingness to discuss the ARC Lifeline program with the researcher.

Motivation to participate in the interviews extends from NHQ influence on ARC Chapters. The fact that the researcher originally was sent out under the auspices of NHQ resulted in agreement from all ARC Chapter staff to participate, even in the follow-up interviewing. Included in this arrangement was the understanding that staff at NHQ approved of the research;
NHQ staff knew the Pilot Project evaluation constituted a source of data for the dissertation study.

During the Pilot Project evaluation, the researcher met and interviewed ARC Chapter staff at each of the pilot sites. For the purposes of the follow-up interviews, this previous contact prompted involvement from the new LPM's in completion of the interview schedule. Previous contact also establishes justification for telephone interviews during the follow-up phase; the researcher visited each of the sites early on in the process for initial interviews and became familiar with each ARC Chapter's operation, staff, and PERS program.

Capturing the nature of interactions with informants is enhanced by reflections on the positive experiences of the data collection process. The experience in this research study merits a comment on the degree of cooperation with which participants responded to questions and provided information. In some cases, informants provided more information than the interviewers requested. Yet, this information presented a more clear picture of the process the participants were involved in and the barriers they faced. Several ARC Chapter staff contributed information that they considered to be confidential, not intended for public record. Such information was a means for facilitating a better understanding of the unique experiences of that ARC Chapter. Confidential information cannot appear in the presentation of
data; however, it can assist in analysis and interpretation.\textsuperscript{110}

Several informants also shared confidences relating to ARC Chapters' experiences other than their own. Again, data of this type enhances understanding of the phenomena being studied. References and citations of this data warrants caution, unless verified directly by the person or organization discussed. In all of these cases, the presentation of data maintains confidences while dealing with the implications such information might have for other findings.\textsuperscript{111}

Informant reactions to the data collection process and techniques evoke observations about the organizations themselves. In the case of ARC Chapters, response usually was positive and open. The reader should note that the willingness to talk, mentioned earlier in this section, refers specifically to the ARC Chapter staff. Several informants at the ARC and LSI headquarters appeared to be more cautious in the manner in which they responded during interviews. While all of the participants contacted did cooperate and responded to most of the questions and topics for discussion, the degree of cooperation was different—specifically, less—at the organizational headquarters level than at the ARC Chapter

\textsuperscript{110}Initial interview with ARC Chapter staff; file: SITE1_RES, ll. 604-629.

\textsuperscript{111}Follow-up interviews with ARC Chapter staff; file: SITE3_RAB, ll. 891-897.
level. To a certain extent, this is understandable as the organizations struggle to develop a trustworthy relationship and a strong program.

A statement on interactions at the headquarters level is documented in notes taken from the initial interview with LSI staff in Boston. The notes refer to interviewers' perception that the LSI staff were guarded in their interaction. Although they were expecting the interviewers for a pre-scheduled appointment, the LSI staff walked past the interviewers in the lobby, without giving any indication that they were aware of who these visitors might be. "[They] ignored us as [they] entered the building, [with] a deliberately slow greeting, and a quick, superficial tour."\(^{112}\) The researcher might not have been privy to some important aspects of the organization's experience. The nature of responses still appeared open and honest, with LSI staff offering further support in the evaluation of the project. "LSI [is] anxious to become more involved in the evaluation process--that is, offering to meet in D.C. as soon as possible."\(^{113}\)

As a final note, the research study benefits from an opportune involvement on the part of the researcher. Background information on the process being studied comes from

\(^{112}\)Initial interview with LSI staff; file: LSI_RAB, ll. 170-172.

\(^{113}\)Ibid. ll. 178-181.
interactions with ARC staff prior to the evaluation project and research. These interactions were part of the initial negotiations to identify a dissertation topic within the American Red Cross. At that time, the researcher contacted several staff at NHQ who were involved with the ARC Lifeline project. By the time the Pilot Project evaluation got underway, the participants originally contacted were no longer involved in the project, being replaced by other NHQ staff. Despite the difficulties in maintaining continuity with participants, this experience contributed to the researcher's awareness of the length of time involved from initiation through negotiation and implementation. The experience also provided the researcher with perspectives on the program coming from participants with a range of support—-from an NHQ staff person who was excited and supportive of the project to a second participant referred to in interviews as a detriment to the program's progress.

**Relationship Between the Background Organizations**

A second source of data that emerges from the research process involves the relationship between the two primary organizations in the study—-that is, the National American Red Cross and Lifeline Systems, Inc. Reflecting on this working relationship contributes in a fashion similar to the discussion of the preceding section. The relationship between the organizations provides a comment on nature of the research
data. At the same time, narrative on this relationship serves in and of itself as a source of data.

From the time of initiation of the Pilot Project, the two organizations expressed respect for each other. These organizations were interested in the development of a partnership for the purposes of offering Lifeline PERS through the American Red Cross Chapters. Such a partnership promised to benefit both of the organizations involved. Potential benefits involved enhancement of finances, customers reached, community contact, and development of service options. Anticipation of a successful partnership brought with it the vision of a continuing relationship between the two organizations and a lucrative future for ARC Lifeline programs.

As indicated by internal documents and interview data, ARC chose Lifeline based on their sound reputation for quality and solid values. LSI, in turn, sought out the relationship with ARC, believing not only that LSI could make a stronger impact in the market but that ARC was an organization with solid community contacts that would facilitate a rapidly increasing subscriber-base.¹¹⁴

The idea for a partnership between ARC and LSI began in early 1986, followed by many months of paper-work and

¹¹⁴Interviews with ARC staff; file: ARC1_FU.
negotiations between the two organizations.\footnote{Initial interview with LSI staff; file: LSI_RAB, ll. 12-17.} Part of the reason for choosing Lifeline as the PERS vendor was expressed in an ARC document:

LIFELINE [their caps] has a 70\% market share of the PERS market. Project staff [ARC] talked to 4-5 PERS producers. LIFELINE is the oldest continuous provider of PERS services, and spends $1 million annually on research and development. The LIFELINE PERS system has a number of built in backups, and the company has an aggressive service policy.\footnote{American Red Cross internal document entitled "Project Review and Recommendations" and dated March 1987.}

In addition, the rationale for an American Red Cross/Lifeline program includes the statement that this program:

closely fits the mission to improve the quality of human life; to enhance self-reliance and concern for others; and to help people avoid, prepare for, and cope with emergencies.\footnote{American Red Cross internal document entitled "Rationale for American Red Cross/Lifeline Program" (no data).}

The founder and current Vice President of Lifeline Systems, Inc., Andy Dibner, was first told by the researcher about the dissertation study at a conference for the Gerontological Society of America (GSA). Within GSA, Dibner is a respected gerontologist. One of his active concerns is with the political process and determination of insurance of services to the aging, such as PERS. Dibner's involvement with the product and service he developed carries with it a striking amount of advocacy. Perhaps for this reason, Dibner fully supports the partnership with the American Red Cross, as
well as the ARC Lifeline Program as a dissertation case study. Since Dibner is looked upon as providing the value base for the Lifeline organization, this support of the partnership engenders a corresponding support on the part of the entire organization.\textsuperscript{118}

Interview data indicates that the two organizations share common values and philosophy, in terms of quality service and responsiveness to the people they serve. Undoubtedly, LSI has been influenced by its founder, who began the company as a response to perceived need, rather than an overriding goal of profit. Despite this, however, the two organizations have differing operating styles. These differing styles are evident in organizational process, profit and surplus, staffing, program locations, support, and management. Several of these elements are discussed in more detail as data is presented according to analytical themes in this chapter.

Clearly, then, there is a basis for the organizations to work well together, although experiencing many areas where conflict can arise.

\textbf{Cultural Themes}

Investigating the simple process of implementing an ARC Lifeline program takes on a myriad of implications when explored within in the context of ARC Chapter experiences. Although each of the case sites invested in a similar model

\textsuperscript{118}Follow-up interview with Lifeline staff; file: LSI\textunderscore FU, \textit{11. 526-543}. 
for implementing an ARC/Lifeline program, these programs
evidence sufficient dissimilarities as to be exceedingly
interesting for research purposes. Each ARC Chapter employed
its own strategies and initiatives in molding the program to
suit the unique needs of their sub-organization and the
community being served. Assessing the contrasting
characteristics among the cases serves to highlight the
various themes that emerge from analysis.

Theme #1

Marketing for an entrepreneurial program is perceived and
implemented differently by private, for-profit organizations
versus public, nonprofit organizations.

Partnerships between private and public organizations
spark a series of problems in establishing effective patterns
for inter-organizational communication and operation. For the
case studies in this research, the concept of marketing
provoked the most discussion in interviews. This activity
emerged as a major issue to be resolved between the private
and public organizations involved in the partnership. As
indicated in the Pilot Project evaluation report,

marketing proves to be one of the most prominent
indicators of Chapter ability to be a successful
PERS provider. Most significantly, it is because
of the need to market aggressively that [ARC]
Chapter discomfort with the . . . entrepreneurial
nature of Lifeline becomes evident.\textsuperscript{119}

\textsuperscript{119}Ruth A. Bruer and Richard E. Schmidt, \textit{Personal
Emergency Response Systems: An Assessment of Red Cross Chapter
Experiences with a Pilot Test of the Lifeline System.}
Marketing of the PERS service to the community in order to gain subscribers proves to be an essential component in developing an ARC Lifeline program. LSI identifies effective marketing as a major ingredient to a successful program; success connotes high numbers of subscribers obtaining service through an ARC Chapter program. To LSI, the keys to success include "appropriate follow-up to potential subscribers" and "marketing to appropriate target audiences" who can benefit from PERS services.\textsuperscript{120}

One of the major barriers, however, to the technology transfer described in these case studies is the difficulties ARC Chapters had in defining what marketing means within the nonprofit environment and how to effectively accomplish such activity. Conflicts between the nonprofit ARC and for-profit LSI are manifested in the marketing controversies. As indicated in the Pilot Project evaluation report and verified through follow-up interviews with LSI,

\begin{quote}
the gap between expectation and reality is grounded in the difficulties experienced with marketing of the Lifeline program through the Red Cross Chapters. Although ARC has experience in marketing, the relationship between marketing of a product or service and profit making is not comfortable for some Chapters. The perception that human service nonprofits preclude profit making seems to have limited the extent to which Chapters have pursued successfully an aggressive marketing strategy.\textsuperscript{121}
\end{quote}

\textsuperscript{120}Initial interview with LSI; file: LSI_RAB, ll. 142-147.

\textsuperscript{121}Follow-up interview with LSI; file: LSI_FU, ll. 210-224.
In fact, one ARC Chapter notes that marketing still is the one problem with LSI. "We have a volunteer mentality. It is not the Chapter's philosophy to give whenever someone pays. Instead, Chapter response is based on local needs."¹²²

Prior to according ARC Chapters the status of a pilot program, LSI estimated for each site what the goal should be in terms of subscriber numbers. LSI suggested a goal of 300 subscribers during the first year for each program, although all of the ARC Chapters had reasons for paying little heed to these goals. LSI provided estimates of ARC Chapter target audiences, with extremely crude calculations based on population size in ARC Chapter jurisdictions and percentage of people aged sixty-five and over. LSI perceived the inability of ARC Chapters to accept or reach the LSI goals in the first year as linked to ineffective marketing efforts. ARC Chapters did not strive to reach the broadest possible range of potential subscribers.

Various difficulties emerged from the ARC Chapter approaches to marketing. They preferred a service instead of a product emphasis in marketing the ARC Lifeline program. An anecdote from one ARC Chapter experience illustrates the relevance of this distinction between a service versus product emphasis. "[The ARC Chapter] attempted to get a booth for ARC-Lifeline at the AARP convention. They were rejected by

¹²²Follow-up ARC Chapter interview; file: SITE4_FU, ll. 1043-1049.
AARP because Lifeline is a product and AARP refuses to push products onto its members." 123

The type of service as responsive to local needs is another necessary set of distinctions. One ARC Chapter made the explicit distinction between the program’s technology as being life-saving versus being simply a personal reassurance system. In this sense, the ARC Chapter emphasized the "need to be clear to the subscriber [about] what they are getting. Orientation needs to be well-defined." 124

ARC Chapters also were sensitive to hard-sell approaches in marketing that did not fit in with the ARC image. "The Chapter believes that aggressive marketing is wrong for the Red Cross...it is somehow 'unseemly' to sell a service." 125 The soft-sell approach is admired by the ARC Chapters and, despite the fact that LSI has pushed for more aggressive marketing on their part, most of the ARC Chapters perceive LSI as having more of a soft-sell approach than other vendors in competition with PERS services and products.

ARC Chapters mentioned several times that the advertisements by other companies actually bring the ARC-Lifeline programs more business. Another vendor advertised

123 Initial site visit with ARC Chapters; file: SITE2_RES, ll. 855-866.

124 Initial site visit with ARC Chapters; file: SITE1_RAB, ll. 188-190.

125 Initial site visit with ARC Chapters; file: SITE2_RES, ll. 851-854.
with an ad that frightened many older people in the local communities. The advertisement with an older person falling down the stairs is a tactic not employed by LSI. This again brings more subscribers to the ARC programs, when they realize the difference in these advertising techniques.

A national advertising campaign could hurt, rather than help, the promotion of the Red Cross Lifeline program. The 'scary' commercials currently used by other vendors do not seem to attract potential subscribers, but rather push them away from the service. These people do not want to be reminded of the physical dangers that threaten their independence. Instead, they want reassuring advertisements that make them feel safe, through the reputations of the Red Cross Chapters and the promotion of ARC Lifeline programs as being local service.\textsuperscript{126}

Lifeline does not advertise in the way Lifecall does, although Lifecall does still have a 'nominal' charge. All LSI advertising is soft-sell, with no scare tactics, an approach that is more comfortable to these Chapter staff persons.\textsuperscript{127}

ARC Chapter staff members interpret their mission in a way that coincides with their activities. For some of the ARC Chapters, the development of a new program intended to bring profits into the organization did not fit with all of the staff interpretations of mission. Essentially, ARC has marketed services and programs for as long as the organization has been in existence. Yet, this is not defined by all ARC staff as being the same as marketing for profit. An

\textsuperscript{126} Follow-up interviews with ARC Chapters; file: SITE3_FU, ll. 1148-1163.

\textsuperscript{127} Follow-up interviews with ARC Chapters; file: SITE4_FU, ll. 1100-1107.
aggressive marketing approach is not accepted by all ARC Chapter staff.

Not all ARC staff reflect these same values and interpretation of mission. During an in-house presentation, the LPM was aware of hesitancy and discomfort on the part of several staff members. These people expresses resentment towards the endeavor and questioned the rationale for ARC involvement. The LPM’s background with Goodwill motivates the belief that a nonprofit organization can bring in money and place service back into the community.\textsuperscript{128}

Redefinition of the term "marketing" constitutes the best approach for crossing the barriers between the two organizations perceptions. This is the strategy adopted by the new LSI project director, in order to make the concept of marketing more acceptable to the ARC Chapters. LSI gradually accepted the conditions under which the ARC Chapters would promote their program and now strives to help ARC Chapters approach marketing on their own terms.

LSI has attempted to impress upon [ARC] Chapters that they are providing a service through the Lifeline program. Most important, they are "communicating" to the public the value, benefits, and opportunities of this service. Consequently, the most dramatic aspect of dealing with this marketing problem is in redefinition, in finding a nonprofit comfort in "communication" versus "marketing."\textsuperscript{129}

\textsuperscript{128}Initial site visits with ARC Chapters; file: SITE5_RAB, ll. 362-377.

\textsuperscript{129}Follow-up interview with LSI; file: LSI_FU, ll. 296-321.
Theme #2

Organizational mission and philosophies of operation play a large part in guiding the activities of public nonprofit organizations, especially at the local community level.

In much of the discussion of any new program initiative or developing concept within the Red Cross context, organizational mission is a guiding influence. For the ARC Lifeline program, the complex network of two partner organizations and linkages within local communities builds upon the foundation of the ARC mission. "All of this continues to expand the mission of the ARC, which is to have as many people as possible in the community trained for emergency response."¹³⁰ It is not simply a matter of how the program fits within the array of organizational options but whether it expands what already is being offered to the communities.

The theme of organizational mission and guiding philosophies is evident in each of the ARC Lifeline programs examined in the case studies. Although these ARC Chapters adhere to the same basic mission, interpretation of the mission varies by the any number of variables: local characteristics of the ARC Chapters, experiences of staff, and the abilities of the ARC Chapters to address identified needs within their communities. "Each program is a reflection of community needs and local interpretation of mission and

¹³⁰Follow-up interviews with ARC Chapters; file: SITE1_FU, ll. 1011-1015.
service, and the environment of resources available to support the program."\textsuperscript{131}

Program fit within the context of appropriate activities consistent with mission proves to be a deciding factor in program initiatives. ARC-Headquarters and each pilot ARC Chapter accept this and see the ARC Lifeline program as an appropriate addition to their services. Yet, the manner in which the program is promoted and developed rests on the unique interpretation which each ARC Chapter gives to the mission. This is especially prominent in terms of marketing and the setting of goals for acquisition of increasing numbers of subscribers. In one case study, "[ARC] Chapter staff feel[s] that if you do [aggressive marketing and set goals too high], you lose the sense of what the original mission was."\textsuperscript{132}

In cases where the ARC Chapter staff members managing the ARC Lifeline program are comfortable with the belief that aggressive marketing of this service is consistent with the mission, other ARC Chapter staff members express concerns about such an interpretation and response. "Although the LPM and [ARC] Chapter director are comfortable with an aggressive

\textsuperscript{131}Follow-up interviews with ARC Chapters; file: SITE4_FU, ll. 1161-1165.

\textsuperscript{132}Follow-up interview with ARC Chapters; file: SITE4_FU, ll. 1059-1062.
marketing approach, it is apparent that not all ARC staff reflect these same values and interpretation of mission."¹³³

Reality comes to dictate the balance between the organization and its mission. At present, the competition among nonprofits for scarce resources means that organizations such as the Red Cross must "find a program to meet a need for the organization and still fit the mission. With budget deficits over the next three years, every program comes at the expense of something else and ARC could look at other private [for-profit] experiences to benefit."¹³⁴

At the same time, despite these realities, some ARC Chapters still feel a clash between the role of a nonprofit organization and the activities that they can comfortably carry out. "The perception that human service nonprofits preclude profit making seems to have limited the extent to which [ARC] Chapters have successfully pursued an aggressive marketing strategy."¹³⁵ "Marketing is seen to be fundamentally inconsistent with the Red Cross mission."¹³⁶

¹³³Initial interviews with ARC Chapters; file: SITE5_RAB, ll. 362-367.

¹³⁴Follow-up interviews with ARC staff; file: ARC3_FU, ll. 96-104.

¹³⁵Follow-up interviews with Lifeline staff; file: LSI_FU, ll. 219-224.

¹³⁶Initial site visits with ARC Chapters; file: SITE2_RAB, ll. 50-52.
Organizational mission directs the definition of priorities as well as the nature of innovation and adaptation within the organization and its chapters.

Due to the organizational structure of the Red Cross and the Congressional mandate that drives priorities within this organization, it is difficult to promote a program that falls outside of the most important aspects of the mission. ... The development of an indigent program connected with Lifeline at the [ARC] Chapter has been a direct result of a proactive LPM who is highly regarded by LSI as promoting both the Lifeline program and the unique facets of the Chapter's mission.\(^{137}\)

The philosophy of program operation also is affected by the interpretation of mission. Depending on the local economic and environmental characteristics, the type of response offered through the ARC Chapter Lifeline program.

Design and operation of the Lifeline program ... are markedly affected by the adherence of those involved to stated 'philosophies' or values. Such beliefs are seen to be the guidelines for the directions taken in establishing a successful program that will maintain the high reputation embedded in the functioning of the Red Cross.\(^{138}\)

In one case, this motivates an ARC Chapter to invest extra time clearing up every conceivable technical problem before the service is offered to the community; in another ARC Chapter, this molds the program so that it is only offered to people in the local community who have critical medical conditions that warrant PERS services; in a third ARC Chapter,

\(^{137}\)Follow-up interviews with Lifeline staff; file: LSI_FU, ll. 255-261, 268-275.

\(^{138}\)Initial site visit with ARC Chapters; file: SITE2_RAB, ll. 13-23.
this inspires the development of an indigent program that promises to surpass the original Chapter Lifeline program in size but aims to provide PERS service to anyone in the community who needs it.

While there are some aspects of a for-profit mode of operating that are expressed by staff as clashes with the mission, other aspects of the Lifeline organization itself suggest that it comes closer to fitting in with ARC mission than other for-profit organizations might. "Dibner [the founder of Lifeline] was thinking of his mother when he started the Lifeline PERS and not thinking of profit. This is an originating concept that the Chapter respects." Even at ARC-Headquarters, the staff person responsible for initiating the ARC Lifeline Pilot Project perceives "that both types of organizations are guided by similar motivations in current times." These motivations include not only the influence of mission as a guiding force but sheer economics, even for the nonprofit organizations.

While the mission statement is clear within the organization, "underlying the actions of all segments of the organization are values and ethics often left unstated."  

\[139\] Follow-up interviews with ARC Chapters; file: SITE4_FU, ll. 1092-1096.

\[140\] Follow-up interview with ARC staff; file: ARC1_FU, ll. 221-223.

\[141\] Follow-up interviews with ARC staff; file: ARC1_FU, ll. 130-132.
Consequently, ethics as well as mission becomes interpreted differently within the organization. Concern with ethics and the commitment to LSI made by the ARC-Headquarters for the entire organization emerges as an issue that portends even greater problems in the future. Currently, one ARC Chapter suggests that it might look elsewhere for a vendor willing to provide a cheaper arrangement for equipment and support. "In technology transfer, the decentralization of values, ethics and action present an important twist."\textsuperscript{142}

Perceptions contrast among informants considering the influence mission has in each of these scenarios. One ARC informant sees mission as so broad that it does not provide a strong guiding influence. "The mission is broad and can be interpreted in any manner of ways. This is especially important when considering the degree of decentralization in the American Red Cross."\textsuperscript{143} However, in practice, the interpretation of mission does limit activity and is perhaps not as broad as might be suggested. Another ARC informant claims that "some Chapters have tunnel vision of what they are supposed to be doing and limit themselves in terms of the types of programs, services, and risks they are willing to

\textsuperscript{142} Follow-up interviews with ARC staff; file: ARC1\_FU, ll. 158-160.

\textsuperscript{143} Follow-up interviews with ARC staff; file: ARC1\_FU, ll. 113-128.
undertake." Yet a third ARC informant feels that the "ARC is saddled with a narrow vision of their mission and this serves to limit the types of programs or services that the organization gets involved in."  

Theme #3

Community is a key concept in many public nonprofit organizations, not only in terms of the local people they serve but the environment and networking they seek to establish.

Woven in with discussion of marketing, mission, and philosophies of operation is the context of community, within which each of the ARC Chapter Lifeline programs operates. Not only is the essence of the local community critical in the shaping of the ARC Lifeline programs, there is also evidence of a need for community among program LPM's, and among subscribers. In one sense, the ARC Lifeline program not only serves community, it provides community and becomes community.

A key factor in successful ARC Lifeline programs is the development of a strong community network—a web of linkages between various organizations for resources, volunteers, and sponsorships of service. In one ARC Chapter, active marketing did not precipitate the increase in subscriber numbers; that is, the ARC Chapter found that they were receiving numerous requests for service without carrying out an aggressive

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144 Follow-up Interviews with ARC staff; file: ARC2_FU, ll. 254-262.

145 Follow-up interview with external consultant; file: ARC4_FU, ll. 27-31.
marketing campaign. "The only explanation provided for the good response to the program [within the community and resulting in potential subscribers] is the inclusion of Red Cross in the functioning of a [local] department on aging committee of PERS providers." ¹⁴⁶

The importance of community was captured by one LPM when he noted that the real service being provided by PERS is not simply to respond to the community but to provide community. In other words, the desire of many subscribers to contact the LPM and become part of the emergency response network of linkages is not necessarily because they are in desperate need of emergency response. "In essence, the LPM feels that this contact initiated by subscribers is more due to their desire to participate in something (perhaps a need for 'community') than mere loneliness." ¹⁴⁷

Community is important for sponsorships. Part of the thrust in marketing has gone beyond reliance on subscriber funding to incorporate facilitation of a greater donation capacity. Donations from various organizations, such as the Lions' Club, have provided units that can be placed in subscribers' homes.¹⁴⁸ Linkages with community also means

¹⁴⁶Initial site visits with ARC Chapters; file: SITE1_RAB, ll. 94-99.

¹⁴⁷Follow-up interviews with ARC Chapters; file: SITE1_FU, ll. 720-726.

¹⁴⁸Follow-up interviews and initial site visits with ARC Chapters; files: SITE3_FU, ll. 1109-1112, and SITE4_RAB, ll. 154-157.
development of strong volunteer resource banks. Volunteers come from all areas of the local community, representing numerous professional and even unemployed people.\textsuperscript{149}

Voluntary resources from the local community reflect productive linkages and partnerships with other organizations. "Negotiations with the telephone company have resulted in an arrangement whereby people who are in need of PERS receive a line charge waiver for a private line..."\textsuperscript{150} In one ARC Chapter, the local fire department provides after-hours monitoring, along with increasing support of and involvement in the ARC Lifeline program. "This is a great community tie but the [ARC] Chapter points out that such an arrangement is characteristic of this community."\textsuperscript{151}

Each ARC Lifeline program becomes a unique entity, shaped by the local flavor of the community being served. One ARC Chapter terms their program as "very much an individualized thing. It reflects the community and local needs."\textsuperscript{152} The entire thrust of the ARC Lifeline programs is to use profits to put more back in to the communities. ARC Chapter Lifeline

\begin{itemize}
\item \textsuperscript{149}Initial site visits with ARC Chapters; file: SITE2_RES, ll. 761-765.
\item \textsuperscript{150}Initial site visit with ARC Chapters; file: SITE4_RAB, ll. 170-174.
\item \textsuperscript{151}Follow-up interviews with ARC Chapters; file: SITE4_FU, ll. 978-980.
\item \textsuperscript{152}Follow-up interviews with ARC Chapters; file: SITE4_FU, ll. 1160-1162.
\end{itemize}
programs become both the mirror and the reflection of community. The Red Cross becomes a linkage in a network.\textsuperscript{153}

\textbf{Theme \#4}

Several stages can be identified in the transfer of technology to human service, not-for-profit programs.

Examining the data pertaining to possible stages of technology transfer reveals a remarkably prominent pattern of linkages. By establishing where these linkages are and what or who is being connected, one can more easily see the potential for identifying several distinct stages. These stages represent the dynamics of a transfer process that brings a simple technical networking system into operation as a community-oriented human service.

The case site experiences in this research inform on what these stages look like through interactions initiated by a public-private organizational partnership. While research data are limited to the ARC-Lifeline and PERS scenarios, these findings have more implications. Specifically, theory and research focus on the realization that so many instances of technology transfer involve organizational partnerships or networking between the public and private sectors.

In the case studies represented here, there are five stages of technology transfer presented as pertinent to the process. Field research not only identified the various

\textsuperscript{153}Follow-up interviews with ARC staff; file: ARC2_FU, ll. 51-55.
stages in the actual process but also those stages that informants felt should be enhanced or added. Again, the key to technology transfer in this situation is to achieve understanding of the importance of linkages.

Each stage represents a series of differing modes of linkage. Through coding and analysis, the five stages of transfer have been labelled as Program Initiation; Negotiation and Orientation; Administration and Operations; Renegotiation and Revisions; and Expansion and Extension. Each of these stages is discussed in more detail below.

**Program Initiation**

The first stage of Program Initiation represents the linking of fundamental interests with the potential for establishing a Red Cross PERS or Red Cross Lifeline program.

Both organizations began to actively seek out the fulfillment of their interests. In the case of the Red Cross, it was to select a suitable vendor of PERS who could offer both quality service, as well as a substantial investment in the process to make it successful. For Lifeline Systems, Inc., the challenge was to present a strong campaign to ARC in order to develop a partnership arrangement.

This stage also included the ARC Chapters, who had some interest or predisposition motivating them to participate in the ARC-Lifeline program. For at least two of the ARC Chapters, Lifeline already played a part of their operations
and others might have been considering the potential for developing a PERS-related array of services.

Essentially, the first stage occurred prior to the Pilot Project and reflects initiative on the part of organizations and ARC Chapters. During this time, interest in ARC PERS programs began and the appropriate contacts and negotiations made. Although the final evaluation for the ARC-Lifeline Pilot Project was not completed until the end of 1988, the idea for the program began in early 1986.\(^{154}\)

Along with this idea-formulation came the struggle to determine program fit. Program fit refers to the determination of whether an ARC-PERS program is acceptable in the array of ARC services and mission response. Observations made by LSI staff included the realization that passing through this stage does not place the program into operational status.

Even though the Lifeline program has been accepted by the Red Cross as a suitable program for Chapters to develop, it still has taken a great deal of time, negotiation, and planning to initiate and develop the appropriate components of the program's functioning.\(^{155}\)

**Negotiation and Orientation**

The time lapse between acceptance of the program and actual initiation alluded to in the preceding paragraphs

\(^{154}\)Initial interview with LSI; file: LSI_RAB, ll. 12-17.

\(^{155}\)Follow-up interview with LSI staff; file: LSI_FU, ll. 244-253.
highlights the presence of a separate stage, referred to here as Negotiation and Orientation. "Specifically, the idea for the project began in early 1986, while still taking many months in order to clear the paper-work and negotiations necessary between the two organizations."\textsuperscript{156}

Part of this process involved the selection of ARC Chapter sites for initiation of a Pilot Project, intended to simulate the development and operations of several ARC-Lifeline programs. This was seen to be a precursor to development of a National ARC-Lifeline Program, advocated by NHQ. In addition, NHQ and LSI presented financial alternatives to the ARC Chapters, helping them to conceptualize the program as profit-making.

It seems important to delineate between the first and second stages. This captures the emphasis in interviews to the length of time the process took before programs were considered operational. The influence of organizational bureaucracy is marked in the experiences developing the ARC-Lifeline programs. Specifically, the length of time involved in the numerous levels of decision making and the volunteer-driven process of the Red Cross was not fully anticipated by LSI. To this extent, the second stage of the transfer process accentuates this process, along with the differences between the two organizations and the ways they function.

\textsuperscript{156}Initial interview with LSI staff; file: LSI_RAB, ll. 12-17.
While the for-profit environment can often move quickly in developing programs and services, with the necessary funding and support, the nonprofit realm is often characterized as reflecting almost the very opposite process. That is, actions move very slowly, with funding and support usually experiencing numerous barriers.\textsuperscript{157}

Expectations held by LSI and NHQ for ARC Chapters operations also were influenced by this stage of Negotiation and Orientation. "Initiation of the Pilot Project indicates that ARC chapters require a 2-3 month period during which they are able to become oriented to the project and begin to enter into the process."\textsuperscript{158} The extent of this start-up period of time was longer than originally conceived in the design of the Pilot Project. Again, this highlights the perception that there is a second stage of the transfer process, one that is less obvious in overall planning and strategies for program development.

Included in this is the organizational bureaucracy within ARC Chapters that is related to sometimes lengthy decision-making and approval mechanisms for program and policy development. This is especially noticeable with the involvement of the volunteer boards that play a prominent role. For most of the ARC Chapters included in the case studies, these boards held powerful positions not only for

\textsuperscript{157}Follow-up interview with LSI staff; file: LSI\_FU, 11. 226-253.

\textsuperscript{158}Initial interview with LSI staff; file: LSI\_RAB, 11. 94-99.
approving ARC Chapter activities but also for continued support and guidance in program development.

ARC Chapter data indicate that their experience with orientation and program development could have been enhanced by a stronger emphasis on training. Although training is an essential aspect of LSI support to ARC Chapters initiating their Lifeline programs, several LPM's indicated that more intensive and hands-on training is required.

One of the biggest concerns expressed by staff in starting the Lifeline program is the need for more comprehensive training. Although LSI presents a polished performance in showing the chapters how they can get the program running smoothly, the videos and presentations are not seen as being sufficient. Chapter staff suggested that LSI incorporate more hands-on training into their presentation so that staff begins to get a feel for how the equipment operates, how subscribers and response staff interact with the technology and what type of problems might be due to arise during normal operations. ¹⁵⁹

Administration and Operations

During the third stage, Administration and Operations, the ARC Chapters worked closely with LSI field representatives to develop and maintain their ARC-Lifeline programs. Having approved of the program fit, accepted Lifeline as a new program for development, and entered into the period of training and orientation, the ARC Chapters had similar conceptions of a model for operation. This model the was put

¹⁵⁹Initial interviews with ARC Chapters; file: SITE2_RAB, 11. 295-311.
into operation and altered to suit the needs of the ARC Chapter and its environment.

Initially, operation of the Lifeline program involved familiarization with the equipment being used and maintenance required to keep the equipment functional. Although the computers and software were designed by LSI for responding to emergency alarms and activating subscriber information files, the ARC Chapter staff had to configure some of the specifications appropriate to their needs. In addition, one ARC Chapter found that the operating instructions from LSI were not explicit enough, especially for the approval of the unions.

Several volumes of standard operating procedures were written to detail the chapter's Lifeline program. This was not provided though LSI. While various documents were available through LSI in relation to the hardware they are selling, very little (one page) is written to outline the procedures to be followed in response and service (such as, how long to wait in attempting to contact a subscriber before taking emergency measures).

This stage is characterized by numerous staff and volunteer issues, as well. In these case studies, shared staff members were common during the initial stages of the program's development. Although LSI encouraged each ARC Chapter to place a full-time LPM in charge of the Lifeline program, this could not be justified in some cases until the

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160 Initial interviews with ARC Chapters; file: SITE1_RAB, 11. 192-199; SITE2_RAB, 11. 336-390.

161 Initial interviews with ARC Chapters; file: SITE2_RAB, 11. 392-406.
programs had grown sufficiently. However, the division of LPM time and energy between various tasks and sometimes between departments proved to be a major stumbling block for the ARC-Lifeline programs. By the time of follow-up interviews, each program had a full-time LPM, although staff and management turnover has proven to be a continuing phenomenon in these programs.

Obviously, program marketing is an essential element of the administration of the ARC-Lifeline programs. A critical pattern that influences these marketing activities emerges in the importance of networking for the ARC Chapters and their programs. Networking with other ARC-Lifeline programs, with other ARC Chapters that might consider offering PERS services, with community support, and with potential subscriber groups.

Renegotiation and Revisions

During this stage of Renegotiation and Revisions, critical changes occurred as the organizations and ARC Chapters adapted to the experiences of administering and operating the programs. One of the most important of these changes was in marketing revisions and the necessity for ARC Chapters and LSI to incorporate altered understanding of marketing into their operations. This has been discussed under the heading Theme #1 earlier in the dissertation chapter. Marketing is always a key factor in development of PERS and Lifeline programs; therefore, any difficulties experienced in this ARC Lifeline program require attention if
the program is not only going to succeed in capturing ARC Chapter intentions but expanding the scope of what a PERS system can mean in a community setting.

Contracts appear in many forms throughout the process of developing the ARC Lifeline Pilot Project and National Red Cross Lifeline Program. The stage of transfer discussed here represents attempts by the two organizations to renegotiate their original contract, incorporating input from the ARC Chapters that had been involved in the pilot project. Essentially, this establishes the terms of the partnership and the extent of investment accepted on the part of each organizational partner.

Contract negotiations involved obtaining perceptions and suggestions from the pilot [ARC] Chapters. The chapters opposed the suggestion that Red Cross and LSI should create a person at NHQ to oversee the chapters’ progress, because all chapters with Lifeline would have to support the costs of this staff addition.\textsuperscript{162}

This period of renegotiation appears regularly and promises numerous conflicts and issues for consideration and resolution.

Although there have been negotiations over the terms of the ARC and LSI contract, the experience with this [ARC] Chapter indicates terms that might need to be renegotiated. The LPM feels that NHQ needs to meet with LSI to work out the kinks in the contract and make sure that a conflict such as that

\footnote{\textsuperscript{162}Follow-up interviews with ARC Chapters; file: SITE3_FU, 11. 1067-1075.}
experienced [in this ARC Chapter]. . . . doesn't happen again.\textsuperscript{163}

Resolution of conflicts occurs at all levels of inter-organizational interaction. For one ARC Chapter, the misinterpretation of previous contract negotiations did not necessarily cause conflict with LSI but certainly added to the confusion experienced. Specifically, this ARC Chapter responded to a call for a proposal that would provide PERS services to a local retirement community. A second PERS vendor submitted a proposal to the same retirement area--this competition turned out to be LSI. Although the ARC Chapter thought there was an exclusivity clause in their contract that kept LSI from marketing in their area, LSI could not promise such an arrangement.

. . . This [LSI competition] was not only a surprise to the [ARC] Chapter but totally unexpected in terms of their understanding of the arrangements between LSI and ARC. . . .

. . . The other discrepancy--the exclusivity clause--is something the LPM feels ARC cannot anticipate. He hopes that NHQ will bring [ARC] Chapters together and discuss all of these elements before they renew the contract with LSI. The whole experience left a bad taste in the [ARC] Chapter's mouth . . . . \textsuperscript{164}

Other changes that affected the ARC Lifeline program were the organizational transitions that occurred. NHQ transferred oversight of the program from Special Projects to Military and

\textsuperscript{163}Follow-up interviews with ARC Chapters; file: SITE5_FU, ll. 630-640.

\textsuperscript{164}Follow-up interviews with ARC Chapters; file: SITE5_FU, ll. 543-546, 650-661.
Social Services. Central management of the program is necessary, especially in terms of providing ARC Chapters with information on options and supports.\textsuperscript{165} Also, ARC Chapters must decide where the program belongs in their organizational functioning.

Essentially, this is not considered a profit program yet, even though it has experienced substantial growth in the past year. In determining the profit aspect of the program, the LPM adds that if the program grows to a great extent, then the [ARC] Chapter might have to develop another department outside of Disaster and that would be costly, again detracting from potential profit.\textsuperscript{166}

\textbf{Expansion and Extension}

A key incentive in the partnership between ARC and LSI was the potential for expansion of the PERS program. Originally, this meant a more broad range of people subscribing to the service; more than older people, the hope was for the program to be marketed to people with disabilities or vulnerability in an independent-living community setting.

This expansion presented exciting expectations for the dissertation research, in considering the potential for mentally impaired persons and many others in need of social supports to benefit from an ARC-delivered emergency response system. Research findings did not substantiate the implementation of this goal, although informants do retain the

\textsuperscript{165} Follow-up interviews with ARC staff; file: RES_FU.

\textsuperscript{166} Follow-up interviews with ARC Chapters; file: SITE1_FU. 11. 899-909.
hope that the subscriber base will expand in response to program growth. Interesting usages of the PERS services appeared in ARC Chapter experiences; for the most part, however, the program marketing continues to target older adults and their families who might pay for the services.

Changes in equipment technology represent expansion but ARC Chapters' inability to incorporate newer features limits effective expansion. This refers to the potential in acquiring new forms of equipment, improved versions of older equipment, and adapted technology that is useful to more subscribers in the local communities. Many ARC Chapters are limited by resources and simply do not have the funds to bring these new technologies into the programs. Also, there is some hesitation in raising subscriber fees to bring about this type of expansion. There is some potential in ARC Chapters' programs for other types of expansion that fit within their means and operations but this depends on the character of the ARC Chapter and the local communities.

Legislation and politics also affect potential for expansion. In effect, external politics and environment influence success and progress of the programs. "The LPM believes that, should the legislation support such developments, the . . . [ARC] Chapter wouldn't be able to keep up with the installations."\(^{167}\)

\(^{167}\)Follow-up interview with ARC Chapters; file: SITE3_FU, ll. 998-1002.
Key differences exist between public and private, nonprofit and for-profit organizations and functioning that influence the transfer process of a technology.

One of the critical assumptions of this research is that there are differences between public and private organizations that must enter into a model of technology transfer for scenarios similar to the ones described in these case studies. For this reason, data were sought that could identify what these differences might be, especially as they impinge on the ability of human service organizations to respond to the needs of the communities and people they serve.

The findings from this study elicit several assumptions about ways in which the two organizations involved in the partnership were similar, yet different. While it is impossible to relay all of the nuances that emerged during the data collection, several key factors were identified. These have been categorized into four areas: Bureaucracy, Profit-making, Ideology, and Voluntarism.

**Bureaucracy**

Although one informant expressed his belief that "the for-profit and not-for-profit organizations are faced with the same limitations based in bureaucracy," data suggest otherwise in the cases studied here.

The second element that enters the expectation-reality gap lies in the degree of bureaucracy involved in the majority of ARC processes, especially with the reliance of [ARC] Chapters on volunteer boards for decision making. This
component was perhaps not fully anticipated by LSI on entering into the partnership with the Red Cross.\textsuperscript{168}

Most prominent in the findings is the frustration that LSI had with the slow progress made in program development. The two organizations involved in the partnership experienced very different perceptions or definitions of progress based on the time lines established for initiation and for achieving goals. "Profit versus nonprofit expectations in terms of progress and time lines appear to have influenced perceptions of the project's development."\textsuperscript{169} Despite this experience, LSI continued to work with the ARC Chapters and NHQ to design a more effective strategy for dealing with program development. In order to allay frustrations with the slow Red Cross process, LSI altered expectations and added their new awareness into their interactions with the ARC Chapters.

\textbf{Profit Making}

Obviously, one of the primary distinctions between most (but not all) public and private organizations is the emphasis on profit-making. For many public organizations, profit is not considered to be the goal of the organizations. In the case of the Red Cross, staff members interpret the mission of the organization to dictate that they are there to serve the

\textsuperscript{168}Follow-up interview with LSI staff; file: LSI_FU, ll. 226-235.

\textsuperscript{169}Initial interview with LSI staff; file: LSI_RAB, ll. 7-12.
community and not to make money. Although ARC Chapter programs differed in the degree of emphasis on profit and program growth, the discomfort with allowing profit to override mission was clear throughout the interviews. "The LPM is adamant about the fact that this program is not being operated as a means for bringing funds into the ARC Chapter. 'I'm not doing this to make money; I'm doing it as a community service!'"  

Yet, for many private organizations, profit is necessary not only to keep the organization in business but to provide benefits to shareholders. The observation of one informant was that the real issue for the ARC Chapters was and is the inability to deal with surplus.

For the profit organization, surplus is created to provide to stockholders and to invest in the future. For the nonprofit, it is more a questions of 'what do I do with surplus' and uncertainty not only over how the surplus should be used but what constitutes surplus. For [ARC] Chapters who claim that they are not interested in profits, they likely are sitting on a great deal of surplus in the form of assets, land, buildings, and so on. This defies their claims of disinterest in profits, no matter what they say.  

_Ideology_

This has been discussed in some depth under the theme related to "Mission." Essentially, the two organizations in

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170 Follow-up interviews with ARC Chapters; file: SITE3_FU, ll. 932-937.

171 Follow-up interview with ARC staff; file: ARC1_FU, ll. 224-242.
the partnership studied here have similar guiding values that make up their ideology. Both organizations are guided by quality service, trying to keep in mind who is being served. Leadership and mission are essential ingredients to these similar ideologies.

For the American Red Cross, however, the ideology comes through clearly in the data. This is manifested in the delineation of priorities, such that the Lifeline program and concentration on profit-making take second place to the disaster and emergency mandates of the organization. Oversight of the ARC-Lifeline program at NHQ suffers especially from these priorities.

In the context of the Red Cross nonprofit environment, recent circumstances have dictated a series of events that has limited involvement in promoting the ARC/Lifeline program. Essentially, the past two months has been lost to NHQ and the [ARC] Chapters as they have dealt with disaster [1989 Hurricane Hugo and Loma Prieta-Northern California Earthquake] and fundraising activities.172

While ARC Chapters now have full-time LPM’s dedicated to coordination of the ARC-Lifeline programs, these staff also feel the effects of the ARC Chapters commitment to disaster. "Chapters have to raise an assessed amount for disaster, according to the capacity of each specific [ARC] Chapter.

172Follow-up interviews with ARC staff; file: ARC2_FU, ll. 187-195.
When necessary, [ARC] Chapters have to drop everything and do this fundraising to the amount demanded.\footnote{Follow-up interview with ARC Chapters; file: SITE3\_FU, ll. 1038-1044.}

**Voluntarism**

Again, there are surface similarities between LSI and ARC in terms of their voluntaristic nature. For LSI, staff indicate that the roots of their organization provide more similarities to a nonprofit, volunteer-based organization than might be expected.

While LSI is a profit organization, it was apparently started through the involvement of volunteers and is considered by LSI staff to be an organization that can easily adapt to a volunteer-generated process characteristic of ARC Chapters.\footnote{Initial interview with LSI staff; file; LSI\_RAB, ll. 124-131.}

At the same time, however, understanding fully how volunteers engage in the Red Cross functioning and their role in decision-making proved to be a limitation on the part of LSI. The role of the volunteer board and its power in the choices and actions of many ARC Chapters contributed to the bureaucracy and slow progress that proved to be a frustration for LSI.

In addition, the use of volunteers in the operation and administration of the ARC Chapter Lifeline programs was another limitation to LSI influence. While volunteers were used in some capacities with the ARC Chapter programs, they
were not nearly as prominent as they are in many other programs. In one ARC Chapter, the LPM during the pilot period stated that training volunteers was not part of her responsibility, even though volunteers were included as an integral component of the program's functioning.\textsuperscript{175}

This attitude was clearly unacceptable, however, to ARC staff members at national headquarters who emphasized that

\textit{... volunteers are the life-blood of an organization such as the Red Cross. ... As with any program within the Red Cross setting, the Lifeline or PERS programs should emphasize the importance and value of volunteers. Without this, the program is a weak entity in the structure. ... The successful [ARC] Chapter NEEDS a strong board and a lot of volunteers. Likewise, the successful [ARC] Chapter is more likely to promote a successful PERS program.}\textsuperscript{176}

Capturing this link between active volunteers and a successful Lifeline program highlights the difference between the two organizations in this study. It might be suggested that LSI did not fully appreciate or know how to respond to this reality for the Red Cross. Even during follow-up interviews, ARC Chapter staff expressed concerns about the reliability of volunteers to perform necessary tasks, such as monitoring the system to respond to emergency alarms. "The biggest barrier is that the [ARC] Chapter feels it can't run

\textsuperscript{175}Initial interview with ARC Chapter; file: SITE2_RAB, li. 214-234.

\textsuperscript{176}Follow-up interview with ARC staff; file: ARC2_FU, li. 443-470.
24-hour monitoring with volunteers. In the [ARC] Chapter's experience, volunteers are not reliable."^{177}

Yet, the proper guidance and strategy could develop an exceptionally strong range of tasks for the Lifeline volunteer.

The claim that volunteer use with the Lifeline program has to be limited because volunteers cannot be trusted to do certain jobs doesn't hold water. Volunteer use with Lifeline is possible and the argument that they can't use volunteers for monitoring is not acceptable ... Using the ARC Transportation Program as an example, the volunteers do all of the driving. The program is totally dependent on the involvement of volunteers and they have to have drivers. You can carry over the hot-line concepts with volunteers to apply to the Lifeline program--volunteers man hot-lines and must always be present, in the same way that monitors must always be present for a Lifeline response center. Essentially, the [ARC] Chapters disprove their own problems. If there was better oversight, the [ARC] Chapters could be challenged by LSI or NHQ and forced to deal with the barriers that are preventing their program growth.^{178}

Theme #6

The physical technology does not necessarily portend major difficulties as public nonprofit organizations adapt to new technology-based programs.

Several ARC staff members commented that the Red Cross was not a technology-based organization, therefore might be more prone to difficulties in establishing a technology-based program. Although the Lifeline equipment is relatively simple

^{177}Follow-up interviews with ARC Chapters; file: SITE3_FU, ll. 875-880.

^{178}Follow-up interviews with ARC staff; ARC4_FU, ll. 172-200.
in design and technological sophistication, development of the ARC-Lifeline programs is an interesting process.

In terms of technology, the Red Cross is just getting in to computers. The organization is not considered to be a high-tech operation and those in social services are only just beginning to engage in dealing with the implications of technology. In this sense, this really appears to be the first indication of any connotations of "technophobia" for the technology transfer process in a public nonprofit environment.179

At the beginning of the research study, it was expected that there might be evidence of computerphobia or technophobia into the PERS program. This has been a recurring theme in some commentary concerning the role of the computer in organizational processes and it was thought the there might be indications that this was an important consideration in the development of ARC-Lifeline programs. The field research did not produce support for this conclusion. Although there were some indications that a cautious approach towards the technology and equipment might be a problem, only a couple of ARC Chapters indicated this and even those thought of it in a minor way.

The equipment did elicit a number of different issues in the program development, however. LSI was perceived as being a superior vendor of the PERS equipment.180 LSI provided

179Follow-up interviews with ARC staff; file: ARC2_FU, 11. 417-428.

180Initial interviews with ARC staff; file: SITE3_RAB, 11. 249-252.
exceptional support for their equipment and assisted ARC Chapters in many aspects of the program development.\textsuperscript{181}

On the other hand, it was suggested by one ARC Chapter that LSI is in the business of providing hardware, not service.\textsuperscript{182} As a result, the ARC Chapters were required to ensure that quality service was meshed with effective equipment. This often meant working with the equipment to get the most effective balance between technology and service. For one ARC Chapter, a delay getting the program operational was directly attributed to the difficulties with computers and equipment.\textsuperscript{183}

Finance is clearly a key issue in the development of a technology-based program within the Red Cross array of services. Specifically, for most of the ARC Chapters involved in the pilot project, acquisition of appropriate computers and software was delayed on account of unavailable funds. By the time of follow-up interviews, all the ARC Chapters had acquired computers and software to access subscriber databases in response to emergencies.

However, ARC Chapter ability to afford more or advanced equipment is extremely limited, as the programs now stand.

\textsuperscript{181} Follow-up interviews with ARC Chapters; file: SITE4\_FU, ll. 1082-1090.

\textsuperscript{182} Initial interviews with ARC Chapters; file: SITE1\_RAB, ll. 193-199.

\textsuperscript{183} Initial interviews with ARC Chapters; file: SITE2\_RAB, ll. 97-114.
The development of "improved technology also means higher prices" and most ARC Chapters would have difficulties incorporating newer equipment or subscriber units into their reserve. Another consideration relates to the ultimate usefulness of improvements. "New features have been added but the units still have the same functions. . . . New technology doesn't necessarily mean better functions."\textsuperscript{184}

The final issue discussed here relates to a concern that will likely become more prominent as the ARC-Lifeline programs are in operation longer and serve greater numbers of subscribers. The issue of liability was raised in several discussions. It is an issue that promises to be a source of conflict, even though the ARC NHQ staff have explored the issues of liability and found the ARC Chapters to be in a secure position. "Apparently, the question of whether Red Cross could be sued should Lifeline equipment fail in a person's home had not been addressed adequately in the agreements and contract negotiations and documentation."\textsuperscript{185}

Another aspect of liability relates again to the changing and improvements in the technology.

One of the issues that emerges is the concern about what could happen if LSI doesn't keep up with new technology. Although some ARC personnel might feel that ARC should have a strong commitment to the organization they sign contracts with, it is also

\textsuperscript{184}Follow-up interviews with ARC Chapters; file: SITE1_FU, 11. 929-942.

\textsuperscript{185}Follow-up interviews with ARC staff; file: ARC2_FU, 11. 645-650.
imperative that ARC consider what standards they must look for in the private organization they work with and, should these standards not be met, to consider what options are available.\textsuperscript{186}

Theme #7

Decentralized organizational structure within many public nonprofit organizations does not facilitate the technology transfer process.

For the purposes of the ARC-LSI program initiation and pilot project, the program NHQ location was in the Office of Special Projects. During the pilot period, the ARC-Lifeline program received special attention from staff at NHQ. Several months after the pilot project ended, NHQ transferred the ARC Lifeline program from the Office of Special Projects over to the department of Military and Social Services (M&SS).

Military and Social Services is a relatively new entity, having evolved from Services to Military Families and Disaster Services [two separate entities]. [ARC] Chapters inevitably go beyond those traditional roles to provide various social services in response to community need.\textsuperscript{187}

With no staff person assigned in a full-time capacity to oversee the Lifeline program through NHQ, the program was only one of many program concerns in M&SS. Although the director now in charge of the Lifeline program at the national ARC level felt that this program was a major focus of his efforts, low priority had been given to the program by the time of

\textsuperscript{186}Follow-up interviews with ARC staff; file: ARC3_FU, 11. 226-243.

\textsuperscript{187}Follow-up interview with ARC staff; file: ARC2_FU, 11. 84-91.
follow-up interviews. ARC response to natural disasters during this time accounted for some of this lack of attention. Yet, the current director knew very little about the ARC Lifeline program and had an old list of LPM's and pilot site contacts up on his wall. Despite his intentions, he had not yet visited the original pilot sites during the six to eight months since the program transition.

Within M&SS, the Lifeline program fit within a specific category of program development.

For the purposes of [ARC] Chapter presentations, Lifeline fits within the realm of Aging Services and this is the purpose for [ARC] Chapter involvement in the program, not simply "because it puts a few more dollars in their pockets." In terms of this program focus, [ARC] Chapters provide aging services through the emergency response systems, as well as transportation services—two national-sponsored programs.\footnote{Follow-up interviews with ARC staff; file: ARC2_FU, 11. 118-128.}

Regardless of this program fit, priorities still reflect the crisis intervention nature of the organization, that defines the organization's reason for being. Confirmation of data during the writing of this dissertation revealed that disaster priorities continue long after the situations appear to be resolved. ARC staff members still are actively involved with ongoing response to natural disasters that occurred months previously.

Although the ARC Chapters are in some ways influenced and guided by the national headquarters, the organizational
structure and patterns of operating are not as direct as this suggests. In much of the functioning of the organization, the NHQ has only limited impact on the directions taken by the ARC Chapters. One of the lessons learned by LSI during the pilot project was that the ARC Chapters are essentially entities autonomous of NHQ. ARC Chapters are influenced by volunteer boards and elements of bureaucracy that affect time, funding, negotiation and planning efforts.

...in terms of the contract between the two organizations, LSI has had to remember that the [ARC] Chapters are autonomous and that this can make the process even longer. NHQ can only suggest to the [ARC] Chapters that the Lifeline program is a strong addition to their services. Ultimately, it is the [ARC] Chapters' own decisions that make the difference.189

Each of the ARC-LSI programs was placed in a different location within the ARC Chapter's organizational structure. These ranged from location in Disaster and related subunits, such as Emergency Senior Services; to shared responsibilities between Blood Distribution and Services to Military Families; to operation as a separate department within the ARC Chapter. All of the above discussion makes the ARC Chapters significant players in the transfer of technology, either increasing or decreasing the transfer of a given technology depending on the ARC Chapter's characteristics and resources.

For many of the programs, staffing for the Lifeline program began with shared staff positions from other ARC

189Follow-up interview with LSI staff; file: LSI_FU, ll. 554-563.
Chapter departments. This meant that some staff divided their time between Lifeline responsibilities and other ARC Chapter tasks. In some cases, the LPM had divided responsibilities, leaving the Lifeline program without a full-time staff member implementing the program. Once the LPM position was established as full-time within the ARC-LSI program, there was an uncertain administrative load. LPM's often carried out almost any task associated with the ARC-LSI program.\(^{190}\)

Aspects of organizational structure for the ARC and the ARC-LSI programs illustrates the decentralized structure that is involved.

The variation between the [ARC] Chapter experiences and . . . two larger organizations . . . indicates an issue of decentralization. This enters into any consideration of an organizational model of technology transfer. Specifically, it is an organizational issue of how technology transfer fits into bureaucracies that are highly decentralized.\(^{191}\)

Although this decentralization can provide a positive environment for ARC Chapters to respond most effectively to the particular needs of the communities they serve, the organizational structure also can limit the potential for effective development of national programs. Simply by establishing something as a National Program, the program often gets moved to a different organizational location at the

\(^{190}\)Initial interviews with ARC Chapters; file: SITE4_RES, ll. 662-665.

\(^{191}\)Follow-up interviews with ARC staff; file: ARC1_FU, ll. 97-111.
national headquarters; the staff members at national most interested in the program often are moved to other responsibilities and essentially become disinvested of the program's progress. It is at the ARC Chapter levels that some of the National Programs have continued to survive, with little support from NHQ.192

This recurrence of program disinvestment suggests that ARC might not have the appropriate structure to accommodate and make successful a program like ARC-LSI. "In the Red Cross Lifeline program, there is nothing driving from the top, [there is a] 'who cares' attitude. The program incorporates the worst features of public and for-profit organizations."193 Centralization of some parts of the program could help, in coordination, dissemination of information, and possibly centralized ARC monitoring service. As it stands, the only thing that really pushes program development from the top is the influence of mission and this, at best, is considered to be broad and open to many interpretations.194

192Follow-up interviews with ARC staff; file: ARC4_GU, 11. 59-114.

193Follow-up interviews with ARC staff; file: 11. 253-258.

194Follow-up interviews with ARC staff; file: ARC1_GU, 11. 113-128.
Successful transfer of technology-based programs into public nonprofit organizations can evoke an innovative environment for adapting and expanding services.

Of all the themes discussed so far, the theme of innovation is one that captures the real essence of what ARC Chapter Lifeline programs can be. This might seem inconsistent with the previous Theme #7 dealing with organizational limitations on technology transfer. However, the distinction between transfer and innovation becomes apparent in these case site studies, even if it is not always apparent in the available literature. That is, in this research, the innovative and adaptive capacities of the ARC Chapters are a strength to the technology transfer process; this is true even if technology transfer is not considered complete in terms of the development of a larger national program.

It is natural in this type of study to look for innovation in terms of the technological alterations or equipment adaptations that correspond to new and exciting ways to respond to needs. Yet, in the ARC-LSI programs, the degree of innovation is not necessarily linked to the equipment these people were connecting into an emergency response network. Rather, the degree of innovation is exposed in the ways these ARC Chapters entered into the process of developing their Lifeline programs and adapting the model to suit their own needs.
From a similar model of program operation, it is fascinating to observe the great diversity among all of the ARC-Lifeline programs. This is perhaps to be expected, in light of the character of many ARC Chapters. "Chapters are doing innovative things in response to local need but NHQ is not recognizing this. Altered priorities due to Disaster is used as an excuse."\textsuperscript{195}

Some innovation is attributed to the development of more sophisticated and responsive technological components of emergency response networks; LSI develops equipment that can be more effective. Improvements in form and function have resulted in speakerphone units with greater reception and clarity of sound to link subscribers with emergency responders. In addition, the introduction of a new line of products enhances the usefulness of Lifeline for a broader range of subscribers. "In 1990, a new line of products will be available, that incorporate special help-buttons designed for use by disabled people."\textsuperscript{196}

Adaptations of the equipment and problem resolution are clearly another aspect of innovation. ARC Chapters were required to take the equipment available and adapt their system to provide the type of quality service they felt was necessary. In some cases, this meant standardizing simple

\textsuperscript{195}Follow-up interviews with ARC staff; file: ARC4_FU, ll. 150-154.

\textsuperscript{196}Initial and follow-up interviews with LSI staff; files: LSI_RAB, ll. 65-80; LSI_FU, ll. 411-414.
elements, such as the jacks used to install the units in subscribers' homes. In other cases, it resulted in innovative measures used for billing subscribers or specializing the software configurations.

Linked to adaptations, but more exciting, is the initiative to develop spin-off of technology and service in the ARC-Lifeline programs. One ARC Chapter (site 3) adopted an aggressive fundraising campaign to develop an Indigent Lifeline Program. This involved soliciting foundations and businesses, encouraging each of them to purchase several Lifeline units that could be used for subsidized Lifeline services. Referrals to this program would come from local social service agencies, taking responsibility for determining eligibility. The Indigent Program has potential to surpass the size of the original ARC Chapter Lifeline program. It is a perfect example of how the Lifeline program can expand in innovative ways.\(^\text{197}\)

The importance of local community is apparent in almost every case site. For one ARC Chapter, the network of local community organizations and supports that deal with the social issues of the environment likely becomes a critical factor influencing the high degree of innovation in that program. This particular ARC Chapter has been active in seeking out grants for "innovative high-tech programs for the disabled,"

\(^\text{197}\)Follow-up interviews with ARC Chapters; file: SITE3_FU, 11. 903-906.
that might allow "a Lifeline expansion so that data (heart
monitors and 24-hour attention) could be transmitted between
home care and the hospital."\textsuperscript{198} By the time of follow-up
interviewing, a partnership had developed with the local Fire
Department now providing after-hours monitoring for the ARC
Chapter's Lifeline program.

A smoke alarm might be an addition to the current
equipment and system, although this would be
expensive. The Fire Department has been interested
in this expansion of service because currently they
do not know immediately whether an emergency alarm
means that fire fighting equipment is needed.\textsuperscript{199}

The emphasis on developing partnerships proves to be
another important aspect of innovation. "One of the
initiatives of the program is developing partnerships with
other private companies. [A local] medical company is tying
in with ARC-LSI and advertising the service to their
clients."\textsuperscript{200}

One consideration is whether the mission of the Red Cross
serves to limit the degree of innovation undertaken. "Need
can sometimes circumvent purpose. . . . Let's not have this
overtake the mission of the Red Cross."\textsuperscript{201}

\textsuperscript{198}Initial interviews with ARC Chapters; file: SITE4_RAB,
ll. 47-51, 522-532.

\textsuperscript{199}Follow-up interviews with ARC Chapters; file: 1150-
1158.

\textsuperscript{200}Follow-up interviews with ARC Chapters; file: SITE2_FU,
ll. 961-971.

\textsuperscript{201}Follow-up interviews with ARC staff; file: ARC2_FU, ll.
564-577.
CHAPTER VI

CONCLUSIONS

Documenting the research study includes several phases of presentation and development of themes. Throughout this process, the researcher takes the reader through the stages of the research, capturing a concise and encompassing view of the case studies. Following the logic of the dissertation organization, the research report now comes full circle, bringing both the researcher and the reader back to the beginning of the inquiry.

The concluding chapter in the dissertation transforms the findings to highlight their implications in general theory and practice issues. This involves linking the findings to the primary and subsidiary research questions posited in the initial stages of the dissertation and developed in the review of literature. Applying the findings to these questions seeks to develop the full potential of the data. It is not only representative of the case studies but can be used to inform on diverse areas of inquiry and extrapolated to bring meaning to other experiences and theories.

The purpose of this section is not to report, but rather to reflect on the findings. In other words, the research has gone beyond the point of merely presenting and analyzing the
data for the reader. It can now be used to draw other conclusions pertinent to an audience of professionals and practitioners interested in the general issues and theories that arise.

Each of the research questions provides a subheading in this dissertation chapter. Discussion of the findings within this arrangement of issues ensures that, not only do the data connect with priority issues from the case experiences, but also remains true to the original inquiry of the research. Following these discussions, implications are pondered for adding to the current scope of literature and understanding.

**Research Questions**

Data already have been presented in the form of theme divisions and delineations. Findings are not presented again in this dissertation chapter; instead, they are used to respond to the research questions that guided the research. Themes from the data reflect the priorities and issues emerging from the case experiences. Several of these themes correlate well with research questions, since these questions were tools guiding a large part of the data collection. However, the responses to the research questions are intended to go beyond the data. These responses are grounded in the data that already have been presented, but seek to reflect and spring from those data.
Primary Question #1: What organizational issues arise from a program that links technology with issues of aging?

Identifying a process of technology transfer in the five case studies accents the implications of two very different organizations working together. The public-private organizational partnership yields an interesting platform for studying the provision of human service options, especially to the growing population of older people.

The research question in its statement above appears to cover a broad range of organizational considerations. Inquiry into the relevant issues, however, stimulates a vast scope for assumptions and predictions. Some of these were identified in the review of literature and expressed as tools for inquiry through the line of subsidiary questioning; these subsidiary questions extract more narrowed and specific aspects of organizational functioning in the sections that follow this discussion.

Yet, recognizing the importance of the broad primary questions foresees the need in ethnographic research to leave room for discovery of the unanticipated. The most outstanding issues to emerge from analysis of the site cases did not necessarily correspond to the expected factors represented in the subsidiary questions.

Specifically, the priorities in interview discussion items appear to relate to varied interpretations of time and bureaucracy. Linking these elements together extends directly
from the perceptions of the case site informants. In discussing the length of time involved in the transfer process, informants often attributed this experience to the organizational bureaucracy, especially in the Red Cross setting.

It is clear that, for many organizations, time extensions based in bureaucratic procedures become major complications in program development. An important feature of the findings from case studies, however, is that organizations have very different perceptions of bureaucratic processes. The expectations of one organization in relation to these processes can contrast greatly with those of another organization.

The contrasting expectations imply the advent of a period during which the organizations in a partnership must recognize and come to terms with each other's procedures and expectations. In terms of technology transfer, a critical component of organizational activity is the determination of any bureaucratic impediments. Essential to this aspect of the transfer process is resolution of what this means in terms of time expectations for achieving milestones.

In the case studies, length of time is a factor in feelings of frustration for many of the participants. In order to deal with this, participants made changes in anticipated ends, expectations for progress, and completion of major goals. For instance, the ARC Lifeline Pilot Project had
deadlines that were consistently readjusted and were altered many months beyond the original date for completion.

In the same vein of questioning, another finding from the case studies highlights the organizational implications of staffing patterns. The transfer process is markedly affected by the nature of staffing within the organizations involved. Tension between the two organizations in the case studies was initiated at times by the differences in the type of roles and people carrying out program-related tasks.

Specifically, roles within the private realm appeared to be more defined and limited to the assigned tasks of the position. In the public realm, staff members were often shared between departments and programs. Even when a position was defined clearly, for instance the LPM, other tasks and priorities arose that took precedence, especially in terms of disaster activities and fundraising, organizational mission. In addition, the public and nonprofit sphere is characterized by many volunteers who influence many critical aspects of the organizations’ functioning, especially volunteer boards. Employees often refer to the volunteer mentality that affects the functioning of an ARC Chapter and its staff.

Subsidiary Questions

1.a. Stages of technology transfer: Are there stages that represent a process of technology transfer in the case studies?

Establishing stages of technology transfer is not as easy as the stated subsidiary question might imply. The research
findings induce recognition of prominent linkages in the transfer process. Such linkages assist in any assumptions made about stages of technology transfer. The term itself--technology transfer--logically connotes this emphasis on linkages. Yet, definitions concentrating on the simple passage of knowledge from one organization to another makes the transfer process appear more static and temporal than is the reality.

A limited image of transfer as a simple process from source to target misses key considerations. It does not highlight the fluid process that encompasses transition and evokes ripples of effect throughout the surrounding environment. In fact, to conceive of the transfer of hardware and equipment technology without discussion of transfer of technology as knowledge is literally impossible. This became apparent in the case studies. Even the transfer of technology in the purchase of computer equipment is a weak process without the inclusion of support. Recognized as an important ingredient to a computer sale, this support represents a corresponding transfer of technology--that is, transfer of knowledge.

The case studies and findings illuminating stages of transfer accent clearly the importance of an inclusive understanding of technology to mean more than simply hardware and equipment. The vendor of the equipment to the case sites provided good technical support that received praise from some
of the ARC Chapters. Yet, interview comments implied that more support could have been used by the participants in order to implement more effectively the Lifeline programs.

As with many forms of equipment, the best tool for learning is hands-on training, as well as detailed simulations and documentation for implementation. As for the transfer process in the case studies, this transfer of knowledge and support was to be the combined responsibility of both partner organizations; it was assumed, though, that the private organization as vendor or owner of the hardware had most of the expertise for this process.

Several stages of transfer were identified in the case studies. Parts of these stages--on both ends of the transfer process--were unanticipated by both informants and researcher. Transfer clearly represented a broadened understanding of program initiation beyond original expectations. As well, a final stage identified in the process goes beyond mere implementation and operation of the program and includes extension and expansion.

An analogy that strikes at these implications relates to models in policy analysis. Technology transfer might be similar to stages of policy analysis, in which initial and final responsibilities supplement the model. In policy analysis, there is an initial stage representative of gaining the idea for policy or felt need. In addition, in some models of policy analysis, there is an added stage that goes beyond
those commonly conceived to include advocacy. For technology transfer, the initial stage must include this clarification of needs and goals. The final stage must seek the full potential of the process in the context of the relevant environment.

1.b. Functioning: How do participants define the technology (hardware/equipment, software/information, socio-technological) and what is their response to it?

Knowledge of the computer field combined with hypotheses from the review of literature led to the formulation of this subsidiary question. Although it was not one of the most significant questions to be pursued in the research study, it was certainly one that indicated potential complications in the ARC Chapters' experiences. Motivations in the research design and line of interview questioning were such that technophobia was expected to emerge as a factor limiting the successful transfer of technology in the case studies. However, the findings did not support this as a significant aspect of the case site experiences.

Cautious or fearful approaches to technology and computers have plagued the development of effective and efficient programs for a long time. The case studies show that this cannot be assumed to be a factor automatically entering in to public-private technology transfer for human service programs.

This research examines organizational incorporation of relatively simple technological networks. Fairly unsophisticated computer systems, recordkeeping and recall
software, autodialers, alarm activators, and communications devices are all part of the emergency response systems. For some ARC Chapters, acquiring this equipment and implementing the response network has entailed an innovative approach to service delivery.

Within the realm of the public organization represented in the case studies, the technology was not as simple as it might have been in other organizations or service realms. It is important to recognize this when considering the technology transfer process. It highlights that there was a transfer of very new and innovative equipment and knowledge from the private organization to the public organization. In turn, there was a form of technology transfer in the other direction. That is, the private organization also gained knowledge of the public organization, especially where bureaucratic procedures or processes were involved, and where issues in marketing hindered progress.

Despite the assumption that the case studies surely would exhibit difficulties responding to new equipment and computers, evidence of computer-phobia or technophobia was limited. Participants defined technology in a way that made the issue of technophobia a minor consideration. Although the ARC Chapters relied on the computers and other monitoring equipment to make the program work, the hardware was only a small element of the program's functioning.
Several of the staff and volunteers did experience difficulties mastering the use of the equipment. Also, the costs involved limited when and how much of the appropriate computer equipment could be obtained. Other public organizations will most likely have similar experiences. Yet, the ARC Chapters incorporated the technology as best they could and simply assimilated the adaptations deemed necessary for effective functioning of the equipment in the program.

Clearly, these case studies emphasize the relevance of a sociotechnological approach to understanding the processes of technology transfer. Configuration of systems, dealing with staff and volunteer anxieties, standardizing telephone jacks, and resolving installation technicalities were only some of the adaptations experienced at the case sites. In most cases, there was great potential for spin-off endeavors.

In terms of a sociotechnological approach, these ARC Chapters were aware of adapting to their environments. They had few difficulties with technophobia or, at least, not in a way that they felt was a problem. Perception differed on whether LSI and ARC should have gone beyond mere technical support, in terms of hands-on training, and more effective marketing intervention.

1.c. Leadership: Where is the central leadership of the program; how does it affect development and maintenance of the program?

Based on the directions from the literature review, leadership promised to play an important role in the
effectiveness of the technology transfer process. An interesting dimension at play here is the influence of overall organizational leadership on program development and other organizational processes. On the surface, the private organization in the case studies has stronger leadership; this is evident in the references made by LSI informants to the guiding influence of the founder of their organization on the quality of service they provide.

On the other hand, the American Red Cross at the national level has experienced troublesome times over the past years, characterized by uncertainty about and conflict in their overall leadership; the president stepped down nearly a year ago and the position has not been filled again as of this writing. This has perhaps been balanced by the fact that the organization does still have a single driving mission that serves to maintain direction. Exploring this aspect of leadership could contribute much to this research study, especially in light of the study's commitment to a sociotechnological understanding of the case studies. Unfortunately, it was not an element included in the direct inquiry and, consequently, can only be reflected on in a minor way.

Concerns expressed in the literature on cooptation in public-private partnerships suggest that central leadership belongs in the public sector for human service programs. In this way, the public or nonprofit organization continues to
ensure effective service delivery and responsiveness to the public.

In the case studies, the role of leadership turns out to be convoluted, at best. Negotiations took place between the public and private organizations involved in the partnership. Yet, ARC national headquarters had a tenuous hold on the ARC Chapters. In many ways, ARC-NHQ was necessary as an approval mechanism, providing security to several ARC Chapters who were concerned about the long-term acceptance of the ARC-Lifeline programs within the organization. However, ARC Chapters made their own decisions about whether to go ahead with the program or not. ARC-NHQ realized as the pilot project progressed that this was not a "pilot" for the ARC Chapters who were involved. ARC Chapters made significant investments in developing the Lifeline programs and, once they were in, remained committed to making the program work. Consistent with the organization of the ARC Chapters, the volunteer boards played a large part in guiding the ARC Chapters and their activities.

In the partnership arrangement, contrasts between the nonprofit and private organizations emerged. The private organization, in establishing the partnership, had to reconcile the differences between the two organization's leadership structures. This included the fact that the ARC Chapters operate as relatively autonomous entities in their program development efforts. Central management does not necessarily come from the ARC-NHQ, even though there is some
show of oversight there. For the purposes of the case studies, LSI provided the majority of central management and perhaps leadership for the ARC Chapter Lifeline programs.

This, in itself, is an interesting finding. It suggests that an outside vendor—a private, for-profit organization—provides leadership in a public setting. As far as programmatic issues are concerned, this is acceptable if it is a necessary ingredient to the technology transfer process and the support required by ARC Chapters to operate their Lifeline programs. However, in light of concerns about potential for cooptation, the finding suggests that the nature of the private organization influences in a powerful way the operations within the public, nonprofit organization. In this research, the private organization had an admirable value system, similar to some of the values within the nonprofit organization. For other instances of public-private technology transfer, however, this might not be the case.

Leadership is an important aspect of technology transfer in the type of setting described in the case studies. The case studies show that without strong central management and leadership, problems develop. The findings from the research indicated that it was the lack of central management that caused problems impeding the growth of Lifeline programs.
1.d. Motivators & Inhibitors: What factors seem to facilitate the process of technology transfer and what factors impede?

Despite the insinuations of this subsidiary question, motivators and inhibitors are not necessarily static factors in the technology transfer process. Motivation for launching and continuing ARC-Lifeline programs emerged through the actual implementation of these emergency response systems. Perceptions on the factors that influenced these programs' development intimated that something must be right or these program would not still be in business. So, in one sense, motivation comes from success, or at least from involvement in the process. It is the investment in the process and in implementation that accentuates the motivations that were originally present.

All of this suggests that the motivation for establishing partnerships and facilitating the transfer of technology actually goes beyond the most obvious benefits that can be enunciated. This leads to the conjecture that there must be more to the story; or possibly it is partly the fact that once you are in, you have to protect and justify your investment.

Stated motivations on the part of both organizations in the case studies insinuate that the participants believe in what they are doing. In many instances, public and nonprofit organizations are familiar with the experience of investing in programs that they believe are needed, whether or not those programs bring forth all of the promised benefits. To a
certain extent, facilitation of the transfer process is also found in the community support and networking that accrues.

Primary inhibitors for the participating organizations include the expectations grounded in differing processes for operation and program development. It is possible that an uncertain learning curve exists where these differences materialize. To differing degrees, the organizations involved invest in the necessary practice of becoming acquainted with each other's organizational operations and processes in order to acquire more realistic strategies and expectations.

Communication gaps in the case site studies and different definitions of tasks and process are apt to result in response to uncertainty about the ultimate potential for the program. For some, an ARC-LSI program could become an uncertain money-maker, at least in the way it was sold to the ARC Chapters. The original anticipation that it could bring a handsome profit within a year or two of operation was of initial interest to most of the pilot ARC Chapters.

The reality of a longer than expected period of time to reach a financial break-even point created the altering of perceptions about the real purpose of the program; it could not be considered simply a money-making venture but, rather, was a prominent addition to the range of programs providing services to local communities. To augment this situation, staff members' perceptions conflicted in terms of what the ARC Chapters should be doing as community linkages. For some, the
purpose of the program was never profit, even though profit was a prominent factor in most decisions to begin the ARC-LSI program.

**Primary Question #2:**
*What are the implications of technology transfer under conditions of public-private partnership?*

This primary question delves into the realm of the public-private partnership and the unique facets of technology transfer in this context. Public-private technology transfer requires effective partnerships facilitating such activity. Understanding the dynamics of the relationships and processes involved requires exposing the challenges and expectations that emerge. As suggested earlier, a large part of the difficulties are due to unrealistic expectations about the technology transfer process.

The transfer process between public-private organizations involves a period of inquiry of each other’s operations. This should go on to influence the absolute nature of interactions between the organizations. A period of learning denotes searching to understand the other organization before going further with the process.

This learning stage makes the transfer process more effective. In essence, the organizations cannot rely on the organizational similarities that create the illusion that the two organizations can work together. Rather, the public and private organizations need to look for the differences and
begin to address them in a way that fosters greater awareness of each other's organization.

More so than in primary question #1, this primary question is truly focused through the subsidiary questions. The emphasis on organizational values and commitment accentuate what is unique about the technology transfer process between public and private organizations illustrated in this research. The assumption here is that technology transfer has some exceptional components in the context of a public-private partnership. These can be explored adeptly in the subsidiary questions and discussions that follow.

**Subsidiary Questions**

2.a. Organizational Values: What values influence each organization and how are these manifested by staff and programs/service?

Providing effective and efficient service to the public requires a certain commitment and value orientation on the part of the organization. Where organizations work together and strive for these same goals—effective and efficient public service—it would be logical to assume that certain similarities exist in their value orientations. Yet, review of the literature calls into question this assumption when the organizations working together include a private, for-profit institution. Ideally, the hope is that the public or nonprofit partner maintains the set of values that uphold responsiveness to public needs. Yet, with both or all partners working together with the same goal of responsiveness
in mind, there is greater potential for maintaining high—or perhaps higher—standards for program and service delivery.

In this research, both partner organizations stated a ready obligation to quality of service. For the public organization, the responsibility is grounded in the mission statement and the interpretations of meaning from this mission that guides organizational actions. On the part of the private organization, this commitment stems from the influence of the organization's founder and the origination of the company as a response to identified human and social service needs, promoting assisted independence.

Commitment to quality service does not necessarily connote similar responses, however. The potential for conflicting definitions of quality service dilutes the appearance that organizations respond to similar values. An underlying value in an organization that promotes quality service does not mean that the organization has the same standards for this service as those of another public service organization. Gaps in communication or different terminology are sources for considerable dissension in an organizational partnership, especially when the partnership is between public and private organizations. Differing standards between public and private organizations' definitions of quality service can stem from the different levels of responsibility each organization bears for providing effective public response and service.
Findings from the case studies emphasized another factor that was not anticipated in the initial design and inquiry. There appeared to be an organizational tendency that could be rooted in a value system within the organizations; this observation appears to create a possible distinction between public and private organizations. The tendency relates to a perception of profit. Although the overall organizations themselves differ based on the profit-nonprofit distinction, the ability to accept entrepreneurial or for-profit endeavors within the scope of services becomes quite controversial.

Accepting for-profit programs does not appear on the surface to be a value issue. Yet, the nonprofit organization in the research case studies at times defines this as a value issue. For many of the staff in the nonprofit organization, the emphasis on nonprofit directions is taken as a cherished goal, even when it is not a realistic perception.

Maintaining a sharp distance between profit and nonprofit in organizations and programs might be characteristic of the societal interpretation of public-oriented organizations. For those who study and promote the interests of nonprofit organizations, this poses a difficulty in communicating to others the nature of nonprofit activity. The concept of aggressive competition for resources among nonprofit organizations proves to be difficult to describe to others outside of this field or who are not involved in some way with the nonprofit sector.
Relying on nonprofit response to local community needs characterizes the work of many public organizations. This extends to the point where any programs and services intended for profit are regarded with distrust and suspicion. The concept of recycled profits that are placed back into the local community should justify some for-profit programs. However, even this concept fails to compensate within some public and nonprofit organizations for entrepreneurial directions taken in program development.

A belief in the value of volunteers stems from the nonprofit emphasis. In some of the case site studies, the lack of initiative to develop an aggressive, rapidly growing program stemmed from the perception that such programs operate at the expense of quality service. Participants attributed this perception to the volunteer mentality of the staff and the organization in general. Part of this emphasis on the values in the nonprofit organization relate to the importance of the organizational mission that has a guiding influence for staff and activities.

Several situations suggest that ethical conflicts arise during the transfer process and that these emanate from a sense of commitment. Specifically, one ARC Chapter (case site one) indicated after the pilot project that they might consider offers from other cheaper vendors; this was the site that had not signed an original pilot project contract, although they participated as if a part of the pilot and
received the same subsidies and discounts provided by LSI for all pilot ARC Chapters.

The actions of this ARC Chapter provoked conflicting opinions among other participants; these reflected perceptions of ethics, legality, and ARC Chapter autonomy. Within ARC national headquarters, divided impressions of this situation represented opposite extremes. One position reflected the belief that this was an ARC PERS program and ARC Chapters could choose any vendor; as long as the contract with Lifeline exists, however, NHQ would promote this one vendor, while not stopping ARC Chapters from choosing another. The other prominent position taken by a staff member stems from the belief that the contract signed by ARC national should be respected by all organizational subunits, specifically ARC Chapters. The situation discussed here, then, was perceived by this participant as being clearly unethical.

For most participants, there was a commitment to both organizations in the case study partnership. Several contractual agreements prominent in the partnership suggest that some ethical conflicts might actually be legal issues. Yet, the case site studies indicate that such interpretations go far beyond legalities. This is especially true for public-private partnerships in delivery of human services. For those involved in the case studies, adherence to an implied code of conduct reflected the very mission of the organization and established an environment of trust, not only for those
internal to the public organization but those external to the organizational processes.

2.b. Program Goals/Incentives for Partnership: What incentives stimulated the involvement of each organization with the other?

The original incentives and goals for each of the two organizations in the case study public-private partnership were similar in nature. On a base level, one of the most prominent factors was the potential to make money through the partnership. This is a critical consideration for many nonprofit public-oriented organizations faced with the reality of limited and shrinking resources to be shared among a growing body of service-providing institutions.

At the ARC Chapter level, the profit goal was an undeniable consideration. However, the decisions to initiate or to maintain the ARC-LSI programs became more of a service issue, responding to local community needs. In general, the programs fulfilled a need for expansion of service to the community, with supposedly minimal aggravation anticipated in administering the program.

Added exposure and public relations served as an incentive at all levels of the organizations. For small ARC Chapters, monetary and image benefits were important factors in program development. Compatibility with the organizational mission and a comfortable fit within the scope of emergency response was another critical consideration. As well, the program held potential in long-range planning--to include 24-
hour response for some ARC Chapters, computer enhancements, and additional vehicles (a Lifeline van).

The incentives and goals for both of the organizations interconnect and remain fairly similar despite the public-private differences in nature and operation. Finances, reputation, and a broadened scope of impact in the local community prove to be influential.

What can alter, however, depending on the public or private nature of the organization, is the balance of these stated goals and incentives. Responsibility to the public need is a different ingredient than responsibility to shareholders. The private vendor in the case studies claimed commitment to quality service. At the same time, profit was obviously important to the organization. Consequently, goals set for ARC Chapter programs (for subscriber numbers) during the Pilot Project were high—too high for most of the sites to achieve.

Extending the pilot deadline did not necessarily mean that these goals were achievable during the anticipated time period. Even during the follow-up interviews, some ARC Chapters still resisted these goals. Observation of this difference is not intended as a judgmental statement but simply a recognition of the reality of the organizational functioning, especially as it impinges on the potential in public-private partnerships. While the private vendor in the case studies encouraged rapid growth, the nonprofit
organization, especially at the local community level, stood firm in the commitment to providing what they perceived to be appropriate response.

2.c. Commitment: Is there a sense of commitment on the part of participants to organization, program, community and subscribers; to what extent does staff commitment vary among these various groups?

While both public and private partner organizations expressed commitment to quality service, the staff and organizational levels that are in direct contact with subscribers manifest the deepest commitment to purpose. In the case site studies, it was the ARC Chapters that ultimately undertook this explicit commitment and were directly responsible to the people they served.

At the same time, the entire public, nonprofit organization remains cognizant of the importance of organizational responsibility to every level of its functioning. Programs and services carried out at the local community level reflect the shadow and guidance—however obtuse that might be—of the national or umbrella organization. In issues concerning liability, for instance, almost every participant in the process becomes accountable for actions taken. Ultimately, each organization in the partnership is involved to varying degrees.

As mentioned earlier in the context of motivation for participation, involvement and investment in the process and functioning of the program can enhance motivation to continue.
In the same way, it might be argued that commitment increases along with length of involvement. Uncertainty about the future of the ARC-LSI programs characterized the initial stages of transfer and development, as would be anticipated. However, uncertainty gradually diminished as participants came to terms with the program and its potential, altering their perceptions and creating fresh justifications for its ultimate purpose.

Commitment to the organization varies according to the participants. In the case site studies, some ARC Chapters expressed a strong commitment to their national organization and the network of supports it represents. Others involved in the pilot project took their own stand and responsibility for whatever directions they chose to take. This was apparent in the obligation to contractual arrangements made by the national organization. Among ARC Chapters, there appears to be an implied code of ethics requiring a duty to uphold and abide by these negotiations and contracts. Yet for some ARC Chapters, the commitment is to their own sub-organization and the local community they serve; hence, they chose to interpret their commitment to the national organization only so far as it promotes their ability to be responsive within their own environment.

For public-private partnerships, such ranges in degree and nature of commitment obviously imply highly contentious issues requiring negotiation and resolution of potential
conflicts. Varied definitions of commitment between the public and private organizations affect this situation. The private partner experiences a shifting relationship internally between the for-profit implications of the organization and the public-oriented concerns that facilitate a public-private partnership. It could be argued that the private organization's commitment to quality service can never reach the same expectations of the nonprofit organization; profit establishes priorities and definitions for the private organization.

Whether implications arise here for determining a "collective" commitment in public-private partnership remains uncertain. The mix between public and private definitions of their corresponding degrees of commitment affects both of the organizations. The private organization becomes more sensitive to the issues involved in providing quality service that is truly responsive to the local communities. The public, nonprofit organization learns to balance this quality service with the absolute necessity (in light of current resource limitations) of gaining a business perspective that emphasizes resource development.

The decentralized structure of the ARC allows ARC Chapters to establish their own standards for commitment; at the ARC Chapter level, this usually meant that staff promoted Lifeline programs with higher standards for quality service than emphasis on profit. In a public or nonprofit
organization with a more centralized structure, this could change. If ARC national headquarters had promoted a greater emphasis on rapid growth in the ARC Chapter Lifeline programs, research findings on commitment might have been different.

2.d. Barriers Between Private and Public: Did issues of conflict arise in initiating and maintaining the programs that can be attributed to a clash between private and public; what is the source of these conflicts (missions, values, profits)?

Several sources for potential barriers are alluded to in responses to preceding research questions. Communication barriers and inconsistency of terms between public and private organizations creates a formidable barrier that takes time to break down or at least to minimize. The conflict that causes barriers arises in the form of differing perceptions of what constitutes support to the administration of programs and who should be responsible for providing this support in program development and maintenance. Contract negotiations proved to be a prominent part of the case site studies and served to elaborate the differing perceptions of program support. Contrasting processes for decision-making between the organizations also formed a series of barriers, manifested in the form of impractical or unrealistic expectations; these expectations related to the nature of the technology transfer process and the course of program development.

The profit-nonprofit clash is possibly the most difficult barrier to be surmounted in the partnership between public and private organizations. Promoting a for-profit program in a
nonprofit environment raises numerous difficulties. Complications with program marketing and incorporation of this concept into a nonprofit framework experience resistance from staff members, local communities, subscribers, and other human service agencies and associations.

Case study findings illustrate the experience of one ARC Chapter caught in a situation posing a threat to the continuance of the ARC-LSI program. A successful program for this ARC Chapter relied almost completely on the ability to market and negotiate an exclusive arrangement for providing service to a local retirement community. However, a confrontation with the for-profit partner organization arose when the two inadvertently became competitors for the same service contract. Catalysts at the core of this predicament related to apparent ARC Chapter misinterpretation of the partnership negotiations and contract, as well as evident communication and program technology support gaps.

For each of the case site studies, partnership conflicts arose. Partnership conflicts included the confrontation described in the preceding paragraph, along with several other indications of dissatisfaction on one side or the other. This was manifested by distinct ARC Chapter behaviors: consideration of another vendor that might provide cheaper equipment, the perception that LSI sells hardware but is not in the business of providing service, the view that ARC Chapters were pushed too aggressively to adhere to
inappropriate goals, and experiencing many unnecessary difficulties getting the technological end of the program operational. None of these conflicts, however, posed an insurmountable barrier to the technology transfer process or the partnership between the public and private organizations. Reciting their occurrence highlights contributory elements to clashes between the partner organizations and potential difficulties in facilitating relevant processes.

2.e. Innovation: To what extent does the technology and the program become innovative when incorporating the public and private emphasis?

The public-private partnership is discussed in the dissertation as an innovative route for the nonprofit organization and associated programs. Unique characteristics in each of the partner organizations in tandem with their combined networking influence create the most innovative aspects of these case site studies. Innovation unfolds as these interactions expand on potential for the program and service. Specifically, the dynamics of a local community-based organization that deals directly with a wide range of people and networks of human service organizations fosters a prosperous environment in which to spawn the products of a technology-based private organization.

The program-related amalgamation between public and private organizations, then, evokes the means for developing more creative enterprises within the local community forum. Participants in the case site studies created ample
opportunities for spin-off from both technology and service. One of the most essential ingredients to this potential is the strength of local community, the networking of people working together to formulate innovative solutions to contemporary problems.

Professional concerns relating to the features of an aging population bring to the forefront the lack of attention in policy and program development focused on long-range planning efforts. Eliciting a more innovative realm characterized by spin-off and adaptations should be a priority in this decade. The case site studies indicate that putting simple technology-based programs into local communities opens the door for exciting program development and more effective programs to emerge. This observation could mean that learning to "cope" with the technology transfer or innovation creates a climate that facilitates other innovation. The most likely factor, though, is that environments already conducive to innovation can bring new meaning to simple technology-based programs. In the case studies, ARC Chapters create innovative solutions to local community needs or problems, even though it might be argued that this innovation is limited at the national level.
Primary Question #3: What is acceptable in terms of promoting to the public a new service or product of the type described in the case studies?

Definitions of acceptable public service vary depending on the environmental and local community characteristics. Determining acceptability often must remain as close to the community-contact organizational level as possible. In the case site studies, the ARC Chapters strove for the most appropriate program and range of services offered to the people in their local communities.

Part of this task of providing appropriate service involved the redefinition of what emergency response does and should mean in the context of external and internal environment. Protocols for the type of response assured through the alarm system varied by ARC Chapter. Response protocols ranged from assurance of life-saving support to simple personal reassurance. Some areas emphasized to the subscribers that the ARC-LSI program could not be relied upon as life-saving, in light of the limited 911 and other emergency crisis intervention systems available in that locale. In other areas the service remains very much a life-saving response network that pulls together a reliable team of emergency personnel equipped to deal quickly and effectively with medical or other crises. Personal assurance was another aspect of the system's response; ARC Chapters decided the extent of such assurance, whether this meant answering any
"chat" calls that might come in or allowing only "real" emergency calls to come through the network.

Certainly, one important aspect of appropriate service deals with the commitment to quality over quantity. This was a key factor that served to limit the growth of several programs in the case site studies; striving for appropriate service sometimes changes the very nature of an entrepreneurial program. Commitment to quality is undoubtedly a determinant affecting other public organizations learning to deal with a public-private partnership and any potential financial benefits that could accrue by adopting an aggressive operating approach.

Acceptable service influenced the equipment and hardware technology used in the response network system. The ARC Chapters were aggressive in their strategies for adapting the technology to suit the needs of their own local communities. Despite the initial training and orientation by ARC and LSI, the ARC Chapters decided at the local community level what was acceptable for them to be providing to the people they served and how best for the technology to address these service needs.

**Subsidiary Questions**

3.a. Entrepreneurial Approach: How is this program an example of an entrepreneurial direction and how is this perceived by the participants?

Negotiating a model between ARC and LSI for ARC Chapter program development incorporates an entrepreneurial thrust.
In one sense, the ARC Chapters already are entrepreneurial in their ability to balance resources with programs and services. However, this is not necessarily the way that staff members perceive their activities or the mission of the organization. Profit and entrepreneurialism are attributed by many participants in the case site studies more to the private business world that aggressively follows the most lucrative directions for success and competition. In the nonprofit realm, ideals maintain a more modest demeanor that lays claim to effective response to human and social needs within local communities.

The business emphasis of the private partner organization balances the nonprofit emphasis and provides a beneficial influence in the case site studies. Such an influence is at the heart of the model for program development incorporated into the case site experiences. Yet, the ARC Chapters redefine this emphasis so that it becomes somewhat less entrepreneurial—at least, in their eyes. The approach taken to marketing illustrates this point; ARC Chapters marketed the program much less aggressively than LSI would have liked. In essence, then, the program remains an entrepreneurial approach within the ARC environment; although it is an approach that appears to experience much resistance from this nonprofit environment.

Observing a public-private partnership produces a picture that includes a certain amount of denial. Often, the degree
of entrepreneurialism found in public-oriented programs is disavowed within public, nonprofit organizations. Emphasis on effective programming in the case site studies ensures a very aggressive approach in responding to local community needs; this approach often defies attempts to alter the process. The development of an ARC-LSI Indigent Program represents a most aggressive and entrepreneurial campaign to garner the resources and investments necessary to provide a host of services to a wider range of people.

3.b. Insurance of Service/"Escape Clauses": What assurances are available to the subscribers and community to insure that the service will be maintained; unlike the private sector, is it possible for a public-oriented organization to back out of a program or service, for whatever reasons?

Assurance of service is a necessary corollary to the commitment of public organizations to the people being served. Continuity of services was a concern in each of the case sites, especially in light of the uncertain profit generation potential for the new programs. The ARC-LSI partnership program at first was called a pilot project; potential subscribers perceived this title as creating an uncertain future in the long-range stability of the program.

Assurance of service becomes an individual issue at the local community level. ARC Chapters had to make their own decisions, as guided by the volunteer boards, on whether to fully adopt the programs regardless of future decisions made by NHQ. Discontinuing the program was very much a possibility at one case site until long after the pilot project had ended.
Despite the responsibilities of a public organization, it is unrealistic to expect in these times of constrained resources that responsiveness only means providing what the public needs without consideration of the organization's health. Programs that do not show a balance between gains and service are not necessarily worthy of continuance in the face of great expense to the organization. How these public organizations deal with such situations undoubtedly varies dependent on their mission, goals, and available resources. Yet, the reality of the public, nonprofit realm is such that the limited resources force careful consideration of appropriate programs if they cannot keep pace with the economic implications of the service.

Assurance of service at the ARC Chapter level forces decisions about program development independent of the position taken by the national organization. For the private partner organization, assurance of service is less of a problem; it is dealt with through the internal Lifeline Central, the central monitoring station that can field emergency response calls from any region of the country. In the partnership arrangements, the case sites also gained from this security measure; in case of possible discontinuance of a program, Lifeline Central represented some measure of continuity of service for the subscribers already receiving emergency response service.
3.c. Community Contact -- Contribution to the Community: To what extent does the program reflect the needs of the communities being served?

Local community contact represents the level at which the commitment to the public remains. Program coordination from an upper organizational level creates a stronger likelihood that this commitment could be thwarted. The case site studies did not present a stunning illustration of a rapid-growth program. It is possible, however, that the groundwork has been laid for these programs to experience a faster pace of development as they become adapted to the local environment and the two partner organizations become more comfortable with each other.

Community contact and characteristics influences many aspects of discussions in previous sections of this dissertation chapter. In fact, this is a highlight of the public-private partnership--the ability to have a generic model of technology transfer and program development become so completely adapted to a local community that it looks entirely different from the same model implemented elsewhere.

3.d. "Creaming" with two classes of subscribers--Commitment to Poor: Does an entrepreneurial program like this one result in an imbalance between those who can afford the service and those who cannot?

For the public partner organization, responsibility to all people in the community who require a service means that special attention must be focussed on those who are less capable of acquiring the services. Despite the stated
intentions of each ARC Chapter in the case site studies, not all maintained the commitment to provide waivers to a percentage of subscribers unable to afford the ARC-LSI program services. Documented need and medical referrals are prominent measures for responding to local need at one case site and the development of the Indigent Program at another site represents a strategic response to need in the local community.

The fees for ARC-LSI programs are not as much as those required by other vendors. Lifeline has reasonable fee structures for their services, although the ARC Chapters have flexibility in how they implement their fee structures. Yet, these costs are still steep for many potential subscribers who live on fixed and limited incomes. Generation of greater resource banks for the programs to instill better subsidy capacity appears to be a key to true responsiveness.

**Implications for Further Inquiry**

Extrapolation of the findings to their full meaning involves responding to research questions, then contributing in whatever ways possible to relevant theories and models. To a certain extent, the findings from this research are constrained by the specifics of the case site studies. That is, the findings speak only to those situations and must be treated with caution in applications to any other settings. Yet, these data inform current theory and assist in advancing modifications to such theory. This section of the dissertation serves to reflect on such implications.
The use of *The Ethnograph* as a tool for data analysis has implications for further research. In the dissertation case studies, this tool allowed for multiple searches and comparisons of all data entered into the appropriate files. Familiarization with the software does take time and effort—potentially discouraging to some first-time users. In addition, the coding process relative to the specific research can become unnecessarily complex the first time it is done; the amount of coding produces so many potential categories for searches that it can become overwhelming. However, identifying themes emerged and writing summaries based on searches provides enough information to cover the most pertinent findings from the research. Data searches are possible for any combination of concepts, themes, or research questions relevant to analysis and conclusions. In this sense, it is a highly useful tool that facilitates a rich interpretation of data from ethnographic case studies.

Up to this point, findings have been applied in various degrees to the research questions; these inquiries anticipated phenomena drawn from theory and findings in the relevant literature. Case site studies from the dissertation research indicated a wealth of information on the transfer process, while not completely answering all of the questions about leadership, organizational values, and responsiveness to the local communities. In at least one instance, the findings implied that the expectations of that particular inquiry were
simply misguided; that is, the issue of technophobia (research question 1.b) did not appear to be as important to the technology transfer process as was anticipated.

The socio-technological approach to conceptualizing technology induces the incorporation of cultural factors into the equation. Technology and associated processes become culture-dependent considerations. In the case studies, they are culture dependent within the realm of circumstances surrounding the public-private partnership, the organizational and local community environments, and especially the interaction between technology-based service and the needs of the aging, who were most prominent in the subscriber base.

Experiences documented in the case site studies are apt illustrations of technology as the expansion of the realm of practical human possibility. The emergency response systems and associated support incorporated at each case site definitely qualified as expansions to the capability for providing service in local communities. Defining of technology among participants registered this orientation. Technology was not perceived as simply hardware or equipment but as an entire system that allowed for networking and linkages previously difficult or impossible to achieve. Facilitating this technological system and processes involved adaptations and extensive organizational manipulations to make the system functional within each specific environment.
This element of adaptation of culture-dependent technology to other cultural settings reflects the import of hypotheses from the review of literature. Since technology is culture dependent, the transfer of technology must embody some elements of transition to create successful incorporation and implementation. That firms sell discrete technology, not integration comes across clearly in the case site studies. LSI provided as much support as they deemed necessary. Yet, there was still an element of support and integration into the public realm that was missing from the private vendor's capacity to provide.

The above finding, coupled with hypotheses from the literature, speaks clearly to two dangers in public-private partnerships and technology transfer. There is often limited understanding of the adaptation component of transferring culture-dependent technology, especially between two different environments—public and private. Also, the differences between these two realms—public and private—limit ability of many private organizations to provide appropriate supports facilitating integration of technology into a relatively unknown (to the private organization) public sphere.

Applying the research findings to models of technology transfer posited in the literature serves to both confirm and challenge the elements heretofore considered necessary to the process. Specifically, this research suggests that the demands of a transfer process in the public realm include
several elements that are not always considered essential to the transfer process. The case site studies cannot provide definitive answers to questions of this nature. However, they can inform on the potential for other relevant factors to emerge in the public nonprofit sphere and the need to address these issues with further inquiry.

Channels or networks of communication, time factors, and social systems all are evident in the technology transfer processes studied in this research. Manifestations of these elements arose in several situations, the most prominent being the promotion of effective marketing techniques within the public realm. In addition, the inclusion of understanding in models of technology transfer is confirmed in the findings. Without attempts to build on understanding of the emergency response network and potential within the local communities, the technology transfer process surely would have been a complete failure.

Organizational factors suggested in the literature included technological gatekeepers and organizational design conducive to effective transfer efforts. Although not established conclusively, the import of organizational design did arise in the findings. This entered the picture with the suggestion that ARC does not have the appropriate structure to facilitate effective incorporation and adaptation of culture-dependent technology. The decentralized level of decision making and authority and uncoordinated functioning of subunits
contributed to an environment unsupportive of transfer and innovation, at least at the national level. The relevance of technological gatekeepers is perhaps an area that does not emerge clearly enough from findings in order to reflect on the organizational import of such a concept.

In addition, the temporal pattern referred to as the S-curve for diffusion is not clearly established through the case site studies. This, in particular, is a factor that emerges through time. Although the case site studies did cover an extended length of time, the S-curve likely will emerge (or not emerge) as the ARC-LSI programs continue to grow. Changes taking place in the case sites and the functioning of the two partner organizations do suggest, however, that increasing and decreasing levels of transfer, innovation, and diffusion might be identifiable as a temporal pattern in coming years or months.

Leadership is another realm where the case site studies inform only in minor ways to established theory and models. Again, the decentralization of the nonprofit organizational structure and the communication disparities between public and private partners highlight the tenuous leadership--not only programmatic leadership but overall organizational leadership. Certainly, leadership emerged as a factor that could be important to the process but further inquiry and comparative analysis are required before making any leading statements about this potential. The suggestion that the private
organization provides stronger leadership potential is an interesting finding that could be important to subsequent research.

Most important to the findings is their ability to go beyond these factors suggested above as being important to technology transfer. The case site studies indicate that, despite the recognition of technology transfer as a process of linking, it is necessary to consider the nature of the linkages being promoted. Technology transfer is not simply the conveying of information or artifacts from a source to a target—numerous linkages must be identified, each with their own characteristics between source and target. The suggestion being made here, then, is that technology transfer in the context of public-private partnership and service to the public becomes a multi-dimensional process—a complex system of multiple linkages and multiple transfer processes. Obviously, such a model becomes highly complicated but if technology transfer is expected to follow a more simple model, then the process is fraught with potential for failure. In the public realm where responsiveness is a key issue, this is a risk that most organizations cannot afford to take.

Although technophobia does not enter as an influential component of the process based on case site studies, the role of mission does. In the transfer process, few models include or make explicit the impact of organizational mission or philosophy of operation. The role of moral responsibility in
the transfer of technology highlights the potential for contrasting missions or values among participating organizations.

Research findings are divided about the role of mission in the case site studies. For some participants, interpretation of mission becomes a strong guiding influence in decision-making and service. This is perceived in some instances to represent a narrow or limited view of mission that stunts the development of highly innovative responses to local community needs in the form of program development. At the same time, the capacity of the mission to be interpreted in any number of ways by subunits in the organization also suggests a very broad mission statement that facilitates interpretations responsive to the characteristics of local communities.

The above discussion reflects very contrasting perspectives on the role of mission in organizational decisionmaking and activities, especially in the context of public-private technology transfer. Whichever position is taken, it suggests that mission is an important consideration worthy of further research in order to develop more representative models of technology transfer. In addition, comparative studies between different aspects of public technology transfer are necessary—for instance, between the defense realm where so many transfer models have been developed and the realm of specific human service programs.
Finally, as suggested in the context of a model similar to models of policy analysis, advocacy becomes an important addition to the understanding of technology transfer. Without the appropriate support in the internal and external environment, technology transfer can become an impotent process. The case site studies indicate the importance of changing health insurance systems and resource supports for PERS programs. These are just a couple of the external factors that promote the development of stronger ARC-LSI programs. It is likely that reexamination of many illustrations of technology transfer already promoted in the literature would capture the advocacy component as a critical piece in successful transfer efforts.

The case site research provides many suggestions and hypotheses for technology transfer in public-private partnerships that aim to provide effective services and programs responsive to an aging population. The approach taken in this research also suggests an important consideration for technology and aging. This relates back to the charge made in the review of literature that the realm of studies on technology and aging are in need of a guiding force. This research indicates that including more of an organizational emphasis on the work being done might be one way to categorize and promote effective technology and aging programs. Concentration on the unique aspects of the technology transfer process needs to identify what are the
most important linkages in technology and aging and how these linkages create a network of processes for transfer. Culture-dependent technology transfer does not imply that the "culture" is simply the broad concept of aging. Within aging, there are numerous organizational contexts and differing value systems that guide programs and services. Recognition of this diversity is a critical step in breaking out of the "technology and aging" conundrum. Technology transfer becomes a much more complex series of interactions than commonly is anticipated.

The above concern for the target population provides the concluding comments and insights for this dissertation. One of the primary issues for inquiry, based on the literature in organizational theory, deals with cooptation. Cooptation of public responsiveness emerges as potentially harmful in a technology transfer process between a private organization and a public, nonprofit organization. Given the characteristics of the case sites in this research, cooptation is not an inevitable result of public-private partnership.

The ARC Chapters are reminded constantly in their everyday interactions with the local communities that responsiveness to the public is a vital component for the continued existence of the ARC Chapters. In addition, the private vendor chosen to participate in the ARC PERS project represents an organization that has many similarities with the values and functioning of the ARC. However, if the ARC
organizational structure had been more centralized, there might have been stronger leadership from the ARC national headquarters. The national ARC investment in the partnership with LSI would then be combined with the profit motivations on the part of both of these partner organizations. In turn, the effect of these changes on ARC Chapters might be increasing emphasis on profit and altered definitions of quality service or responsiveness to the public. Organizational structure and leadership in the case studies provide evidence that a different public and private organizational mix might have resulted in cooptation of responsiveness. Given the characteristics of other organizations, cooptation is definitely a potential in public-private partnership and transfer of technology.
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Appendix A
Data Collection

LIFELINE DATA COLLECTION FORMAT

Chapter:
Location:
Staff:

1. General description of how the Lifeline Personal Emergency Response System
   is being operated
   A. Hardware/Software - Type/Quantity
   B. Process Being Used in Chapter to Operate System
   C. "Technophobia" (community, users, chapter, staff)?

2. Economic and financial indications of the Lifeline system's progress
   A. Cost of Operations
      1) Capital Costs to Chapter
      2) Staffing Costs
      3) Overhead Costs
   B. Subscribers' Cost Structure
      1) Capital
      2) Monthly
   C. Chapter Revenue Sources
      1) Lifeline Subsidies
      2) NHQ Subsidies
      3) Chapter Funds (Source + Amount)
      4) Other Revenue Sources

3. Characteristics of people using Lifeline
   A. Health Status
   B. Socio-economic
   C. Geographic Locations
4. Performance data being maintained (or planned) by the Chapter
A. Financial Data
B. Client Data
C. Marketing Data
D. Other Operating Data

5. Chapter marketing strategies for Lifeline.
A. Describe Strategy
B. Enrollment Rate by Potential Client Target Group
C. Retention

6. Chapter Data
A. Board participation in planning
B. Staffing - relative use of paid vs. volunteers
C. Funding requirements
Appendix B

Letter and Survey to ARC Chapters

October 7, 1988

Ms. (Lifeline Program Manager)
American Red Cross
Chapter

Dear,

During the past several weeks, each of the pilot chapters was contacted to obtain input on the data elements being used in the Lifeline evaluation. Your input was helpful in deciding whether or not the information we need is available from each of the chapters. Thank you for taking the time to comment on the format.

The next step in the evaluation is to have each of the pilot chapters compile the information and statistics relevant to their own Lifeline program. Attached is the format for this data collection. Please complete the entire range of questions in order to allow us to assess the success of the American Red Cross-Lifeline Demonstration project. If possible, we would like to obtain this information within the next couple of weeks so that we can review it at the meeting on October 28th here in Washington, D.C.

Most of the forms are self-explanatory, although a few brief instructions follow to assist you in completing the attached forms. A. American Red Cross-Lifeline Demonstration data forms:

1. Chapter Budgets

In order to assess the differences between each of the pilot chapters, we are asking for limited information on total chapter budgets and staffing patterns for the most recent completed budget year. This information will allow us to place the Lifeline data within the context of the individual Chapter budgets. Please record the number of employees and volunteers for the chapter, as well as the number involved with the Lifeline program. Attach a separate sheet if there is additional information you feel will be important to the evaluation we are performing.

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2. Lifeline Annual Operating Expenses

On the expense side of the ledger, we need your actual expenses over the period from the inception of Lifeline until the present time. Please indicate the time periods involved in the various expenditures; for example, if staffing expenses were incurred for several types of staff, but for different time periods, indicate the time periods for each. We want to be able to project costs over a full year.

3. Lifeline Income

We would like you to provide a quarter by quarter breakdown of your income from Lifeline in the categories indicated. These data will show the timeline associated with the buildup in clientele.

4. Marketing and Operating

We ask on Page Three for basic information about your system configuration, number of units of each type, etc. and for some marketing data, which we equate mainly with presentations or direct mailing of information about Lifeline. Chapters differ substantially in the amount of formal marketing and some have received more client referrals than others.

5. Clients

We next ask for some information about who is subscribing, why they are subscribing, to the extent that you know, and the rates at which they are both subscribing and dropping out. Finally, in this area, we would like to know the activity level of the service itself... how many calls of each type, etc.

6. Client Satisfaction

We have attached a client satisfaction survey instrument which you can use during your next "monthly check calls". It is quite simple and should not require much time. Hopefully, it will be helpful to you. You can use the form itself to summarize the responses.

Please attempt to have these questions asked when the next series of "check calls" is carried out for your chapter's program and provide us with the tally of total responses to each question.
Should you have any questions about completion of the forms, please call me at (301) 229-0706 or Ruth Bruer at (703) 538-5512.

It would be helpful if we could get the completed forms several days prior to our meeting on October 28th. I hope to see you then in Washington.

Thank you for your assistance.

Sincerely,

Richard E. Schmidt
# AMERICAN RED CROSS - LIFELINE DEMONSTRATION

**Chapter Name:**

**Address:**

**Lifeline Program Manager:**

**Tel. No:**

### ANNUAL CHAPTER BUDGET

<table>
<thead>
<tr>
<th>TOTAL: $</th>
<th>% United Way:</th>
<th>% Contracts/Grants:</th>
<th>Total Lifeline Budget: $</th>
</tr>
</thead>
</table>

**In what Chapter organizational unit has Lifeline been located?**

**WILL LIFELINE remain in its current organizational location when it is no longer a pilot project?**

- [ ] YES
- [ ] NO

### LIFELINE ACTUAL OPERATING EXPENSES SINCE STARTUP

#### LIFELINE STAFFING EXPENSES:

<table>
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<th>Position</th>
<th>(Avg. Hrs/Wk)</th>
<th>Total Salary: $</th>
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</tr>
</tbody>
</table>

**TOTAL STAFFING EXPENSES:** $ 

(All salary expenses since startup)

#### OPERATING SUPPLIES & EXPENSES

(Installation supplies, telephone urban, etc.) $ 

#### CONTRACT EXPENSES

(A-D, Answering Service for after-hours monitoring) $ 

#### OTHER DIRECT COSTS

$ 

#### OVERHEAD EXPENSES

$ 

**TOTAL OTHER EXPENSES** $ 

#### TOTAL LIFELINE EXPENSES (Specify Time Period)

(Stating plus all other expenses) $ 

---

*Note: The form contains blank spaces for data entry and is designed to gather information about the Lifeline Demonstration project, including budget details, Lifeline program logistics, and expenses incurred.*
LIFELINE OPERATING SYSTEM

Number of RC 400s = _____________

Number of PCs = ___________ PC Type = ___________

Number of Home Units:
- Total inventory = ___________ *
- Total installed = ___________
- Total in Disrepair = ___________

* No. of "Voice" Units = ___________
No. of non-"Voice" Units = ___________

Lifetrak in use:
- No

LIFELINE MARKETING ACTIVITIES

LIFELINE PRESENTATIONS

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<thead>
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<th>Type Audience</th>
<th># Presentations</th>
<th># People Reached</th>
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<td>Hospitals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soc. Svc. Agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior Centers/Clubs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Clubs/Assoc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Organiz.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of Direct Mailings = ___________

Number of referrals (Specify Number by referring organization)

Media Coverage: (Specify Dates and Type of Coverage)

Other Marketing Contacts:
**AMERICAN RED CROSS - LIFELINE DEMONSTRATION**

Total Number of Lifeline Subscribers Currently Being Served: 
Date of First Lifeline Subscriber: 

<table>
<thead>
<tr>
<th>Reason for Subscribing</th>
<th>Number by Reason</th>
<th>Referral Source</th>
<th>Number by Referral Source</th>
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<tr>
<td>HEALTH CONCERNS</td>
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<td>FAMILY</td>
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<td>PERSONAL SECURITY</td>
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<td>SELF</td>
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</tr>
<tr>
<td>SAFETY CONCERNS (e.g., fire, etc.)</td>
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<td>AGENCY</td>
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<td>OTHER REASONS</td>
<td></td>
<td>HOSPITAL</td>
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<td>PHYSICIAN</td>
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<td></td>
<td></td>
<td>OTHER SOURCES</td>
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**LIFELINE SUBSCRIBER DATA: PART 2**

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<th>Age</th>
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<td>TOTAL LOSS MOBILITY</td>
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<td></td>
<td></td>
<td>(Cancer, Stroke, etc.)</td>
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<td></td>
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<td>LIVING ARRANGEMENT</td>
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<td></td>
<td>MALE</td>
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<td></td>
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<td>LIVING WITH SOMEONE</td>
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<td><strong>SUBSCRIBER DATA:</strong></td>
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<tr>
<td># INQUIRIES</td>
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<td># INSTALLATIONS</td>
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<td># SUBSCRIBERS LOST:</td>
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<td>Died</td>
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<tr>
<td>Dissatisfaction</td>
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<tr>
<td>Other</td>
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<tr>
<td># CALLS - ALL REASONS</td>
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<tr>
<td># CALLS AFTER HOURS</td>
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<td>(Chapter normal Hours</td>
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<td># EMERGENCY CALLS:</td>
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<tr>
<td># Emer. Sys. Response</td>
<td></td>
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<tr>
<td># &quot;Responder&quot; Response</td>
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Appendix C

Subscriber Satisfaction Survey

LIFELINE SUBSCRIBER SURVEY

These questions are to be asked of each subscriber (or a sample selected by the Chapter) during the monthly "check calls". The questions have been kept relatively short so that the person placing the call will have a minimum amount of work recording the responses of subscribers.

Please ask the subscriber the appropriate questions and record the total number of subscribers giving each response.

1. In general, have you been satisfied with the Red Cross/Lifeline program since you first became a subscriber?

   Total subscribers responding "yes" (satisfied): ______________________

   Total subscribers responding "no" (dissatisfied): ______________________

   If the subscriber said "no" and is dissatisfied with the service, please ask the following question:

   If 'no,' what is the reason for your dissatisfaction?

   a) Cost ___________________________________________________________

   b) Staff __________________________________________________________

   c) Equipment malfunctions _________________________________________

   d) Don't understand how to operate ___________________________________

   d) Didn't receive appropriate emergency attention
      when required ____________________________________________________

   e) Other (please specify other responses and the total number of subscribers who gave the response)

   _________________________________________________________________

   _________________________________________________________________

   _________________________________________________________________

   _________________________________________________________________

   _________________________________________________________________
2. Have you ever had to receive emergency attention through the Red Cross/Lifeline system?

Total subscribers responding "yes": ______________________________

Total subscribers responding "no": ______________________________

If 'yes,' were you satisfied with the service you received in terms of the response provided by Red Cross in alerting emergency responder (e.g. first responder, doctor, ambulance, or 911)?

Total satisfied ("yes"): ______________________________

Total dissatisfied ("no"): ______________________________

If Dissatisfied, what was the reason for your dissatisfaction?

Response Time: ______________________________

Other (Specify)

______________________________

______________________________

______________________________

______________________________

______________________________

______________________________
Appendix D
Meeting Agenda

LIFELINE PROJECT STATUS MEETING

(The following are issues covered in the meeting at American Red Cross National Headquarters in Washington, D.C. The meeting was intended to bring together representatives from the ARC-Chapters operating Lifeline programs to meet with one another and to meet staff from headquarters, discussing issues of concern to them. In addition, this meeting was a forum for gathering more data from the ARC-Chapters for evaluation purposes and also to supplement the dissertation case studies).

1. BRIEF REVIEW OF EVALUATION STATUS - Schmidt/Bruer

A. KEY MEASURES

Financial:
- Revenue by Source
- Cost by Category
- Break Even Point
- Cash Flow
- Capital

Marketing:
- Contact Presentations
- Mass Media
- Referrals
- Inquiries
- Closures (Inquiries to Installations)

Clients:
- Client Characteristics
- Relative Satisfaction
- Number Leaving
- Reasons for Leaving

Service:
- Number of Clients
- Number of Calls
- Number of Emergency Calls
- Number of After-Hours Calls
- Average Response Time (from Call to Contact)

System:
- Number of Home Units in Inventory
- Number of Units Installed
- Number of Units in Repair
- Mean Time to Failure
B. SUCCESS DETERMINATION

Positive/Balanced Financial Picture
Rate of Growth/Potential
Satisfied Clients
Innovation/Initiative

Assumption is made that the service itself is compatible with Red Cross mission and status in community.

2. STATUS OF PILOT PROGRAM - Spitz

Current “End of Project” Schedule
Financial Implications
Price of Equipment
Payment Schedule
Maintenance Agreements
Lifeline Role

3. STATUS OF NATIONAL DEVELOPMENT BANK - Spitz

Timetable
Limits on Amounts
Payback Provisions
Procedures

4. STATUS OF NATIONAL LIFELINE PROGRAM - Spitz

Process
Likely Outcome
Role of Headquarters
Role of Operations Headquarters
Role of Key Chapters
Role of Lifeline
If not a National Program, What Then???

5. CHAPTER COMMITMENT - Chapters

Financial Arrangements
Chapter Network
Appendix E

Recommendations to ARC and LSI from the Project Evaluation Contract

1. National ARC/PERS Program
Evaluation of the ARC/Lifeline pilot project supports the proposal that ARC adopt a PERS National Program. Initiation of this type of program should be carried out with strong support from National Headquarters, specifically in terms of coordinating and standardizing some administrative aspects of program operations.

2. PERS Vendor Support
Lifeline Systems, Inc. (LSI) continues to be a strong vendor for a partnership arrangement in which ARC offers a PERS program through Chapters. LSI has provided strong commitment, reasonable fees, high quality equipment, marketing materials, replacement arrangements, and technical support to Chapters. Continued partnership between ARC and LSI appears to be a sound idea. However, such a partnership arrangement should include at least biannual negotiations by Headquarters regarding capital acquisition prices, maintenance agreements, marketing expectations, payments, deadlines, and the degree of support that can be expected from LSI to Chapters in the future.

3. Options for After-Hours Monitoring
Since most Chapters have 24-hour in-house monitoring as a goal for their Lifeline programs, the development of a central response unit located through Headquarters would be an unwieldy option that would likely only be used for limited periods of time by Chapters initiating their programs. Each chapter has the ability to negotiate contracts based on its own needs using local answering services, other neighboring Chapters, or Lifeline Central.

4. Computers
Although the Lifeline program can be operated manually without the use of personal computers and software, the potential for tracking data and planning effectively is enhanced through a fully computerized system. If Lifeline is adopted as a National Program, Headquarters should insist upon adoption of the fully computerized approach. However, small Chapters will need assistance in obtaining the equipment and software and Headquarters can be helpful here, by arranging to support Chapter capital acquisition through the National Development Bank (and perhaps even by helping to arrange the purchase itself through bulk purchase agreements.)
5. Standardized Documentation
All ARC Chapters operating a Lifeline program should adhere to a formal system of record keeping which suggests strongly the need for a standardized data set. At the very least, data should include characteristics on subscribers as outlined in earlier sections of this document, in order to justify the service being offered and bolster efforts for grant seeking, resource development, and initiation of spin-offs. In addition, detailed accounts of system activity (inquiry calls, referrals, regular and emergency calls, ARC response roles, and so on) should be documented monthly by Chapters for their own use and to support any requirement for development of an organization-wide picture of program growth and response. Finally, Chapters should maintain accurate cost data on the Lifeline service to establish more accurate information regarding the ability of Lifeline to generate revenues beyond cost, which can be used to support other Chapter activities. No need is envisioned at the present for any system of reporting to Headquarters, but Chapters themselves might need or want information about the comparable experiences of other Chapters and a standardized approach to data would be helpful.

6. Marketing
Intense effort should be placed on the development of aggressive marketing techniques that are compatible with ARC philosophies and draw upon other target populations. Chapter comfort with aggressive marketing is low, perhaps explaining the relatively slow pace of subscriber enrollment. In order for Chapters to penetrate the community to provide an effective and valuable service, this type of marketing will be a necessity. Marketing also will be enhanced through more active participation by Headquarters in developing promotional materials, facilitating a clear understanding of the ARC mission as it relates to the Lifeline program, and assisting in development of networks of organizations that can serve as referral entities.

7. National Development Bank
The purpose and potential of the National Development Bank should be promoted among Chapters. For those already involved in offering a PERS program, this source of funding will make the difference in how rapidly they are able to expand the program so that it becomes financially stable, as well as capable of providing needed service to the community. In addition, the availability of resources through the NDB and receptiveness of the NDB to Chapter Lifeline programs will be a strong factor for encouraging other Chapters to develop similar PERS programs.

8. Fee Structures
Although subscriber-paid fees are reasonable for ARC/Lifeline service when compared with similar cost structures employed by
other PERS vendors, these fees still are high for many of the people ARC Chapters want to reach through this program. Other target populations may have the means to afford the service. However, ARC should explore alternatives for offering the PERS service and operating the system at more reasonable rates, making it more accessible to a larger group of people.

9. Volunteerism

Since the American Red Cross is a volunteer-dependent system able to incorporate volunteer resources in numerous innovative and highly valuable avenues, the ARC/Lifeline program should represent a similar emphasis in staffing and resource development. Although volunteer assistance is of as much potential value in providing Lifeline as in other Red Cross services, the use of volunteers has not been exploited as fully in Lifeline. Volunteers should be included in the ARC/Lifeline programs to a much greater degree, with the LPM taking responsibility for ensuring volunteer development and training. Increased volunteer involvement can substitute for staff growth in a program that is Chapter-dependent for resources during the initial phases of development. In addition, much as it has worked in Red Cross' transportation services, volunteers can act to substantially reduce the cost of operations, thus providing an opportunity to reduce the fees charged to subscribers. A reduced fee structure might well provide the path to a large expansion in the subscriber population so actively sought by Chapters and Lifeline Systems, Inc.

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VITA

Ruth A. Bruer
5850 Upton Street
McLean, VA 22101
(703) 538-5512

Date of Birth: 04 March 1959

ACADEMIC RECORD

1990 Ph.D. Public Administration and Public Affairs,
Certificate in Gerontology
Virginia Polytechnic Institute & State University

1984 Master of Social Work (Community Development),
Diploma in Social Service Administration
Research: Poverty and Child Mortality
Wilfrid Laurier University, Waterloo, Ontario, CANADA

1981 Honours Bachelor of Arts (Social Behaviour)
Thesis: Mental Retardation and Aging
Queen’s University, Kingston, Ontario, CANADA

1981-1982 Sheridan College, Oakville, Ontario, CANADA
Partial course work towards a diploma in Developmental
Care of the Mentally Retarded.

EXPERIENCE

1984 to Present: Consultant/Research Analyst
With Richard Schmidt Associates, Ltd.: 

Completed an evaluation concept paper that describes a
demonstration being carried out by the state of Florida
to link the state’s health professions education system
to primary care centers throughout the state. The paper
examines the emerging system from an evaluation
perspective and lays out the major policy and evaluation
issues posed by this promising state initiative.

Designed and implemented an evaluation of a demonstration
Operation Lifeline program being managed by the American
Red Cross. Lifeline is a personal communications system
especially designed for elderly and chronically ill
people who may need emergency assistance quickly.

Produced a report that the Department of Health and Human
Services required for submission to Congress on the
status of Federal assistance to health science centers in the area of biomedical research facilities. The report entailed synthesizing available literature on the subject, organizing a panel discussion of leading government, industrial, and academic experts, and preparing a final report that incorporated the research synthesis and panel conclusions.

Virginia Polytechnic Institute & State University (VPI&SU) - Research assistance and hardware-software configuration support of a computerized database-resource network. Teaching assistance and student consultation for a doctoral course: Computer Applications in the Public Sector. Research support and development of a computerized database related to publication/media coverage of issues on Congress and Defense. Promotion of Department (Center for Public Administration and Policy) functioning: conference planning, community building, public relations, student counselling.

American Diabetes Association, Alexandria, VA - Analysis and development of a database in support of long range planning effort. Content included internal organizational functioning and external factors (such as, population demographics, health care environment, and nonprofit competition).

Center for Volunteer Development, Blacksburg, VA - Analysis and annotations to catalogue library holdings on volunteer development and nonprofit management intended for a computerized database and resource network.

Curriculum development and joint instruction of a graduate/undergraduate level credit course: Administration of Volunteer-Based Programs. Consultation on the development of a concentration in nonprofit administration within the College of Human Resources. Primary responsibility for survey research, analysis and development of a self-study course on volunteer development for agencies serving older people.

Support of training and consultation with volunteer agencies. Development of funding proposals.

Social Worker (MSW Internship)
Facilitation and development of a social action group for sole-support mothers on government assistance. Workshop and training development.

Mississauga Association for the Mentally Retarded
Mississauga, Ontario
Development and facilitation of special services to promote the integration of clients into the community.

RESEARCH AND SCHOLARLY ACTIVITIES

Presentations:

July 1985 Paper Presentation
Enhancing the Volunteer Difference: A Self-Study Course on Volunteer Development for Agencies Serving Older People
Community Development Society, Annual Meeting
Utah State University, Logan, Utah

October 1985 Paper Presentation
Volunteer Development in Agencies Serving Older People
Association of Voluntary Action Scholars, Coproduction, Prosuming and Appropriate Technology for the Nonprofit Sector
New Orleans, LA

April 1986 Paper Presentation/Debate
How Should Social Security Benefits be Distributed?: Means-Tested Assistance Payments as an Alternative
Gerontology Forum, Center for Gerontology
VPI&SU, Blacksburg, VA

April 1986 Paper Presentation/Lecture Discussion
Training: Implementations and Outcomes/Volunteer Development
Southern Gerontological Society Annual Meeting
Aging in the 1980s: Continuing a Unique Journey

Publications:

April 1986 Self-Study Practitioner Course
A Self-Study Guide to Volunteer Development in Agencies Serving Older People
Center for Volunteer Development and Center for Gerontology, VPI&SU (HHS Grant No. 90AT0115-01)
October 1985 Conference Proceedings
Volunteer Development in Agencies Serving Older People

Fall 1984 Book Review in Center for Volunteer Development
Happenings

COMMUNITY SERVICE

Nov. 1986 to Present
Fairfax/Falls Church Community Services Board
Mental Retardation Programs
VOLUNTEER
Individual client support and consultation.